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## Tailoring time series models for forecasting coronavirus spread: Case studies of 187 countries



Leila Ismail <sup>a,\*</sup>, Huned Materwala <sup>a</sup>, Taieb Znati <sup>b</sup>, Sherzod Turaev <sup>a</sup>, Moien A.B. Khan <sup>c,d</sup>

<sup>a</sup> Distributed Computing and Systems Research Laboratory, Department of Computer Science and Software Engineering, College of Information Technology, United Arab Emirates University, Al Ain, Abu Dhabi, United Arab Emirates

<sup>b</sup> College of Information Technology, United Arab Emirates University, Al Ain, Abu Dhabi, United Arab Emirates

<sup>c</sup> Department of Family Medicine, College of Medicine and Health Sciences, United Arab Emirates University, Al Ain, Abu Dhabi, United Arab Emirates

<sup>d</sup> Primary Care, NHS North West London, United Kingdom

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### ABSTRACT

When will the coronavirus end? Are the current precautionary measures effective? To answer these questions it is important to forecast regularly and accurately the spread of COVID-19 infections. Different time series forecasting models have been applied in the literature to tackle the pandemic situation. The current research efforts developed few of these models and validates its accuracy for selected countries. It becomes difficult to draw an objective comparison between the performance of these models at a global scale. This is because, the time series trend for the infection differs between the countries depending on the strategies adopted by the healthcare organizations to decrease the spread. Consequently, it is important to develop a tailored model for a country that allows healthcare organizations to better judge the effect of the undertaken precautionary measures, and provision more efficiently the needed resources to face this disease. This paper addresses this void. We develop and compare the performance of the time series models in the literature in terms of root mean squared error and mean absolute percentage error.

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## 1. Introduction

Almost a year after the outbreak of the novel coronavirus disease 2019 (COVID-19), which was first identified in Wuhan, China on December 2019 and declared as a pandemic by the World Health Organization (WHO) three months after it has been discovered, the containment of this fast spreading virus still represents a serious challenge to the world community [1]. Over 7 million people have already been infected by the virus [2]. In spite of a large body of virus-related research and numerous studies of fast spreading viruses, such severe acute respiratory syndrome (SARS) [3] and middle east respiratory syndrome (MERS) [4], our fundamental understanding of COVID-19 behavior is still lacking. In order to reduce the likelihood of infection and ensure citizen safety, governments imposed a number of strict social practices, including frequent handwashing, social distancing, school and business closures, home confinement, traveling ban, etc. Evidence from previous pandemic suggests that such measures have potential to reduce the spread of the disease and even the death rate by

50% [5]. Several of these restrictive emergency measures, most notably home confinement, however, infringe human rights and may lead to undesirable social behaviors, including anxiety, depression and a greater increase of population vulnerability to violence [2,6]. It is, therefore, paramount that these measures should be based upon the principles of necessity, proportionality and a robust methodology that takes into consideration the efficacy to reduce infection and the impact these draconian measures on human rights and social welfare.

Since the emergence of the COVID-19 virus, a number of studies have focused on what social, economic and legal factors must be considered in developing breakout-mitigating strategies, when these strategies should be adopted and how they should be appropriately monitored to control the spreading of the virus, while minimizing the social and economic disruptions these interventions may cause [5]. A number of these studies use different time series methods to forecast the COVID-19 infections in few countries [7–15]. At the core of these studies are data-driven models to gain better understanding of the growth of the infection curve and to predict the halting of the infection spread. Several these works propose the use of different time series methods to forecast the COVID-19 infections in few countries and help healthcare

\* Corresponding author.

E-mail address: [leila@uaeu.ac.ae](mailto:leila@uaeu.ac.ae) (L. Ismail).

organizations to assess the social and economic impact of enacted strategies on the community and gain deeper insight on when to enact, relax or terminate these strategies. Although the data-driven statistical predictions are performed objectively by the proposed model, the accuracy and quality of the predictions it produces, however, strongly depend on the data set being used. Given the significant difference in the geographical characteristics and social behaviors of the countries being studied, the use of a single model to predict disease spread and rate of infection becomes questionable, as it is highly likely that the model fails to generate accurate predictions of the infection rate for all studied countries, especially when it becomes difficult to make inferences about what impact a specific variable has on making predictions. Such a failure may lead to greater distress, economic hardship and possibly increased death rate. This paper addresses this question and proposes a new comprehensive methodology for verifying the accuracy of time series models to capture the infection evolution and predict the spread of the disease. To the best of our knowledge, this is the first work that attempts to develop a comprehensive framework to carry out a thorough comparative analysis of the performance of time series models based on the infection evolution in different countries. To this end, we develop and compare the performance of 13 time series models; simple average, simple moving average [16], linear trend [17], quadratic trend [18], s-curve trend [19], simple exponential smoothing (SES) [20], Holt's linear trend [21], damped trend [22], autoregressive integrated moving average (ARIMA) [23], long short term memory (LSTM) [24], holt-winters' additive (HWA) [25], statistical seasonal autoregressive integrated moving average with exogenous variable model (SSM) [26], and sutte-ARIMA [15]. The performance of the models is evaluated in terms of root mean squared error (RMSE) and mean absolute percentage error (MAPE). The study is applied to 187 countries, using data sets specific to each country. The study shows that the 187 countries exhibit nine different trends, which map into nine time series models out of the thirteen models studied in this paper. Overall, our results reveal that for the exponential increasing trend, ARIMA gives the best forecast results, whereas for an exponential + linear trend, Holt's Linear Trend outperforms the other models under study.

The rest of the paper is organized as follows. In Section 2 we provide an overview of the related work. The benefits of time series models for forecasting infections during a pandemic are discussed in Section 3. We present the time series models under study in Section 4. Section 5 describes the model development, validation and the numerical analysis. The paper concludes with future research directions in Section 6.

**Table 1**  
Related Work using Time Series Models for COVID-19 Forecast.

Work	Compared time series models	Number of countries	Evaluation metrics
[7]	ARIMA, SES, Holt's linear trend, Moving average, S-curve trend, Quadratic trend, Linear trend	8	MAPE, MAD, and MSD
[8]	Moving average, Weighted moving average, SES	1	MAD, MSE, RMSE, and MAPE
[9]	Holt's linear trend	NA (global forecast)	Absolute error
[10]	LSTM	1	RMSE and accuracy
[11]	ARIMA, Holt's linear trend, Brown linear trend	8	R-squared, RMSE, MAPE, MAE, MaxAPE, and MaxAE
[12]	ARIMA, Brown linear trend	1	R-squared, normalized BIC, and number of outliers
[13]	Holt-Winters' Additive, ARIMA	1	RMSE and accuracy
[14]	Linear trend, SSM	3	R-squared
[15]	Sutte-ARIMA, ARIMA	1	MAPE
This work	Simple average, Simple moving average, Linear trend, Quadratic trend, S-curve trend, SES, Holt's linear trend, Damped trend, ARIMA, LSTM, Holt-Winters' Additive, SSM, Sutte-ARIMA	187	RMSE and MAPE

Mean absolute percentage error (MAPE), mean absolute deviation (MAD), mean squared deviation (MSD), mean squared error (MSE), mean absolute error (MAE), maximum absolute percentage error (MaxAPE) and maximum absolute error (MaxAE).

## 2. Related work

Several works in the literature have proposed the use of time series models for COVID-19 pandemic forecast [7–15]. Tandon et al. [7] compares the performance of seven different time series models; ARIMA, SES, Holt's linear trend, moving average, S-curve trend, quadratic trend and linear trend. The results of the study show that ARIMA has the best performance among all the compared models. Elmousalami and Hassani [8] evaluate and compare the performance of the moving average, weighted moving average and SES models for the global COVID-19 infections. The authors conclude that the SES is the most accurate model for COVID-19 forecast. Petropoulos and Makridakis [9] evaluate the performance of Holt's linear trend model to forecast the global confirmed cases. The performance of LSTM is evaluated by [10] to forecast the COVID-19 transmission in Canada. Yonar et al. [11] estimates and forecasts the number of COVID-19 epidemic cases of G8 countries using ARIMA and Brown/Holt linear exponential smoothing methods. Jiang et al. [12] evaluates the performance of ARIMA and brown linear trend models to predict the transmission of COVID-19 in China. Panda [13] forecasts the number of COVID-19 infections with 95% confidence interval for different states in India using Holt-Winters' Additive and ARIMA models. Patil et al. [14] estimates the peak COVID-19 cases using linear trend and SSM models for Brazil, US, and India. Ahmar and Val [15] proposed sutte-ARIMA model for forecasting COVID-19 cases in Spain and compared the performance with that of ARIMA. Table 1 shows the time series models developed in the literature for forecasting COVID-19 infections along with the number of countries whose data is used. None of these works undertake a comprehensive analysis of time series models, taking into consideration the intrinsic properties of the data set of the studied country. This work addresses this gap.

## 3. Benefits of time series for pandemic forecasting

Different machine learning models have been widely used to analyze the data of epidemic and pandemic diseases such as influenzas A (H1N1) [27], B [28], measles childhood disease [29], SARS, MERS, COVID-19 outbreak in the world, specific countries or regions. Though any machine learning model can produce reliable results at some level, time series models are the most accurate approaches in studying the epidemic and pandemic diseases because of their dynamic and temporal nature. Therefore, time series analysis has been widely used in epidemiology to predict epi-

demics of infectious diseases. Finkenstädt and Grenfell [29] use the discrete time epidemic model to analyze the data on case reports of measles in England and Wales from 1944 to 1964 in order to understand the dynamics of the disease. Lai [30] implements three types of time series analysis methods - Box-Jenkins model, random walk, and a combination of growth curve fitting and autoregressive moving model - in modeling and forecasting the SARS epidemic in China, which help to monitor the dynamic of SARS in China based on daily new cases. Hall et al. [31] shows how the timing of the maximum prevalence of pandemic wave, along with its amplitude and duration might be predicted by a mass-action epidemic model to the data by regression analysis. Ohkusa et al. [32] summarizes the real-time estimation and prediction of influenza-like illness patients in 2009 influenza A(H1N1) pandemic in Japan using SIR model. Sumi et al. [33] uses a maximum entropy method based spectral analysis of influenza morbidity records to identify the interepidemic period of influenza epidemics in Japan. Foster et al. [34] determines if acute myocardial infarctions and ischemic strokes are associated with influenza activity in the USA building time series regression models. Zhang et al. [35] describes a study that used nine types of infectious disease data collected through a national public health surveillance system in mainland China to evaluate and compare the performances of four time series methods, namely, two decomposition methods (regression and exponential smoothing), ARIMA and support vector machine (SVM). Wu et al. [36] analyzes the effectiveness of influenza vaccination during 2009 H1N1 influenza pandemic in Taiwan for different age groups using a well-fitted multiple linear regression time series model. Song et al. [37] utilizes the method of time series analysis with influenza incidence data from 2004 to 2011 in different Chinese provinces to construct a time series model for short-time prediction. Meyer et al. [38] introduces a comprehensive statistical framework for the analysis of spatio-temporal surveillance data covering individual-level event data as well as aggregated count data time series. Tapak et al. [39] investigates the accuracy of support vector machine, artificial neural-network, and random-forest time series models in influenza like illness (ILI) modeling and outbreaks detection. The models were applied to a data set of weekly ILI frequencies in Iran. Tandon et al. [7] employs Auto-Regressive Integrated Moving Average (ARIMA) model for predicting the incidence of COVID-19 disease in India. Petropoulos and Makridakis [9] introduce an approach to predicting the continuation of the COVID-19 using robust univariate time series models and analyzes the trajectory of recovered cases. Yonar et al. [11] estimates and forecasts the number of COVID-19 epidemic cases of G8 countries using curve estimation models, ARIMA and Brown/Holt linear exponential smoothing methods. Jiang et al. [12] establishes the dynamics models of infectious diseases and time series models to predict the trend and short-term prediction of the transmission of COVID-19 in China. Panda [13] establishes ARIMA and HWA models for short-term predictions of COVID-19 transmissions in India. Patil et al. [14] trained linear regression and SSM models to predict the peak of COVID-19 transmissions for Brazil, US, and India. Ahmar and Val [15] proposed sutté-ARIMA model to forecasting COVID-19 transmissions in Spain and compared the performance with that of ARIMA.

Time series models can utilize data from long-time and short-time periods. From this perspective, if we revisit the papers in the previous paragraph, we can notice that papers [30,31,7,9,11–15] use daily interval data, papers [32,39] weekly interval data, papers [36–38] monthly interval data, and papers [29,33–35] use yearly interval data. The use of short-interval data, especially daily interval data, is very important for the analysis of wide-range active epidemics and pandemics with high transmission rates since a high transmission rate causes very high dynamicity in the values of different features of the data, such as total cases, new cases,

active cases, total deaths, new deaths, total recovered, etc. [40]. Thus, it is very important to use time series models with daily-based data for the analysis of active pandemic disease.

#### 4. Time series models

Time series is an ordered sequence of values of a variable which are collected at equally spaced time intervals. Time series are analyzed in order to extract useful information such as the characteristics of the phenomenon that generates the series, to forecast the changes in the series and to control the phenomenon. Time series analysis involves developing models that describe an observed time series in order to understand the underlying causes. This is by making decomposing the time series into constitution components. In this section, we explain different time series forecasting models to predict the number of COVID-19 infections.

##### 4.1. Simple average

Simple average is a time series forecasting method that forecasts the value of a variable by calculating the average of all previously observed values of that variable as stated in Eq. 1.

$$\hat{y}_{T+1} = \frac{1}{T} \sum_{i=1}^T y_i \quad (1)$$

The simple average method considers all the past values to calculate the forecast value which might be not accurate when the time series is either increasing or decreasing.

##### 4.2. Simple moving average

Simple moving average is based on the assumption that the value at time  $T + 1$  is mostly dependent on the recent past values rather than all values in the history [16]. Consequently, in simple moving average the forecast of the next value in a time series is calculated based on the average of a fixed finite number  $m$  of the past values as stated in Eq. 2.

$$\hat{y}_{T+1} = \frac{1}{T} \sum_{i=T-m}^T y_i \quad (2)$$

The time period consisting of  $m$  past values is known as a window and the moving average is referred to as a sliding window in the simple moving average method.

##### 4.3. Linear trend

Linear trend or trend-line model is a forecasting method where a linear relationship between time and the response variable is developed [17]. It is suitable for the time series where the local mean is increasing gradually over time at a constant rate. The linear trend is a special case of the simple linear regression model in which the independent variable is nothing but the time index or some other equally spaced sequence of numbers. The forecasting equation for the linear trend model is stated in Eq. 3.

$$Y(T) = \alpha + \beta T \quad (3)$$

where  $\alpha$  and  $\beta$  are the regression coefficients whose values are calculated such that the sum of squared deviations from the data is the minimum.

##### 4.4. Quadratic trend

Quadratic trend model is a forecasting method where a non-linear relationship between time and the response variable is devel-

oped [18]. The quadratic trend is a special case of the polynomial regression model in which the independent variable is nothing but the time index or some other equally spaced sequence of numbers. The forecasting equation for the quadratic trend model is stated in Eq. 4.

$$Y(T) = \alpha + \beta_1 T + \beta_2 T^2 + \dots + \beta_n T^n \quad (4)$$

where  $\alpha, \beta_1, \beta_2$ , and  $\beta_n$  are the regression coefficients whose values are calculated such that the sum of squared deviations from the data is the minimum.

#### 4.5. S-curve trend

S-curve trend model is a forecasting method where a sigmoid relationship between time and the response variable is developed [19]. S-curve trend is a special case of the logistic regression model in which the independent variable is nothing but the time index or some other equally spaced sequence of numbers. The forecasting equation for the S-curve trend model is stated in Eq. 5 [41].

$$Y(T) = \frac{10^a}{\beta_0 + \beta_1 \beta_2^T} \quad (5)$$

where  $a, \beta_0, \beta_1$  and  $\beta_2$  are the parameters whose values are calculated such that the sum of squared error deviations from the data is the minimum.

#### 4.6. Simple exponential smoothing

Simple Exponential Smoothing (SES) is a time series forecasting method for univariate data without a trend or seasonality [20]. Forecasts are calculated using weighted averages where the most recent observations are assigned larger weights, while the old observations are assigned smaller weights. The weights decrease exponentially while moving to past observations. The forecast value in SES is calculated using Eq. 6.

$$\hat{y}_{T+1|T} = \alpha y_T + \alpha(1 - \alpha)y_{T-1} + \alpha(1 - \alpha)^2 y_{T-2} + \dots, \quad (6)$$

where  $\alpha$  ( $0 \leq \alpha \leq 1$ ) is the smoothing parameter that controls the rate at which the weight decreases. If the value of  $\alpha$  is small (i.e., close to 0), large weight is given to observations from the more distant past, while if the value is large (i.e., close to 1), large weight is given to the more recent observations. When the value of  $\alpha$  is set to 1, the forecast value will be equal to most recent value.

#### 4.7. Holt's linear trend

Holt's linear trend is an extension of simple exponential smoothing method that allows forecasting of data with a trend [21]. It is exponential smoothing applied to both the average value in the series (level) as well as the trend. The forecast equation for Holt's linear trend is stated in Eq. 7.

$$\hat{y}_{T+h|T} = l_T + h b_T \quad (7)$$

where  $l_T$  denotes the smoothing of the level of the series at time  $T$  and  $b_T$  represents the smoothing of the trend of the series at time  $T$ . The smoothing equations for level and trend are stated in Eqs. 8 and 9 respectively.

$$l_T = \alpha y_T + (1 - \alpha)(l_{T-1} + b_{T-1}) \quad (8)$$

$$b_T = \beta^*(l_T - l_{T-1}) + (1 - \beta^*)b_{T-1} \quad (9)$$

where  $\alpha$  ( $0 \leq \alpha \leq 1$ ) is the smoothing parameter for the level and  $\beta^*$  ( $0 \leq \beta^* \leq 1$ ) is the smoothing parameter for the trend.

#### 4.8. Damped trend

The Holt's linear trend method generates forecasts that depict either a constant increasing or decreasing trend indefinitely into the future. However, for longer forecast horizons, this method tends to over-forecast. Damped trend method includes a damping parameter that dampens the Holt's linear trend forecast to a flat line some time in the future [22]. The forecast, level smoothing and trend smoothing equations for damped trend method are stated in Eqs. (10)–(12) respectively.

$$\hat{y}_{T+h|T} = t_T + (\phi + \phi^2 + \dots + \phi^h)b_T \quad (10)$$

$$l_T = \alpha y_T + (1 - \alpha)(l_{T-1} + \phi b_{T-1}) \quad (11)$$

$$b_T = \beta^*(l_T - l_{T-1}) + (1 - \beta^*)\phi b_{T-1} \quad (12)$$

where  $\phi$  ( $0 < \phi < 1$ ) is the damping parameter. If the value of  $\phi$  is set to 1, the method becomes similar to Holt's linear method. For values between 0 and 1,  $\phi$  dampens the trend so that it approaches a constant some time in the future

#### 4.9. Auto regressive integrated moving average

Autoregressive integrated moving average (ARIMA) is a combination of auto regressive (AR) and moving average (MA) models [23]. AR is a regression model where the forecast value of a variable is a function of the past values of the variable as shown in Eq. 13. Instead of using the past values for the forecast as in AR, MA uses past forecast errors in a regression model as stated in Eq. 14. The AR and MA models combined together with differencing yields ARIMA as shown in Eq. 15.

$$y_T = \alpha + \beta_1 y_{T-1} + \beta_2 y_{T-2} + \dots + \beta_p y_{T-p} + \epsilon_T \quad (13)$$

where  $\alpha$  and  $\beta$  are the regression coefficients and the  $\epsilon$  is the noise.

$$y_T = \alpha + \epsilon_T + \phi_1 \epsilon_{T-1} + \phi_2 \epsilon_{T-2} + \dots + \phi_q \epsilon_{T-q} \quad (14)$$

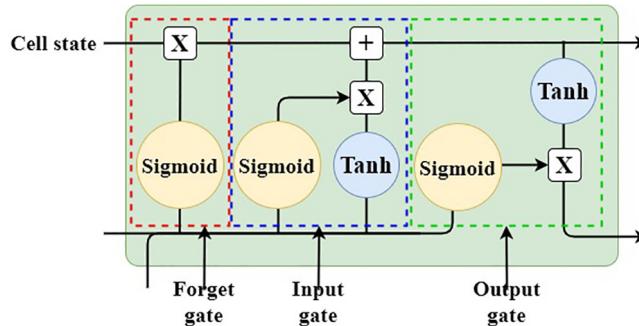
where  $\alpha$  and  $\epsilon$  are the regression coefficients.

$$y_T = \alpha + \beta_1 y_{T-1} + \beta_2 y_{T-2} + \dots + \beta_p y_{T-p} + \phi_1 \epsilon_{T-1} + \phi_2 \epsilon_{T-2} + \dots + \phi_q \epsilon_{T-q} + \epsilon_T \quad (15)$$

ARIMA model is denoted as ARIMA(p,d,q). The variable p represents the order of the AR term. For instance, if the value of p is set to 10, then the model uses 10 previous periods of the time-series for the calculation of AR. The variable p helps in adjusting the line that is being fitted to forecast the series. In ARIMA, the time series is transformed into a stationary series (a series without trend or seasonality) using differencing. This is because the forecasting becomes easy when a time series is stationary. The variable d denotes the degree of the first differencing involved to make the time series stationary. The first differencing value is the difference between the current time period and the previous time period. The variable q represents the order of the MA term.

#### 4.10. Long short term memory

Long short term memory (LSTM) is a recurrent neural network model trained using backpropagation that focuses only on relevant information for forecasting a variable value [24]. Instead of neurons in a neural network, LSTM networks have memory blocks that are connected through layers. The main concepts of LSTM are the cell state and the gates as shown in Fig. 1. The cell state acts as a data transmission channel that transfers relative information to the chain of neural networks. Gates are the way to optionally let the information through. They are different neural networks that

**Fig. 1.** Long Term Short Memory Cell.

decide which information is allowed on the cell state. The gates can learn what information to keep or forget based on the relevance during the training. The gate consists of a sigmoid activation. A sigmoid activation outputs numbers between zero and one that describe how much of each information should be let through. The value of zero lets no information though whereas the value of one lets all the information through. There are three types of gates in an LSTM cell: forget, input and output.

- **Forget gate:** It decides what information should be removed from the blocks. Information from the previous hidden state and from the current input is passed through the sigmoid function. The entire information is removed if the output of the sigmoid function is 0.
- **Input gate:** It decides which values from the input to be selected to update the memory state. This is by first passing the hidden state and the current input information to a sigmoid function. The information is also passed to the tanh function to regulate the network. The tanh output is then multiplied with the sigmoid output. The sigmoid output will decide which information is important to keep from the tanh output.
- **Output gate:** It decides what value to output or what next hidden state should be. First, the previous hidden state and the current input are passed to the sigmoid function. The newly modified cell state is then passed to the tanh function. The tanh output is multiplied with the sigmoid output to decide what information the hidden state should carry. The output is the hidden state. The new cell state and the new hidden is then carried over to the next time step.

#### 4.11. Holt-winters' additive

Holt-winter's seasonality is an extension of HLT to capture seasonality [25]. There are two variations to this method based on the seasonal component: 1) additive and 2) multiplicative. The Additive method is preferred when the seasonal are roughly constant, while the multiplicative is preferred when the variations change proportional to the level of series. Holt-winter's additive (HWA) is used in the literature to forecast COVID-19 infections. The forecast equation for Holt-Winter's Additive is stated in Eq. 16.

$$\hat{y}_{T+h|T} = l_T + h b_T + s_{T+h-m(k+1)} \quad (16)$$

where  $l_T$  denotes the smoothing of the level of the series at time  $T$ ,  $b_T$  represents the smoothing of the trend of the series at time  $T$  and  $s_T$  represents the smoothing of the seasonality of the series at time  $T$ . The smoothing equations for level, trend and seasonality are stated in Eqs. (17)–(19) respectively.

$$l_T = \alpha(y_T - s_{T-m}) + (1 - \alpha)(l_{T-1} + b_{T-1}) \quad (17)$$

$$b_T = \beta^*(l_T - l_{T-1}) + (1 - \beta^*)b_{T-1} \quad (18)$$

$$s_T = \gamma(y_T - l_T - b_{T-1}) + (1 - \gamma)s_{T-m} \quad (19)$$

where  $m$  denotes the frequency of the seasonality,  $\alpha$  ( $0 \leq \alpha \leq 1$ ) is the smoothing parameter for the level,  $\beta^*$  ( $0 \leq \beta^* \leq 1$ ) is the smoothing parameter for the trend and  $\gamma$  ( $0 \leq \gamma \leq 1$ ) is the smoothing parameter for the seasonality.

#### 4.12. Statistical SARIMAX model

Seasonal autoregressive integrated moving average with exogenous variables (SARIMAX) is the extension of ARIMA method that allows forecasting of seasonal data [26]. Statistical SARIMAX Model (SSM) includes four seasonal variables P, D, Q, and m, in addition to the p, d and q variables required by ARIMA. P represents the seasonal autoregressive order, D represents the seasonal difference order, Q represents the seasonal moving average order and m represents the number of time steps for a single seasonal period. The forecast equation for SARIMAX is stated in Eq. 20.

$$y_T = \alpha + \beta_1 X_{1,T} + \beta_2 X_{2,T} + \dots + \beta_p X_{p,T} + \omega_T \quad (20)$$

where  $\alpha$  and  $\beta$  are the regression coefficients,  $(X_{1,T}, X_{2,T}, \dots, X_{p,T})$  are observations of exogenous variables corresponding to  $y_T$ , and  $\omega_T$  is the stochastic residual calculated using Eq. 21.

$$\omega_T = \frac{\theta_q(B)\Theta_Q(B^s)}{\phi_p(B)\Phi_P(B^s)(1-B)^d(1-B^s)^D}\epsilon_T \quad (21)$$

where,  $B$  is the delay operator,  $\phi(B)$  is the autoregressive operator of p-order,  $\theta(B)$  is the moving average operator of q-order and  $\epsilon$  is the noise.

#### 4.13. Sutte-ARIMA

Sutte-ARIMA is a combination of the  $\alpha$ -Sutte indicator and the ARIMA methods [15]. The forecast for sutte-ARIMA is calculated as the average forecast of  $\alpha$ -Sutte and ARIMA. The  $\alpha$ -Sutte uses four historical data from the time series to forecast the fifth value as stated in Eq. 22.

$$y_T = \frac{\gamma(\frac{\Delta x}{2}) + \beta(\frac{\Delta y}{2}) + \alpha(\frac{\Delta z}{2})}{3} \quad (22)$$

where,  $\delta = y_{T-4}$ ,  $\gamma = y_{T-3}$ ,  $\beta = y_{T-2}$ ,  $\alpha = y_{T-1}$ ,  $\Delta x = \gamma - \delta$ ,  $\Delta y = \beta - \gamma$ , and  $\Delta z = \alpha - \beta$ .

The  $\alpha$ -Sutte and the ARIMA models indicated in Eqs. 22 and 15 respectively can be simplified and averaged to obtain the forecast equation for sutte-ARIMA as stated in Eq. 23.

$$2y_T = \alpha + \beta_1 y_{T-1} + \beta_2 y_{T-2} + \dots + \beta_p y_{T-p} + \phi_1 \epsilon_{T-1} + \phi_2 \epsilon_{T-2} + \dots + \phi_q \epsilon_{T-q} + \epsilon_T + \gamma(\frac{2\Delta x}{3\gamma + 3\delta}) + \beta(\frac{2\Delta y}{3\beta + 3\gamma}) + \alpha(\frac{2\Delta z}{3\alpha + 3\beta}) \quad (23)$$

## 5. Performance analysis

In this section, we analyze and compare the performance of the studied time series models using a comprehensive COVID-19 dataset. We evaluate their performance in terms of RMSE and MAPE.

### 5.1. Models development and validation

We develop the models under study and evaluate their performance considering 187 countries in the world. We use Johns Hopkins Covid-19 dataset [42]. The dataset is compiled using resources such as WHO, DXY.cn, BNO News, National Health Commission of the People's Republic of China, China CDC, Hong Kong Department of Health, Macau Government, Taiwan CDC, US CDC, Government of Canada, Australia Government Department of Health, European Centre for Disease Prevention and Control, and the Ministry of Health of Singapore. Table 2 shows the characteristics of the dataset. We use the confirmed cases feature to develop and validate the models for the considered countries.

To evaluate the models, we create a separate dataset for each considered country. We use 85% of the dataset (i.e., 22 January – 15 May) as training to develop the models and 15% (i.e., 16 May – 2 June) for validation. To validate the models, we first forecast the number of infections over time based on the developed models, then we compare the predicted values with the actual ones. In addition, we mention the forecast values for the validation dataset with 95% confidence interval. We implemented the models using Python [43]. For the ARIMA model, we run the model with different parameter values and select the values that yield the minimum Akaike's Information Criterion (AIC). AIC is a widely used measure that estimates the quality of a model with respect to all the other models. The quality is a function of the goodness of fit and the simplicity of the model. The value of AIC can be calculated using Eq. 24. We run the LSTM model with the number of epochs between 1 and 100 and select the epoch value that results in the minimum RMSE value. We evaluate the performance of each model under study in terms of RMSE calculated using Eq. 25 and MAPE calculated using Eq. 26.

$$AIC = -2\log(L) + 2(p + q + k + 1) \quad (24)$$

where  $L$  is the likelihood of the data,  $p$  and  $q$  are ARIMA parameters and  $k$  is a multiplier for the complexity penalty term.

$$RMSE = \sqrt{\frac{\sum_{T=1}^n (y_T - \hat{y}_T)^2}{n}} \quad (25)$$

$$MAPE = \left( \frac{1}{n} \sum_{T=1}^n \frac{|y_T - \hat{y}_T|}{y_T} \right) \times 100\% \quad (26)$$

where  $y_T$  is the actual value,  $\hat{y}_T$  is the forecast value and  $n$  is the total number of fitted points.

**Table 2**  
Characteristics of the Johns Hopkins COVID-19 Dataset used in the Experiments.

Number of countries	187
Starting date	22 January 2020
Update frequency	Daily
Features	Province/State, Country/Region, Last Update, Number of confirmed cases, Number of suspected cases, Recovered, Deaths

### 5.2. Experimental results analysis

In this section, we analyze our experimental results and give insights and conclusions of these evaluations. In particular, we reveal the reasons behind the performance of these models.

We categorize the countries based on the time series models that yield the least RMSE and MAPE values for a country using our experimental results stated in Tables A.1 and A.2 respectively. The values of RMSE and MAPE for each country and each model are computed using Eqs. 25 and 26, based on our experimental results presented in Tables A.3–A.189. Fig. 2 shows the normalized RMSE of ARIMA model for all the countries where the model outperforms all other models under study. Fig. 3 shows the MAPE of ARIMA model for all the countries where the model outperforms all other models under study to bring insights on the degree of suitability of ARIMA on the countries data distribution. The number of infections data trends for all these countries represent an exponentially increasing curve. For instance, as shown in Fig. 4 the number of confirmed COVID-19 cases for Afghanistan increases exponentially and are accurately forecasted by ARIMA. Our experimental results reveal that ARIMA has the least RMSE compared to all other models under study for an exponentially increasing data trend. This is because, the forecast in ARIMA is based on the past values of the series for a period as well as the previous forecast error. The size of the period is optimally adjusted to make accurate predictions based on the local increasing/decreasing trend in the series. The exponentially increasing trends for the countries (Fig. 2) is modeled accurately by ARIMA by selecting an appropriate order of the regression term that fits the exponentially growing data.

Figs. 5 and 6 show the normalized RMSE and MAPE respectively of the Holt's linear trend model for all the countries where the model has the least RMSE value compared to all other models under study. The infections data trends for all these countries is similar to an exponentially increasing curve in the beginning and then follow a linear line after some point in time. For instance, Fig. 7 shows that the Holt's linear trend model forecast the number of infections with the least RMSE compared to the other models for a data trend that increases exponentially in the beginning and then becomes linear. Our results show that the performance of Holt's linear trend is the best among all the studied models for an exponential + linear data trend. This is because the h-steps forecast in Holt's linear trend model is calculated by adding the last estimated level in the series to  $h$  times the last estimated trend as stated in Eq. 7. Consequently, the forecast values are a linear function of time steps leading to more accurate performance for the exponential + linear time series compared to the other models under study.

Figs. 8 and 9 show the normalized RMSE and MAPE values respectively of the S-curve trend model for the countries where the model forecasts the number of COVID-19 infections most accurately. The time series data trends for these countries are almost similar and follow a logistic curve. For example, the increase in number of COVID-19 infections over time for Greece follows a logistic curve and the S-curve trend model forecasts with the least RMSE compared to the other models under study (Fig. 10). The S-curve trend model performs most accurately for a time series that follows a logistic curve. This is because the model is based on logistic regression with sigmoid function that captures the s-shaped data trend accurately.

The normalized RMSE and MAPE of the damped trend model for the countries where the model outperforms the other studied models are shown in Figs. 11 and 12 respectively. The time series data trends for all these countries follows a logarithmic curve that damps after some point in time. Fig. 13 shows the trend for COVID-19 infections in Australia. It shows that the damped trend model forecasts more accurately compared to the other models. Our results reveal that the damped trend model is the most accurate

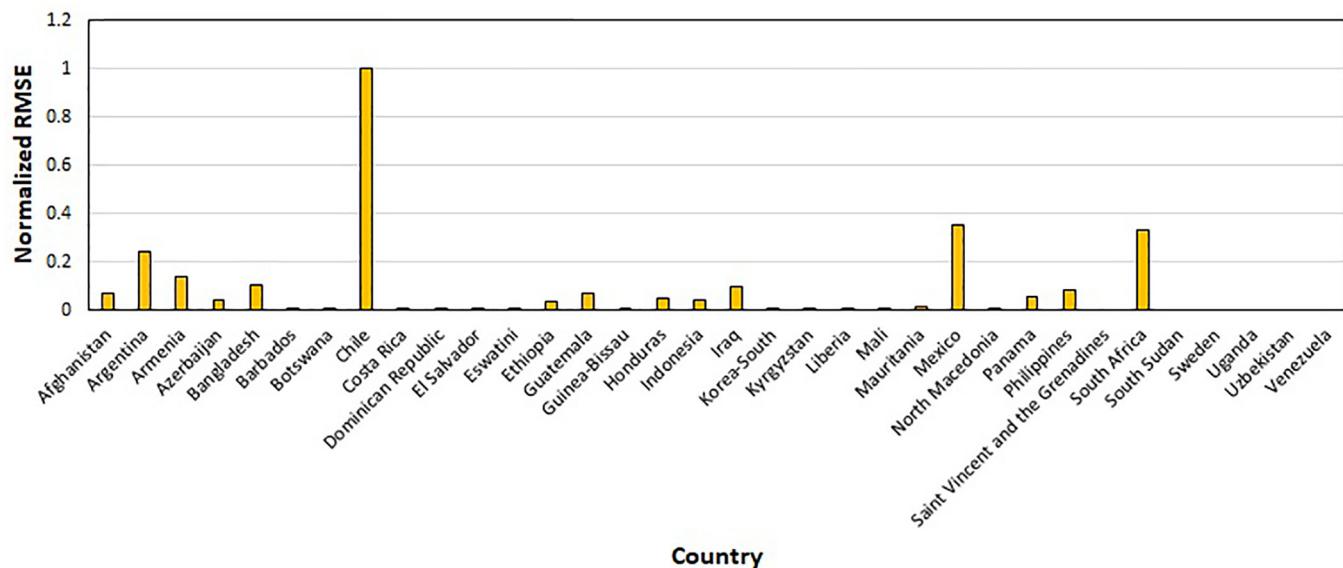


Fig. 2. Countries where ARIMA model achieves the lowest RMSE.

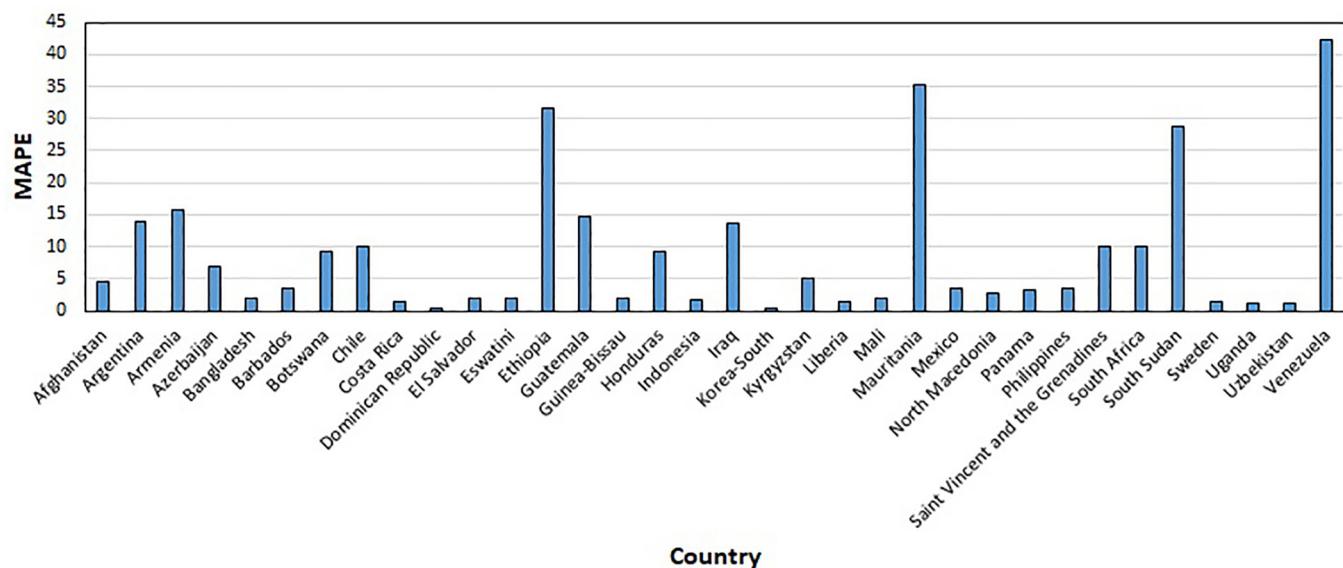
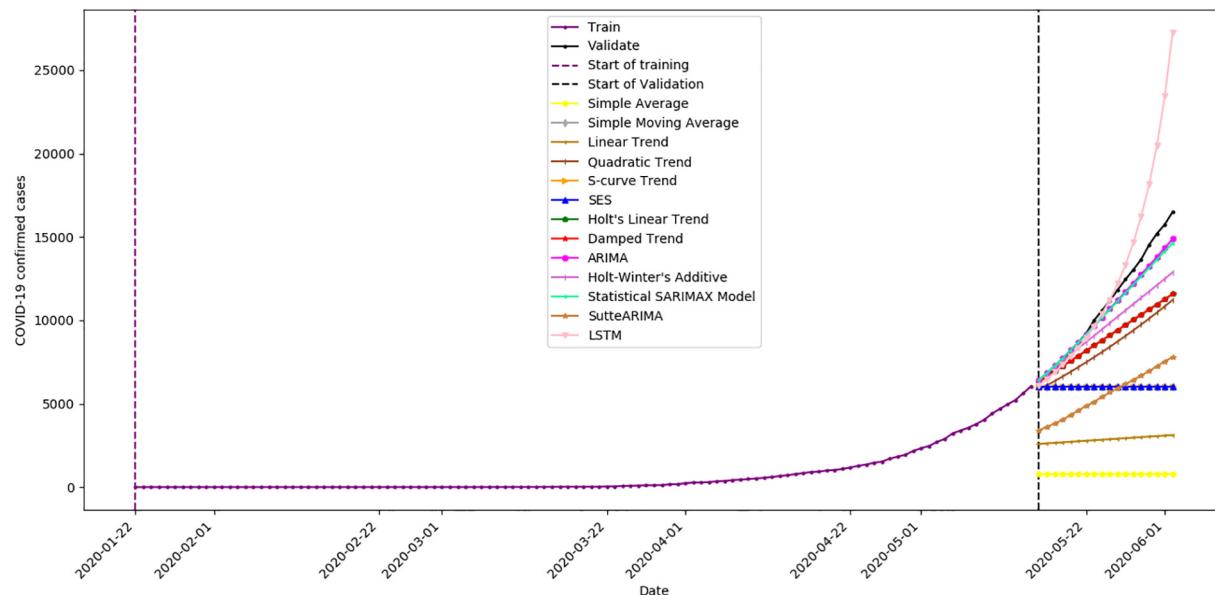


Fig. 3. Countries where ARIMA model achieves the lowest MAPE.

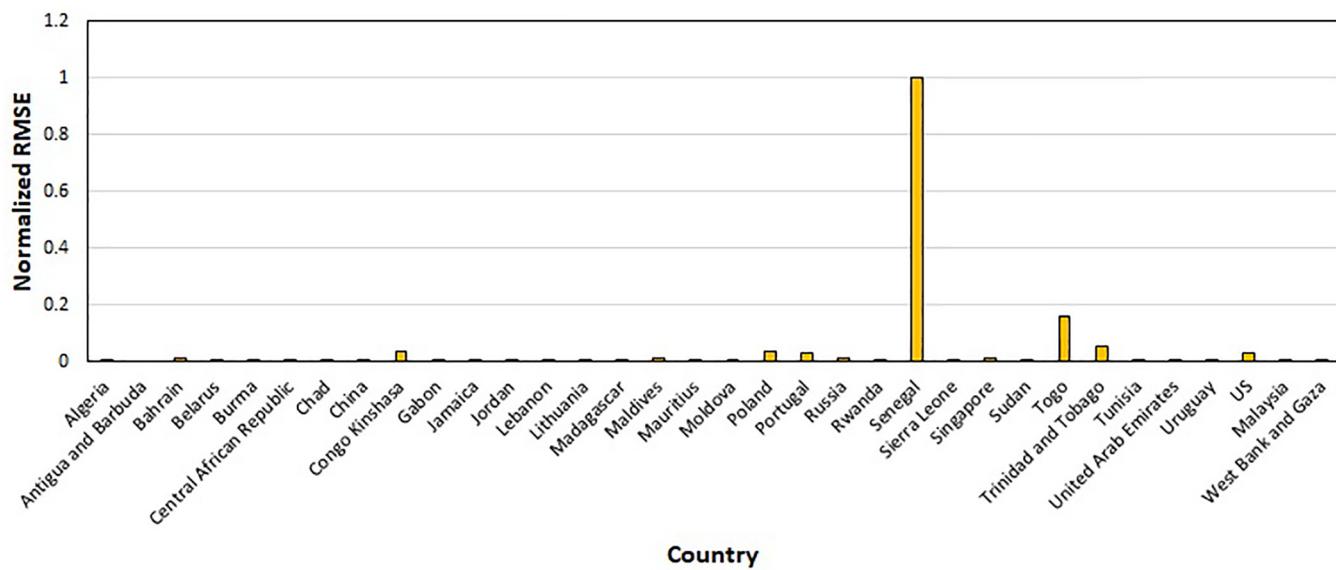
for damped logarithmic and damped exponential time series. This is because of the damping parameter used by the model that dampens the time series trend to a flat line after some point in time.

Figs. 14 and 15 show the normalized RMSE and MAPE of the quadratic trend model for all the countries where the model outperforms all the other models under study. The evolving COVID-19 infections in these countries follows a polynomial curve in a given time period. For instance, Fig. 16 shows that the number of infections increases polynomial in a given time window for Cameroon. It shows that the quadratic trend model forecasts more accurately compared to the other models. This is because the quadratic trend model resembles a polynomial regression model that can capture the polynomial data trend accurately.

Figs. 17 and 18 show the normalized RMSE and MAPE of the LSTM model for the countries where the model performs the best. The trends observed for the confirmed COVID-19 cases for these countries are stochastic in nature with sudden increase and follows no particular curve. Fig. 19 shows the trend of COVID-19 infections in Bahamas. It shows that the LSTM model forecasts the number of infections with the highest accuracy. LSTM model has the ability to learn the context required to fit the data without having any trend assumption and can handle the sudden shocks in the time series data. Consequently, LSTM performs better for the time series data that follows no particular trend and have sudden rise in the number of infections. For instance, an exponential function with a sudden increase/decrease or a logistic function that exponentially increase at some point in time.



**Fig. 4.** Prediction of COVID-19 infections in Afghanistan for the Validation Dataset using the Time Series Models.



**Fig. 5.** Countries where Holt's Linear Trend model achieves the lowest RMSE.

Figs. 20 and 21 show the normalized RMSE and MAPE of the HWA model for the countries where the model performs the best. The trends observed for the confirmed COVID-19 cases for these countries have a cyclic pattern of high and low slopes. For instance, Fig. 22 shows the trend of COVID-19 infections in San Marino. It shows that a cyclic pattern of increasing number of infections and roughly constant infections. The HWA model forecasts the number of infections with the highest accuracy because the model has the ability to extract the cyclic pattern in the time series data. Consequently, HWA performs better for the time series data that has a cyclic pattern. For instance, alternating exponential and damped trend or alternating increasing and constant trend.

Figs. 23 and 24 show the normalized RMSE and MAPE of the SSM model for the countries where the model performs the best. The trends observed for the confirmed COVID-19 cases for these

countries are exponentially increasing with cyclic patterns. Fig. 25 shows the exponentially increasing trend of COVID-19 infections in Albania with repeated damping. The SSM model forecasts the COVID-19 infections with the least error. This is because the SSM model fits well to a univariate data with trend and seasonality.

The normalized RMSE and MAPE values of the sutté-ARIMA model for the countries where the model performs the best are shown in Figs. 26 and 27. The trends observed for the confirmed COVID-19 cases are roughly constant for a long period of time and then show a sudden increase. Fig. 28 shows the trend of COVID-19 infections in Nicaragua where sutté-ARIMA outperforms the other studied models. The sutté-ARIMA performs better for such trend because the integrated  $\alpha$ -sutté method tries to keep the trend constant based on the history whereas the ARIMA model

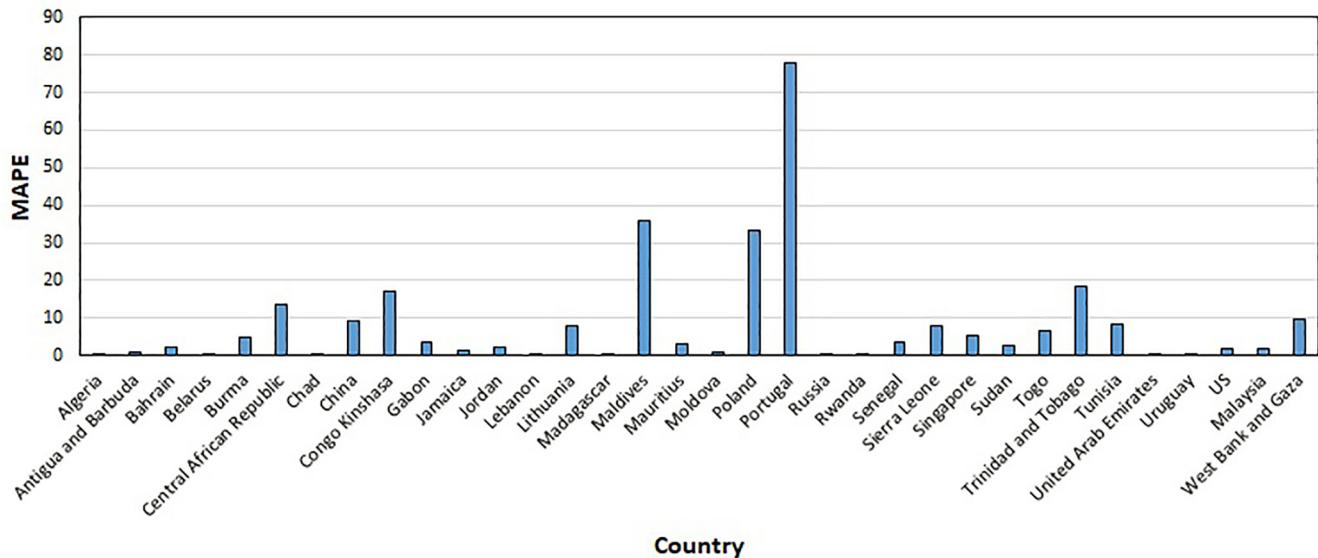


Fig. 6. Countries where Holt's Linear Trend model achieves the lowest MAPE.

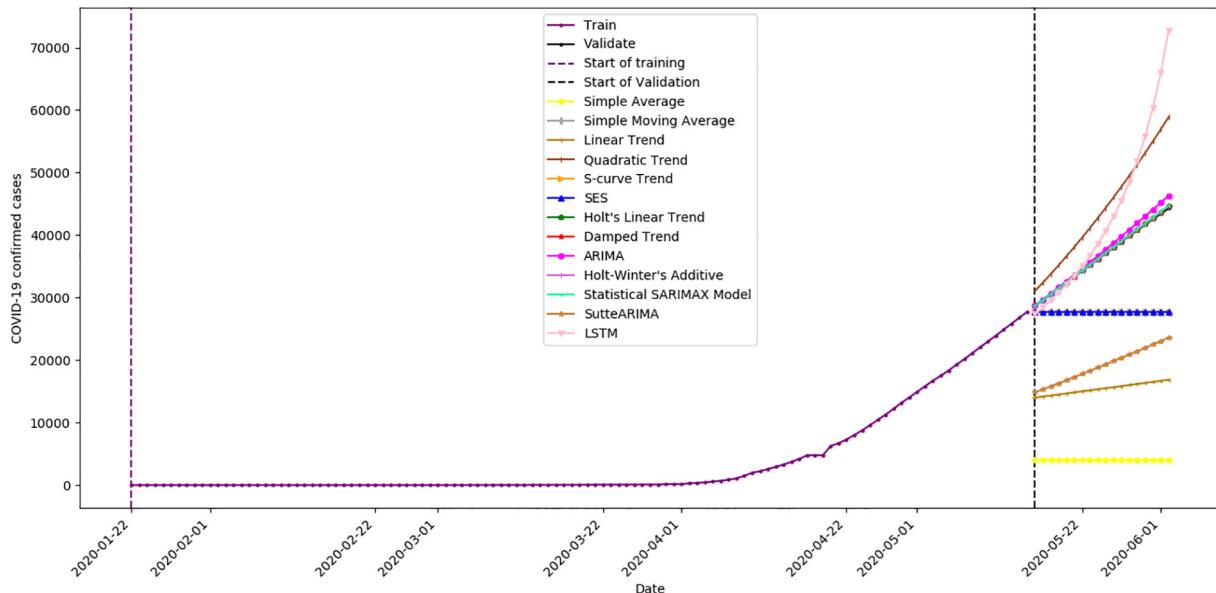


Fig. 7. Prediction of COVID-19 infections in Belarus for the Validation Dataset using the Time Series Models.

tries to fit the sudden increase as ARIMA is suitable for exponential trends.

Table 3 shows the results for RMSE and MAPE of different time series models obtained by the works in the literature for predicting COVID-19 infections. Tandon et al. [7] compared the performance of seven different models for predicting COVID-19 infections in India and showed that ARIMA has the least MAPE. However, our results show that QT outperforms the remaining six models. This discrepancy in the results is due to the difference in the dataset used. We use more data; thus impacting the infections trend. Considering all the models in our study, LSTM predicts the infections for India with the least error. The LSTM model is not evaluated in [7]. Yonar et al. [11] compared the performance of ARIMA and holt's linear models for different countries. The results showed that ARIMA, which has the best accuracy for exponential data trends,

outperforms for Turkey, Germany and France, while holt's linear trend gives the least accuracy for Italy, Japan, Canada and United Kingdom. Our experiments show the same results for Germany and France. Furthermore, our results show that the holt-winters' additive and SSM has the best accuracy for Germany and France respectively with the growing data (Cyclic Increasing + Constant, i.e., exponential over periods of intervals). However, as the dataset for Turkey evolved, its data trend becomes stochastic making the LSTM the most accurate among the models under study. For Canada dataset Holt's linear trend is still more pronounced than ARIMA. However, for Italy, Japan and UK evolving datasets, ARIMA performs better than holt's linear trend. The holt-winters' additive, SSM and LSTM models are not evaluated in [11]. Ahmar and Val [15] showed that suttet-ARIMA outperforms ARIMA for forecasting COVID-19 infections in Spain. This is not confirmed in our results.

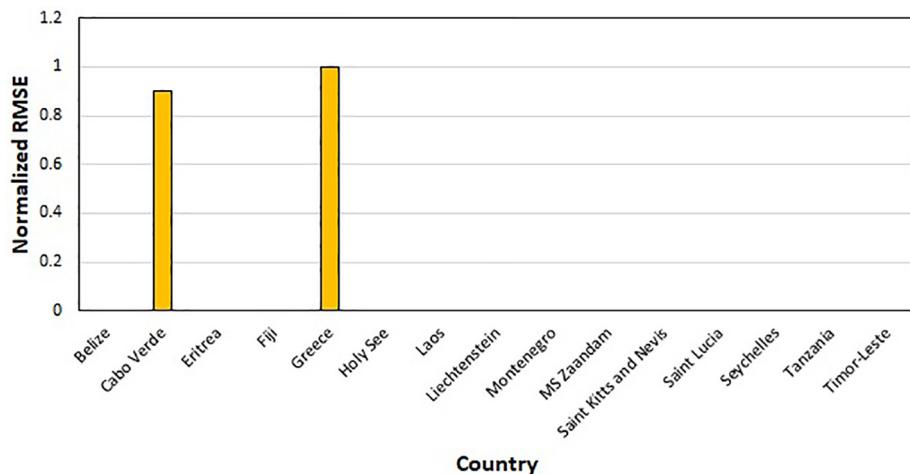


Fig. 8. Countries where S-curve Trend model achieves the lowest RMSE.

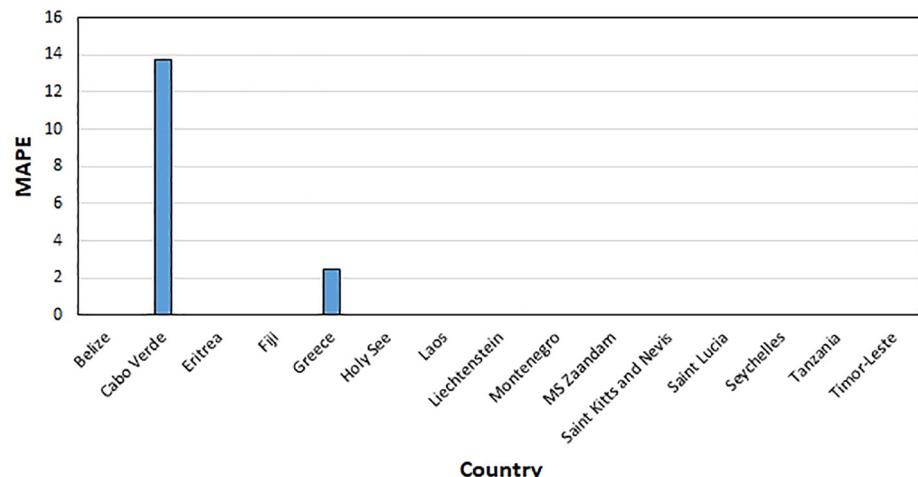


Fig. 9. Countries where S-curve Trend model achieves the lowest MAPE.

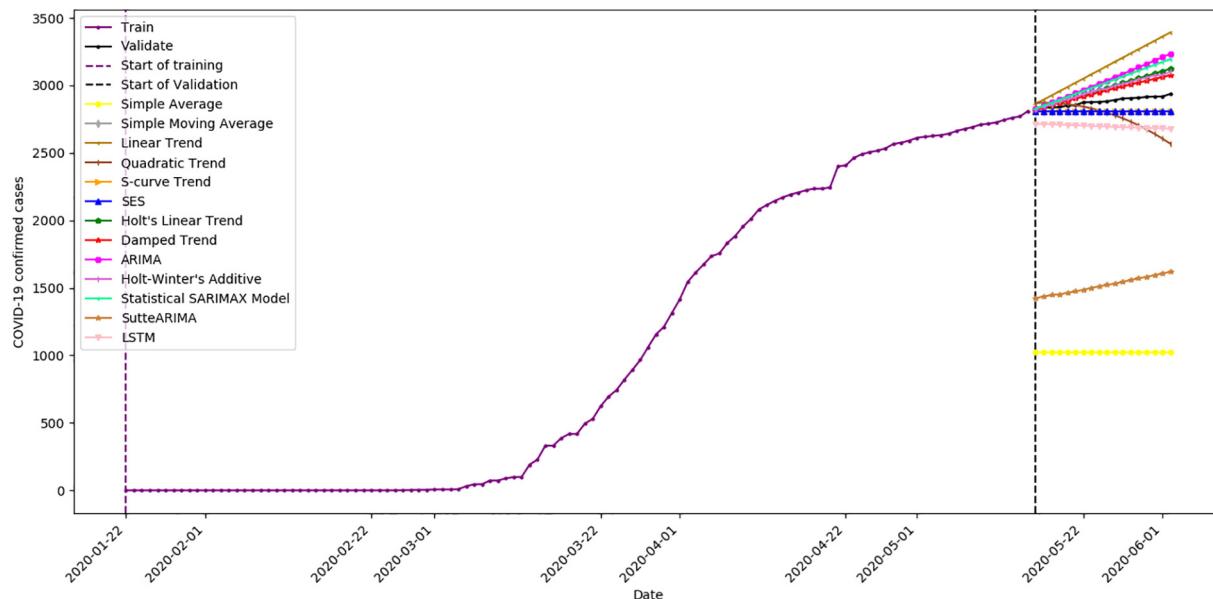
This is due to the evolving dataset. Our results show that holt-winters' additive has the least prediction error among the models in this study for Spain.

In summary, our experimental results reveal that for the time series data having an exponential increasing trend, the ARIMA model is the best selection for forecasting, whereas if the trend is increasing exponentially at a lower rate and then becomes linear at some point in time, then the Holt's Linear Trend model outperforms all other studied models. The S-curve Trend model is the most accurate for time series data that follows a logistic trend. The logarithmic or exponentially increasing time series that damps after some point in time can be best forecasted using Damped Trend model. The time series that are stochastic in nature with sudden shock and follows no particular trend can be modeled using LSTM for comparatively better forecast results. Quadratic curve model is the most accurate for time series where the trend is polynomial. The alternating increasing and constant trend can be accurately modeled using holt-winters' additive model, whereas the exponentially increasing trend with repeated damping can be best forecasted using SSM model. Sutte-ARIMA method is best for roughly constant trends with a sudden increase. Fig. 29 shows the one-to-one relationship between the data trend and its accurate time series forecast model. It also shows the average MAPE

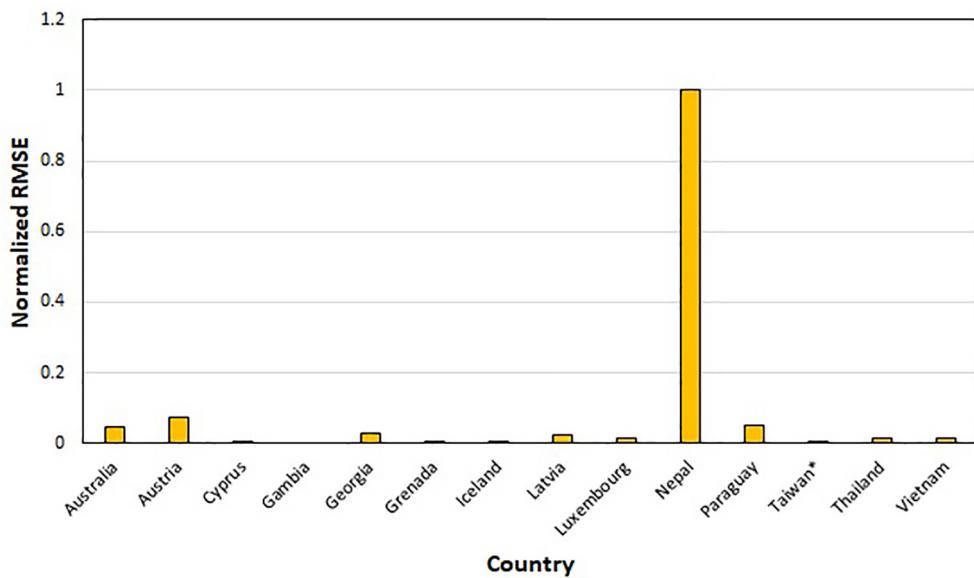
for each model. We categorize all the countries based on their time series trend and calculate the MAPE for each country using the algorithm that performs the best for that trend. We then compute the average value of MAPE for the countries within each category to get that for each model. The RMSE, MAPE, and the predicted infections with 95% confidence intervals of each model for all the countries under study are presented in the Appendix.

## 6. Conclusion

The coronavirus disease continues to spread across the globe raising questions about the optimal requirements for precautionary measures and medical resources. Current research efforts have evaluated the performance of some time series models in the literature to forecast the COVID-19 infections for selected countries. These models are evaluated by different works for different countries. Consequently, it is difficult to draw an objective comparison on the performance of these models. In addition, some time series models are not explored to forecast the COVID-19 infections. In this work, we develop and compare the performance of time series models in the literature applied to 187 countries for an objective comparison. We develop a one-to-one relationship between the



**Fig. 10.** Prediction of COVID-19 infections in Greece for the Validation Dataset using the Time Series Models.

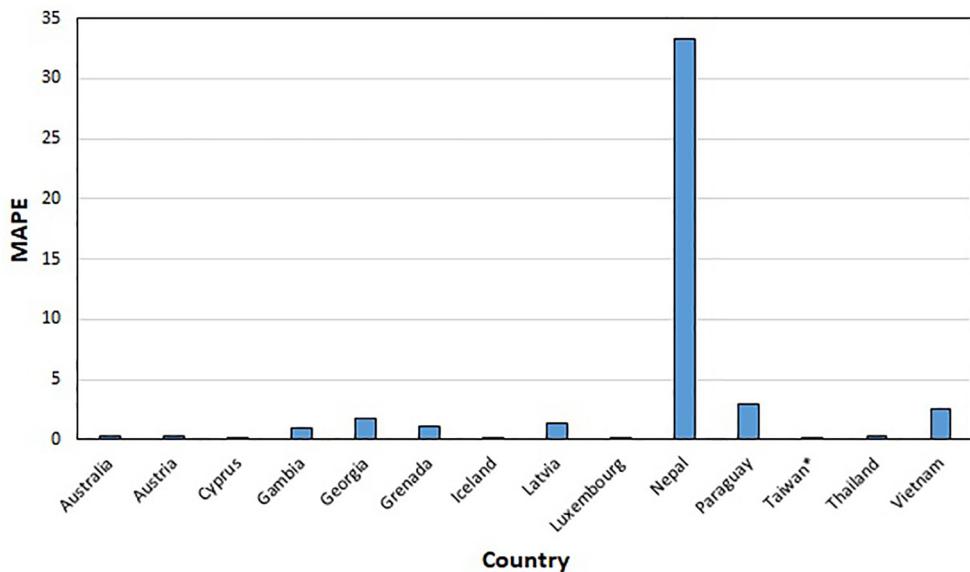
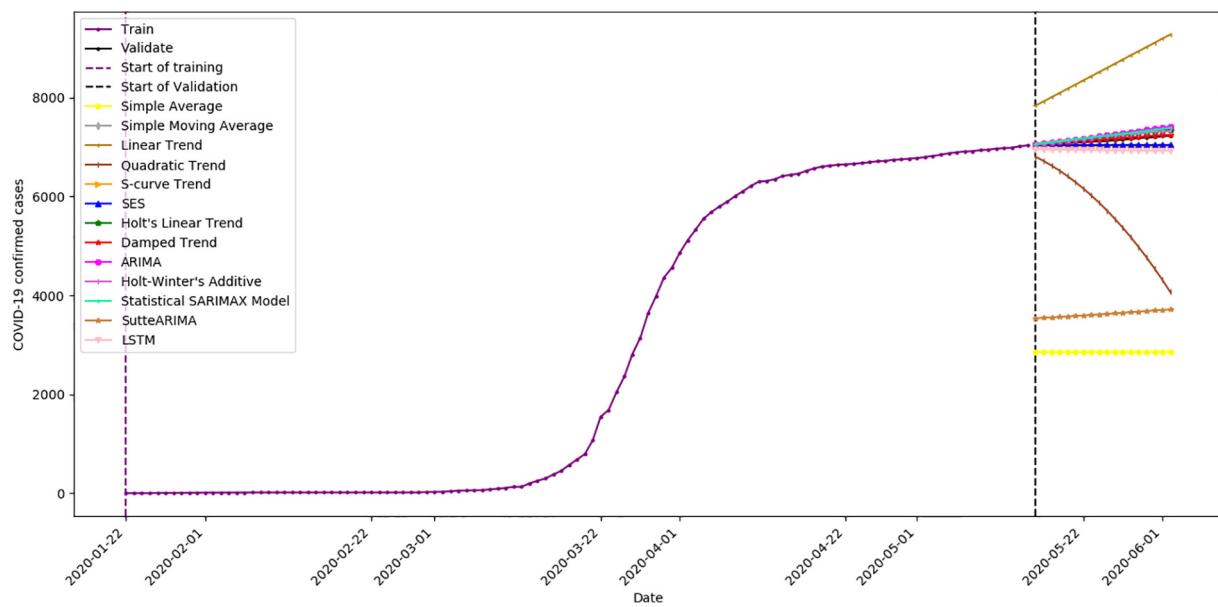


**Fig. 11.** Countries where Damped Trend model achieves the lowest RMSE.

data trend and its most accurate time series model. Our results reveal that for the exponential increasing trend, ARIMA gives the best forecast results whereas, for an exponential + linear trend, Holt's Linear Trend outperforms the other models under study. The countries that have a logistic or damped trend means that the precaution measures taken are effective as the rate of increase in the number of infection is less than the rates of the other trends. S-curve Trend model performs best for logistic trends and Damped Trend model is the most accurate for damped trends. For the countries having a stochastic trend where the number of infections increases without any pattern, it is advisable to use LSTM model and the countries having a polynomial growth, Quadratic trend model is the most accurate. Holt-winters' additive is most suitable for the countries having an alternating increasing and constant trend, whereas SSM model is the best for exponentially increasing

trends with repeated damping. Sutte-ARIMA method is best for roughly constant trends with a sudden increase.

The limitation of this paper is that it is required to extract periodically the trend of the time series infection data for a country. This is needed in order to select the model that matches the data trend to give the highest accuracy. In a dynamic system, such as COVID-19 infections, data trends should be frequently monitored. The obtained results can help the healthcare organizations to better judge the effect of the undertaken precautionary measures, and provision more efficiently the needed resources to face this disease. The extension of this work includes the development of a prediction tool that considers in addition to the number of infections, other features such as a country's healthcare facilities, economy, social status, and precaution measures. This is with the aim of helping a country to develop a national wide prevention plan.

**Fig. 12.** Countries where Damped Trend model achieves the lowest MAPE.**Fig. 13.** Prediction of COVID-19 infections in Australia for the Validation Dataset using the Time Series Models.

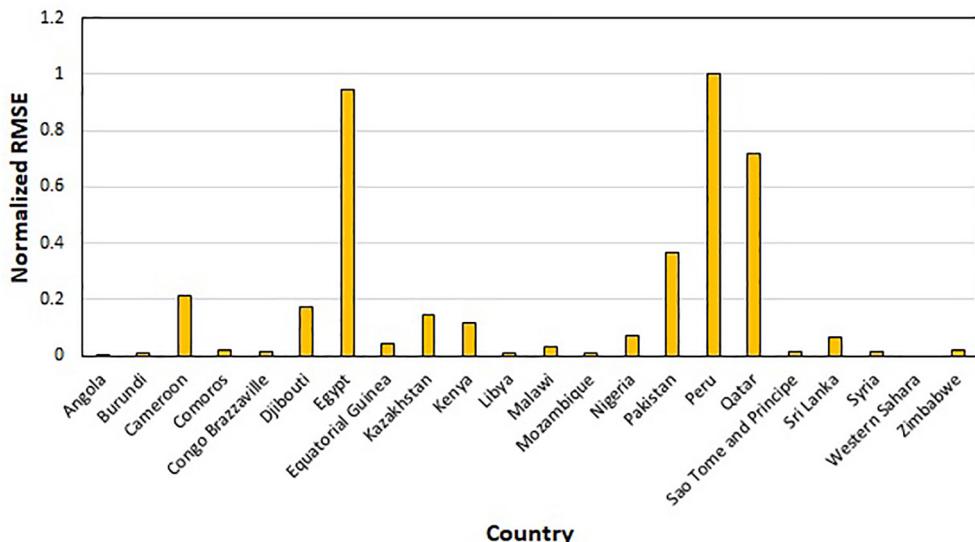


Fig. 14. Countries where Quadratic Trend model achieves the lowest RMSE.

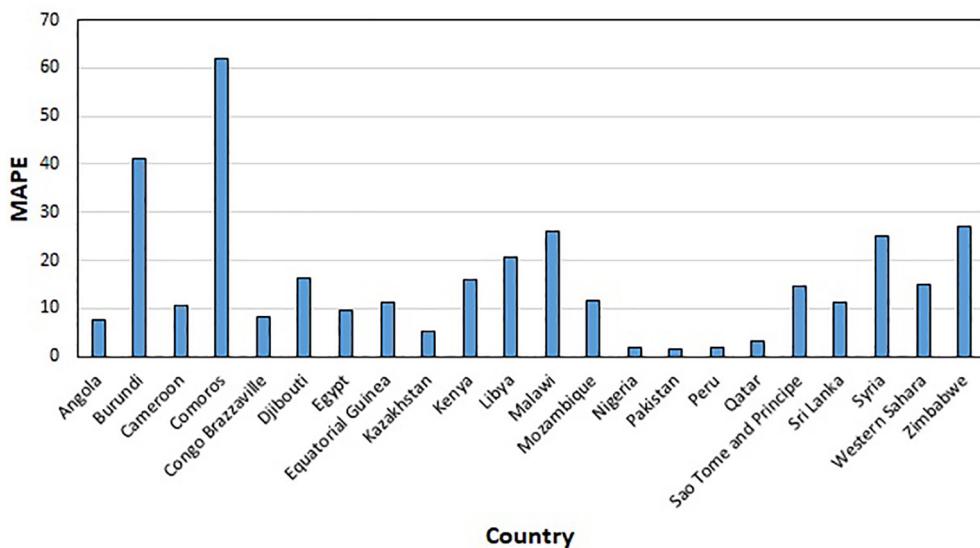
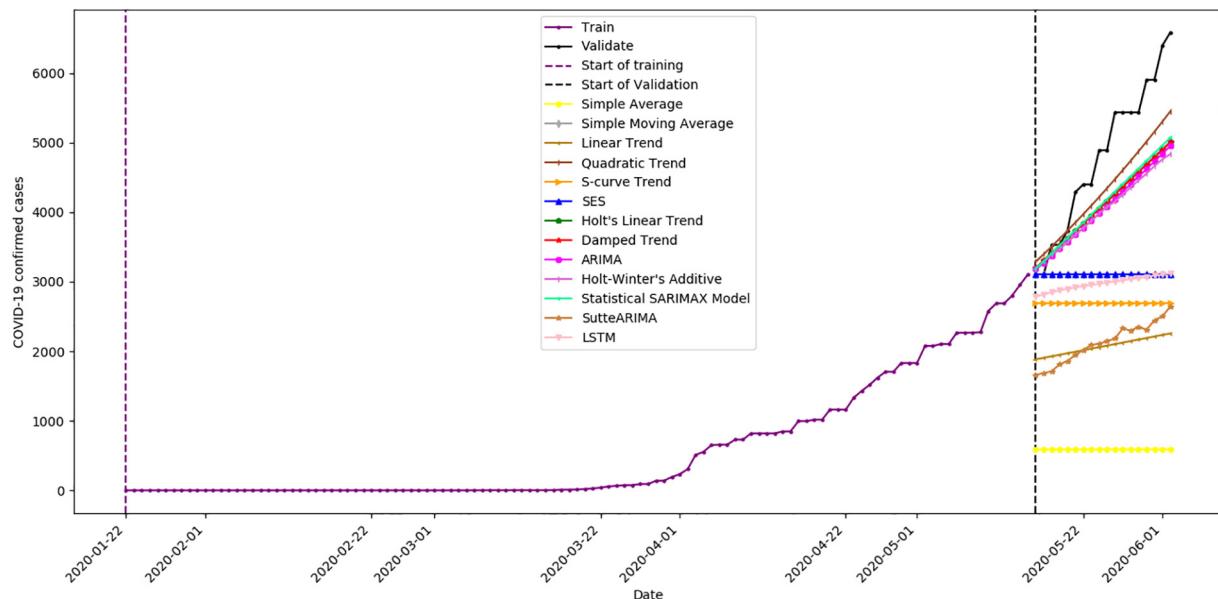
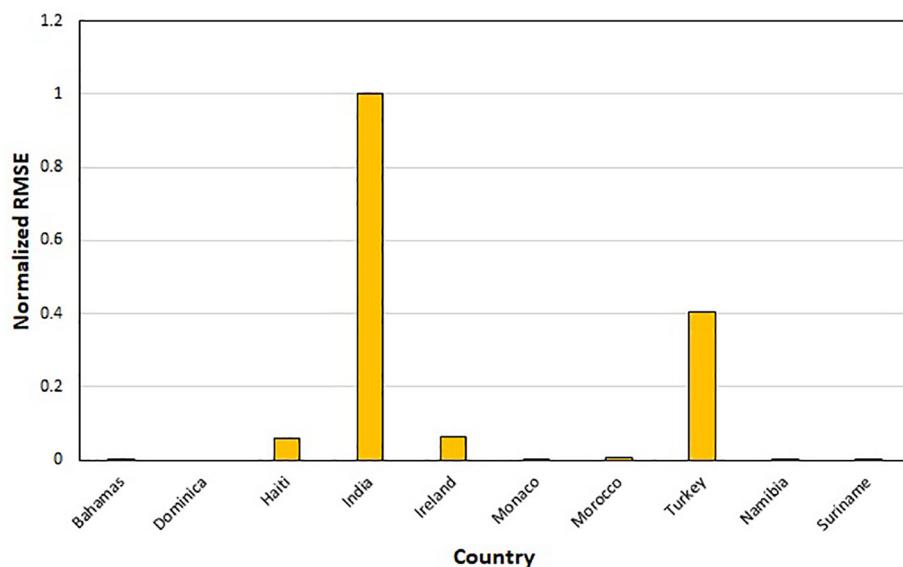


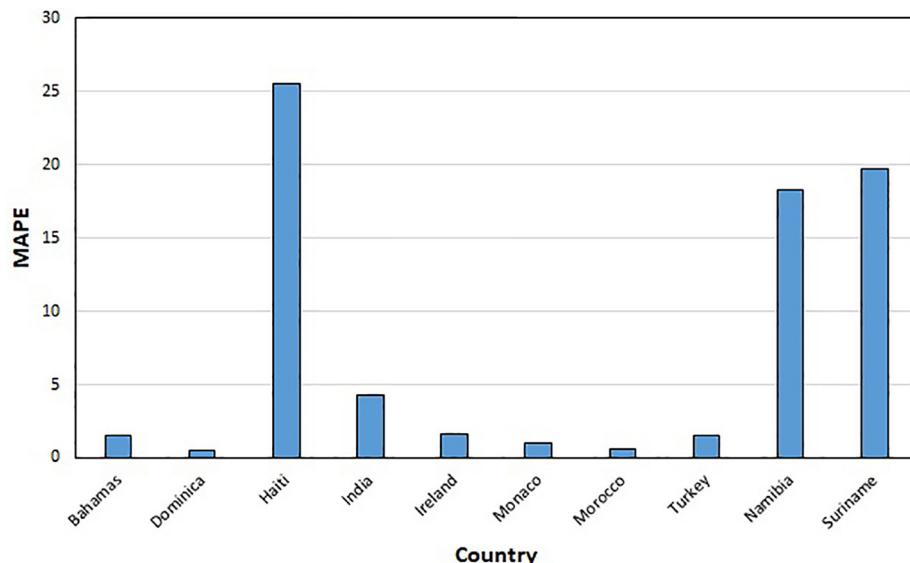
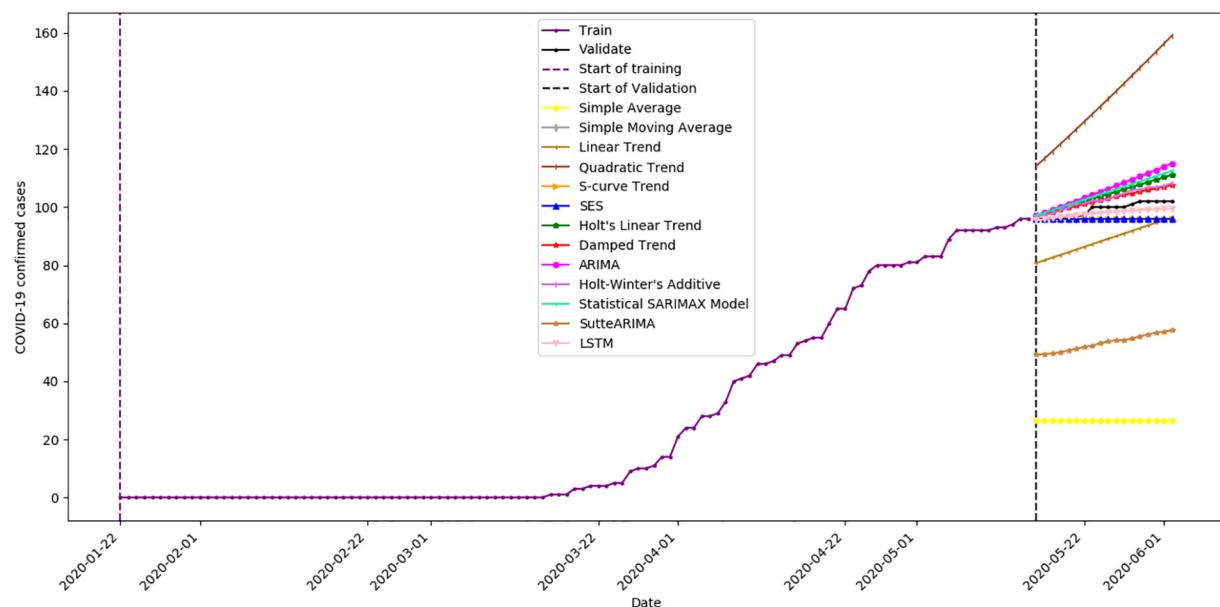
Fig. 15. Countries where Quadratic Trend model achieves the lowest MAPE.

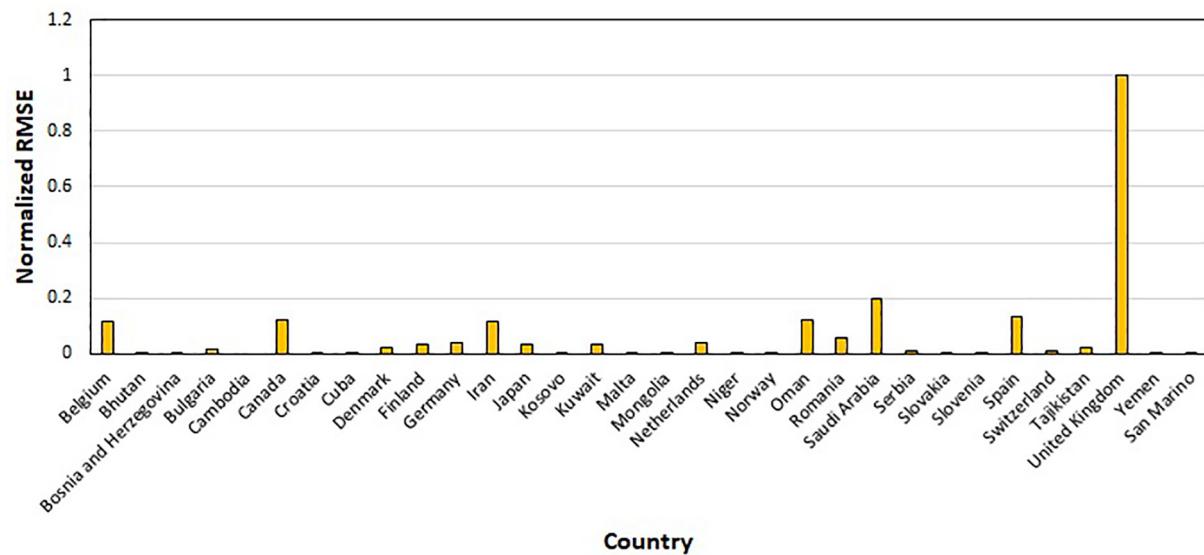


**Fig. 16.** Prediction of COVID-19 infections in Cameroon for the Validation Dataset using the Time Series Models.

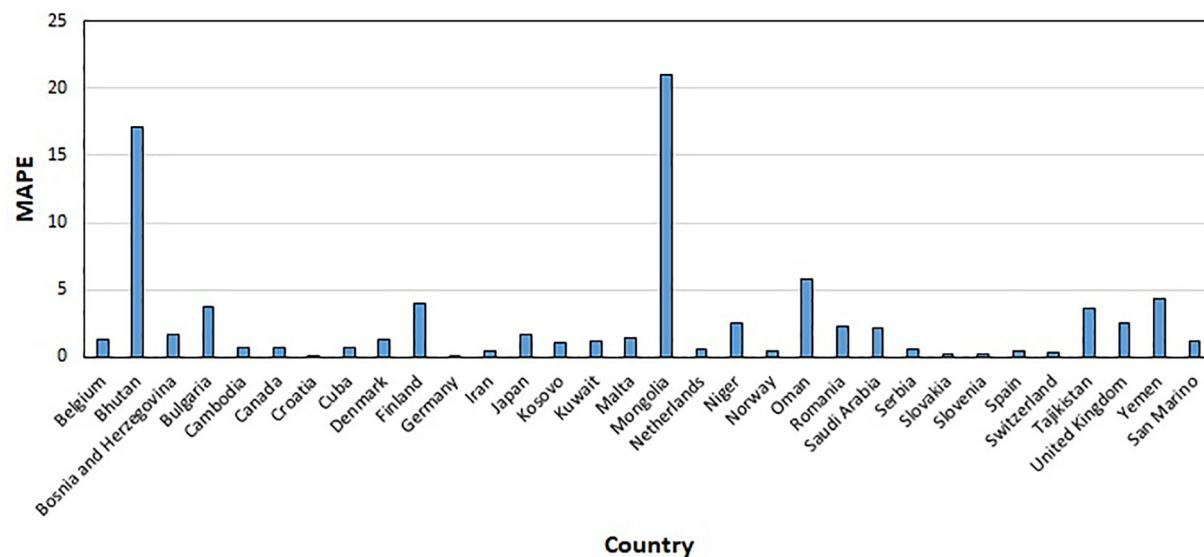


**Fig. 17.** Countries where LSTM model achieves the lowest RMSE.

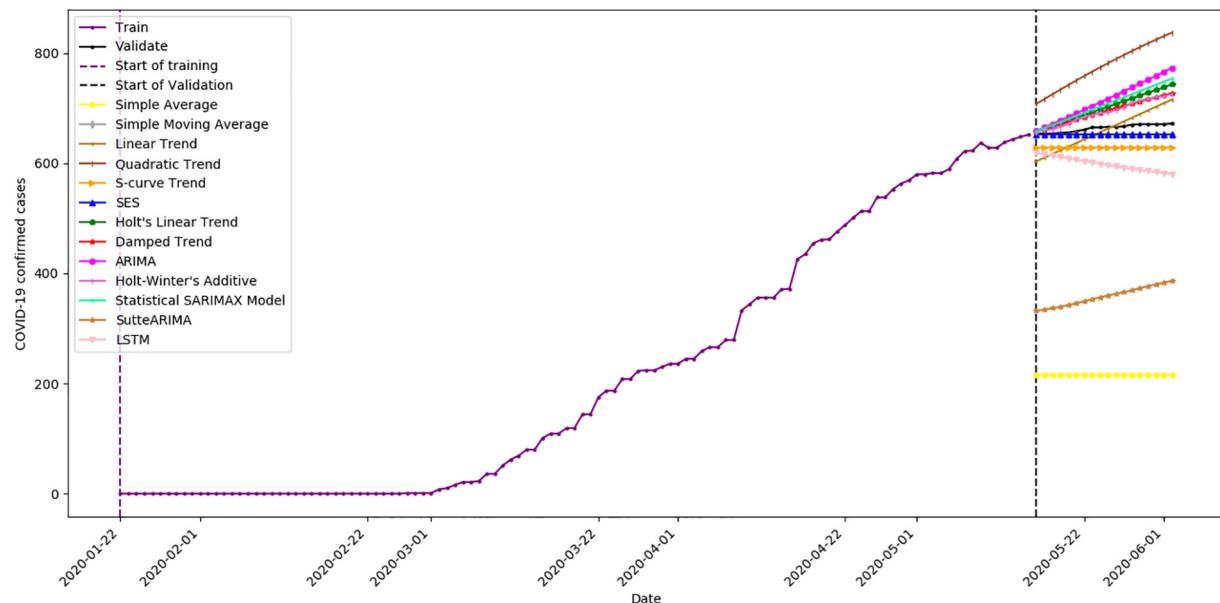
**Fig. 18.** Countries where LSTM model achieves the lowest MAPE.**Fig. 19.** Prediction of Confirmed COVID-19 Cases in Bahamas for the Testing Dataset.



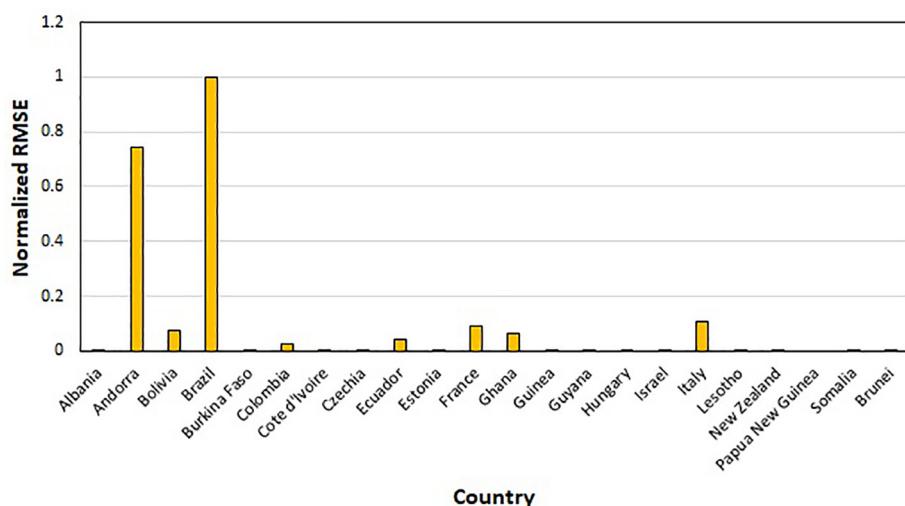
**Fig. 20.** Countries where Holt-winters' Additive model achieves the lowest RMSE.



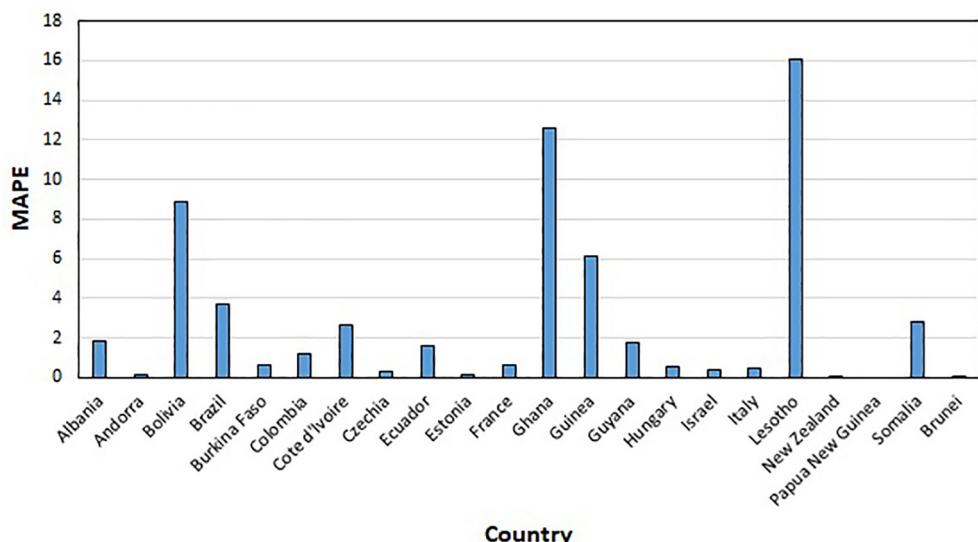
**Fig. 21.** Countries where Holt-winters' Additive model achieves the lowest MAPE.



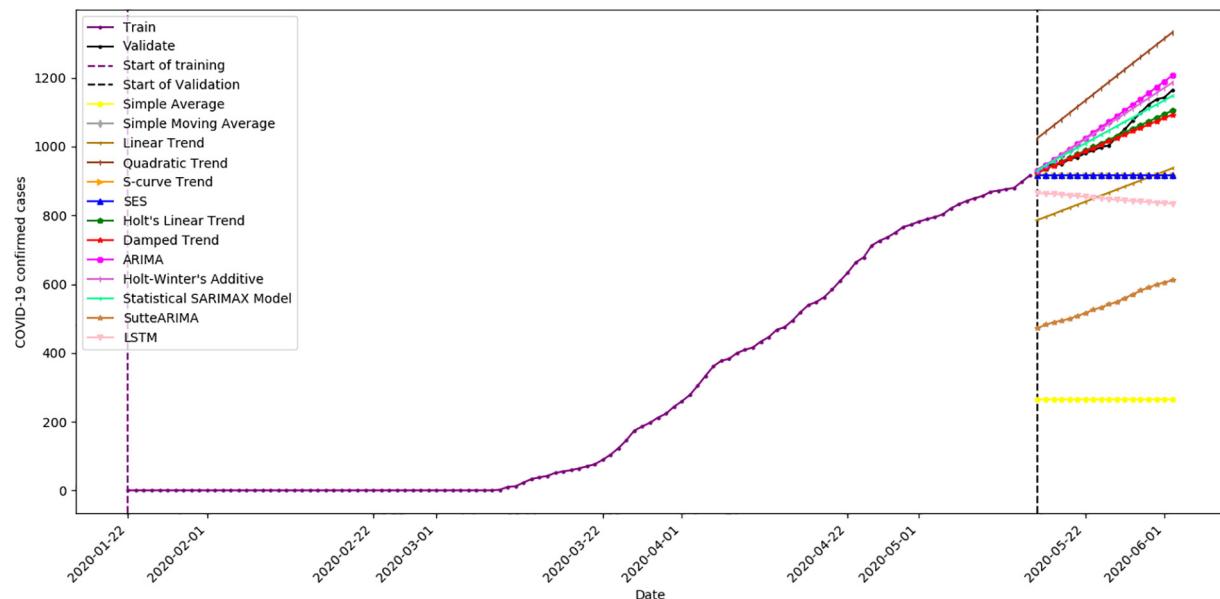
**Fig. 22.** Prediction of Confirmed COVID-19 Cases in San Marino for the Testing Dataset.



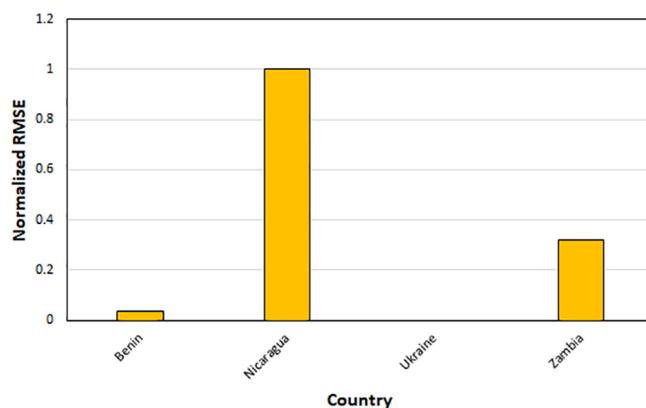
**Fig. 23.** Countries where SSM model achieves the lowest RMSE.



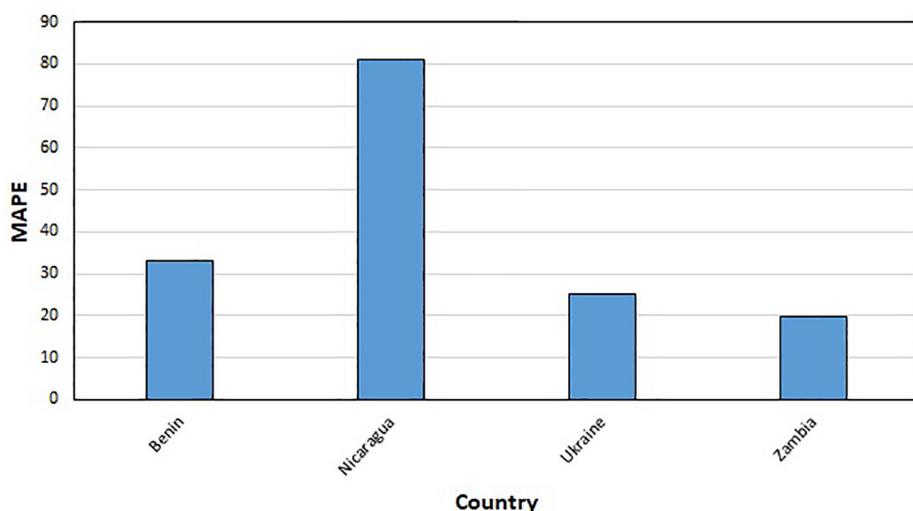
**Fig. 24.** Countries where SSM model achieves the lowest MAPE.



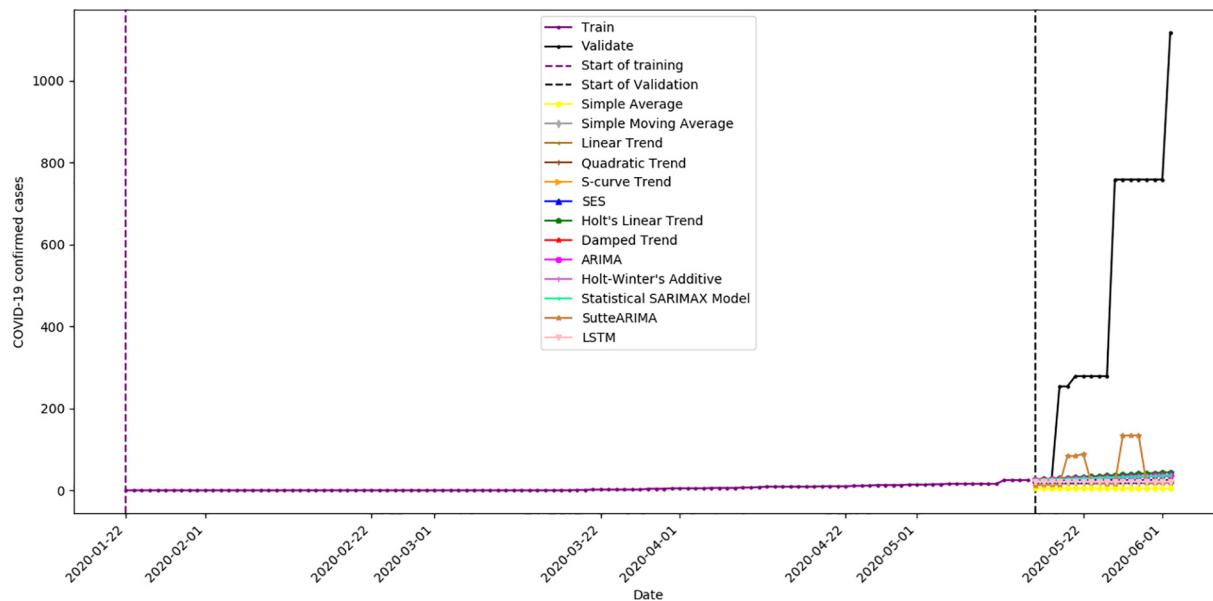
**Fig. 25.** Prediction of Confirmed COVID-19 Cases in Albania for the Testing Dataset.



**Fig. 26.** Countries where Sutte-ARIMA model achieves the lowest RMSE.



**Fig. 27.** Countries where Sutte-ARIMA model achieves the lowest MAPE.

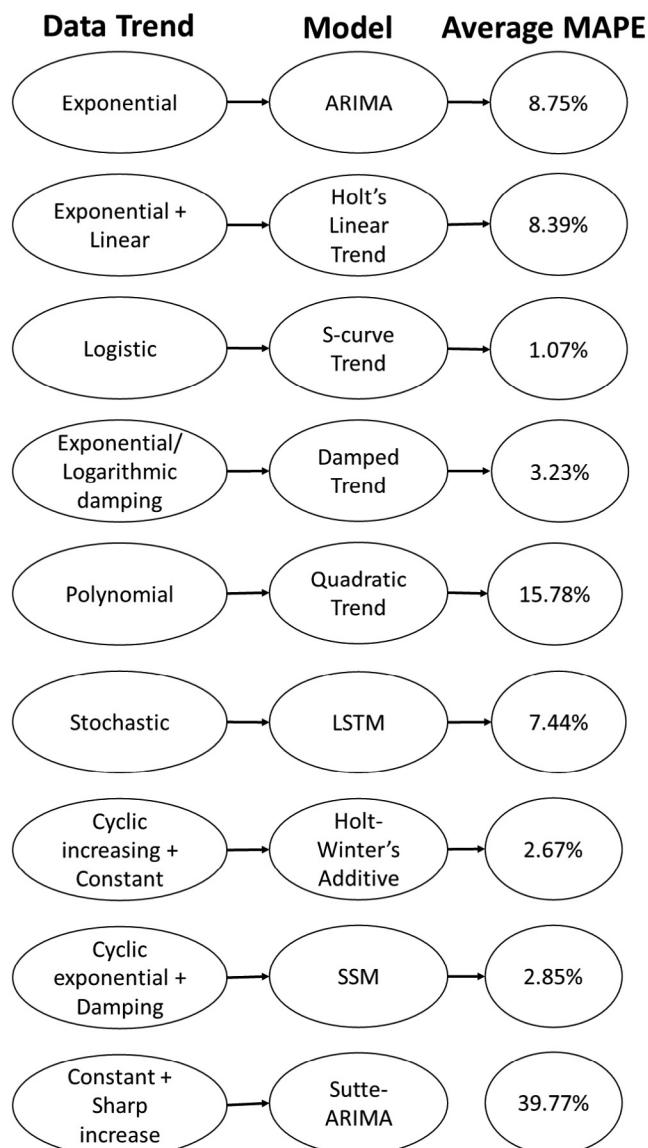


**Fig. 28.** Prediction of Confirmed COVID-19 Cases in Nicaragua for the Testing Dataset.

**Table 3**

Prediction Errors for COVID-19 Infections Obtained by the Works Comparing Time Series Models in the Literature.

Work	Country	Models	MAPE	RMSE
[7]	India	ARIMA	4.1	–
		SES	9.7	–
		Holt's linear trend	9.1	–
		Moving average	10	–
		S-curve trend	66	–
		Quadratic trend	13230	–
		Linear trend	14845	–
[11]	Turkey	ARIMA	2.578	6.171
	Germany	ARIMA	6.389	394.416
	France	ARIMA	1.301	232.490
	Italy	Holt's linear trend	589.553	7.878
	Japan	Holt's linear trend	16.403	3.682
	Canada	Holt's linear trend	29.212	8.001
	United Kingdom	Holt's linear trend	149.556	6.979
[15]	Spain	Sutte-ARIMA	0.035	–
		ARIMA	0.061	–



**Fig. 29.** One-to-one Relationship between the Data Trend and its Accurate Time Series Model with Average MAPE.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### Acknowledgments

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#### Appendix A

**Table A.1** shows the Root Mean Squared Error (RMSE) for the developed time series models for the countries under study.

**Table A.2** shows the Mean Absolute Percentage Error (MAPE) for the developed time series models for the countries under study.

**Table A.3** shows the actual cases and predicted cases using the developed time series models with 95% confidence intervals for Afghanistan.

**Table A.4** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Albania.

**Table A.5** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Algeria.

**Table A.6** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Angola.

**Table A.7** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Antigua and Barbuda.

**Table A.8** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Argentina.

**Table A.9** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Armenia.

**Table A.10** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Australia.

**Table A.11** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Austria.

**Table A.12** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Azerbaijan.

**Table A.13** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Bahamas.

**Table A.14** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Bahrain.

**Table A.15** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Bangladesh.

**Table A.16** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Barbados.

**Table A.17** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Belarus.

**Table A.18** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Belgium.

**Table A.19** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Belize.

**Table A.20** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Benin.

**Table A.21** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Bhutan.

**Table A.22** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Bolivia.

**Table A.23** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Bosnia and Herzegovina.

**Table A.24** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Botswana.

**Table A.25** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Brazil.

**Table A.26** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Brunei.

**Table A.27** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Bulgaria.

**Table A.28** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Burkina Faso.

**Table A.29** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Burma.

**Table A.30** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Burundi.

**Table A.31** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Cabo Verde.

**Table A.32** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Cambodia.

**Table A.33** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Cameroon.

**Table A.34** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Canada.

**Table A.35** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Central African Republic.

**Table A.36** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Chad.

**Table A.37** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Chile.

**Table A.38** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for China.

**Table A.39** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Colombia.

**Table A.40** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Comoros.

**Table A.41** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Congo Brazzaville.

**Table A.42** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Congo Kinshasa.

**Table A.43** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Costa Rica.

**Table A.44** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Cote d'Ivoire.

**Table A.45** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Croatia.

**Table A.46** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Cuba.

**Table A.47** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Cyprus.

**Table A.48** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Czechia.

**Table A.49** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Denmark.

**Table A.50** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Djibouti.

**Table A.51** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Dominica.

**Table A.52** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Dominican Republic.

**Table A.53** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Ecuador.

**Table A.54** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Egypt.

**Table A.55** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for El Salvador.

**Table A.56** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Equatorial Guinea.

**Table A.57** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Eritrea.

**Table A.58** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Estonia.

**Table A.59** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Eswatini.

**Table A.60** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Ethiopia.

**Table A.61** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Fiji.

**Table A.62** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Finland.

**Table A.63** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for France.

**Table A.64** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Gabon.

**Table A.65** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Gambia.

**Table A.66** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Georgia.

**Table A.67** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Germany.

**Table A.68** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Ghana.

**Table A.69** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Greece.

**Table A.70** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Grenada.

**Table A.71** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Guatemala.

**Table A.72** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Guinea-Bissau.

**Table A.73** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Guinea.

**Table A.74** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Guyana.

**Table A.75** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Haiti.

**Table A.76** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Holy See.

**Table A.77** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Honduras.

**Table A.78** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Hungary.

**Table A.79** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Iceland.

**Table A.80** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for India.

**Table A.81** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Indonesia.

**Table A.82** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Iran.

**Table A.83** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Iraq.

**Table A.84** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Ireland.

**Table A.85** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Israel.

**Table A.86** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Italy.

**Table A.87** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Jamaica.

**Table A.88** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Japan.

**Table A.89** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Jordan.

**Table A.90** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Kazakhstan.

**Table A.91** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Kenya.

**Table A.92** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Korea South.

**Table A.93** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Kosovo.

**Table A.94** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Kuwait.

**Table A.95** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Kyrgyzstan.

**Table A.96** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Laos.

**Table A.97** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Latvia.

**Table A.98** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Lebanon.

**Table A.99** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Lesotho.

**Table A.100** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Liberia.

**Table A.101** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Libya.

**Table A.102** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Liechtenstein.

**Table A.103** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Lithuania.

**Table A.104** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Luxembourg.

**Table A.105** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Madagascar.

**Table A.106** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Malawi.

**Table A.107** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Malaysia.

**Table A.108** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Maldives.

**Table A.109** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Mali.

**Table A.110** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Malta.

**Table A.111** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Mauritania.

**Table A.112** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Mauritius.

**Table A.113** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Mexico.

**Table A.114** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Moldova.

**Table A.115** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Monaco.

**Table A.116** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Mongolia.

**Table A.117** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Montenegro.

**Table A.118** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Morocco.

**Table A.119** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Mozambique.

**Table A.120** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for MS Zaandam.

**Table A.121** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Namibia.

**Table A.122** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Nepal.

**Table A.123** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Netherlands.

**Table A.124** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for New Zealand.

**Table A.125** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Nicaragua.

**Table A.126** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Niger.

**Table A.127** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Nigeria.

**Table A.128** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for North Macedonia.

**Table A.129** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Norway.

**Table A.130** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Oman.

**Table A.131** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Pakistan.

**Table A.132** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Panama.

**Table A.133** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Papua New Guinea.

**Table A.134** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Paraguay.

**Table A.135** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Peru.

**Table A.136** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Philippines.

**Table A.137** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Poland.

**Table A.138** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Portugal.

**Table A.139** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Qatar.

**Table A.140** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Romania.

**Table A.141** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Russia.

**Table A.142** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Rwanda.

**Table A.143** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Saint Kitts and Levis.

**Table A.144** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Saint Lucia.

**Table A.145** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Saint Vincent and the Grenadine.

**Table A.146** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for San Marino.

**Table A.147** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Sao Tome and Principe.

**Table A.148** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Saudi Arabia.

**Table A.149** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Senegal.

**Table A.150** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Serbia.

**Table A.151** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Seychelles.

**Table A.152** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Sierra Leone.

**Table A.153** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Singapore.

**Table A.154** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Slovakia.

**Table A.155** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Slovenia.

**Table A.156** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Somalia.

**Table A.157** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for South Africa.

**Table A.158** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for South Sudan.

**Table A.159** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Spain.

**Table A.160** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Sri Lanka.

**Table A.161** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Sudan.

**Table A.162** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Suriname.

**Table A.163** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Sweden.

**Table A.164** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Switzerland.

**Table A.165** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Syria.

**Table A.166** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Taiwan.

**Table A.167** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Tajikistan.

**Table A.168** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Tanzania.

**Table A.169** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Thailand.

**Table A.170** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Timor-Leste.

**Table A.171** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Togo.

**Table A.172** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Trinidad and Tobago.

**Table A.173** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Tunisia.

**Table A.174** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Turkey.

**Table A.175** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for United Arab Emirates.

**Table A.1726** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Uganda.

**Table A.178** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Ukraine.

**Table A.179** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for United Kingdom.

**Table A.180** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for United States.

**Table A.181** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Uruguay.

**Table A.182** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Uzbekistan.

**Table A.183** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Venezuela.

**Table A.184** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Vietnam.

**Table A.185** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for West Bank and Gaza.

**Table A.186** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Western Sahara.

**Table A.187** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Yemen.

**Table A.188** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Zambia.

**Table A.189** shows the actual and predicted cases using the developed time series models with 95% confidence intervals for Zimbabwe.

**Table A.1**  
Root Mean Squared Error for the Developed Time Series Models for the Countries under Study.

Country	Root Mean Squared Error (RMSE)												
	SA	SMA	LT	QT	ST	SES	HLT	DT	ARIMA	LSTM	HWT	SSM	Sutte-Arima
Afghanistan	10746.94	5904.49	8710.56	3084.30	5904.49	5904.49	2611.23	2611.23	787.30	3550.79	1843.77	886.75	5788.17
Albania	765.93	134.69	169.19	153.31	134.69	134.69	27.93	33.16	42.43	197.85	35.07	22.49	488.98
Algeria	7043.02	1919.66	3713.65	1170.19	1919.66	1919.66	85.30	85.30	265.38	890.01	127.05	124.05	4006.84
Andorra	12276.10	12007.37	11914.11	12040.33	12007.37	12007.37	11998.44	12000.41	12000.97	12007.18	12002.85	11001.45	12219.53
Angola	57.70	23.31	32.17	5.91	25.81	23.31	12.04	15.48	10.36	33.18	13.82	12.89	37.42
Antigua and Barbuda	16.01	0.41	3.99	1.90	0.41	0.41	0.35	0.39	1.03	0.36	0.56	0.98	12.97
Argentina	11517.07	6033.57	8004.80	3153.89	6323.73	6033.57	3291.35	3291.35	2658.52	6973.36	2844.02	2872.95	7408.96
Armenia	6464.97	3426.16	4672.72	1806.85	3426.16	3426.16	1879.07	1879.07	1516.78	3410.62	1669.66	1590.14	4155.52
Australia	4278.00	110.90	1479.83	1719.03	124.95	110.90	75.76	27.74	118.29	201.90	87.16	103.43	3507.26
Austria	10081.08	432.27	2945.42	3576.62	432.27	432.27	96.47	42.61	412.25	820.18	44.57	361.49	8063.27
Azerbaijan	3795.18	1589.02	2284.65	501.12	1589.02	1589.02	618.81	618.81	441.07	597.39	507.60	523.40	2322.21
Bahamas	72.93	4.00	10.94	38.70	4.00	4.00	5.27	3.46	7.44	1.90	3.81	6.13	46.05
Bahrain	8291.77	3102.30	5617.71	509.88	3775.69	3102.30	257.82	257.82	825.23	1569.79	854.69	674.22	4129.73
Bangladesh	33995.25	17679.13	27296.41	6219.76	17679.13	17679.13	7324.87	7324.87	1133.37	5694.93	5102.86	5446.11	17760.09
Barbados	59.73	6.05	7.34	7.44	6.05	6.05	3.54	4.26	3.36	6.33	4.61	3.60	46.82
Belarus	32864.63	10063.72	21521.95	8379.53	10063.72	10063.72	107.20	107.20	944.04	10872.34	155.98	167.00	17592.04
Belgium	40839.04	2627.52	4027.92	16568.98	2627.52	2627.52	1484.88	1085.11	1325.94	4177.71	979.46	1022.61	27860.78
Belize	11.92	0.00	2.33	5.00	0.00	0.00	0.01	0.00	2.44	0.37	0.37	0.00	8.02
Benin	188.45	141.93	96.81	299.32	165.03	141.93	281.94	177.34	271.29	138.63	131.78	261.77	81.38
Bhutan	26.27	10.87	19.88	13.63	22.62	10.87	12.44	12.44	25.94	1844395.73	7.65	28.93	26.74
Bolivia	6856.21	4032.22	5687.37	2295.91	4052.15	4032.22	2109.47	2109.47	1759.55	1633.30	1913.05	1104.54	4247.79
Bosnia and Herzegovina	1826.48	188.09	456.36	758.11	188.09	188.09	116.69	106.31	98.35	78.99	48.37	77.62	1154.50
Botswana	25.31	9.19	8.97	4.28	9.19	9.19	8.12	8.76	3.80	8.81	8.29	7.32	17.28
Brazil	364400.89	187657.73	287630.07	81043.92	187657.73	187657.73	72817.65	72817.65	271875.87	207202.33	15096.01	14754.62	82502.44
Brunei	72.52	0.16	48.60	82.23	2.24	0.16	1.07	0.57	0.17	2.13	2.21	0.16	70.43
Bulgaria	1899.31	278.69	716.39	719.41	278.69	278.69	156.21	156.21	219.06	602.48	126.59	154.16	1098.22
Burkina Faso	582.38	51.85	47.58	95.08	58.08	51.85	21.06	10.85	6.99	106.16	11.74	6.37	410.77
Burma	161.68	26.60	50.51	98.62	27.55	26.60	12.95	18.35	21.55	32.14	25.22	21.93	110.89
Burundi	42.44	31.65	33.72	20.81	31.65	31.65	31.15	31.65	27.78	31.54	29.51	29.31	34.92
Cabo Verde	342.70	70.05	224.18	114.86	70.05	70.05	93.40	93.40	97.52	133.88	84.85	85.58	143.00
Cambodia	65.55	1.91	39.96	67.40	1.91	1.91	1.91	1.91	1.93	2.68	1.11	1.85	62.48
Cameroon	4345.07	2003.20	2891.90	649.39	2365.64	2003.20	875.51	875.51	927.67	2070.49	968.93	839.71	2796.61
Canada	69104.86	11485.07	26295.46	29410.94	11485.07	11485.07	2238.85	2238.85	2349.43	11758.47	1020.80	1345.23	41746.56
Central African Republic	674.33	428.22	617.91	409.59	562.92	428.22	156.22	156.22	355.04	88874.71	371.80	345.55	496.77
Chad	626.26	251.94	507.44	74.81	351.40	251.94	25.57	25.57	60.62	157.05	47.84	40.86	302.50
Chile	70035.83	39327.80	55167.28	24055.39	39327.80	39327.80	18584.63	18584.63	11121.09	48780.86	11884.70	13063.23	41080.47
China	14994.09	67.97	24559.39	20755.43	141.85	67.97	11.31	18.46	4458.70	410.50	316.73	12.42	43882.87
Colombia	20104.43	8926.32	14304.35	2381.92	8926.32	8926.32	2692.37	2692.37	1465.11	6503.02	2121.31	366.79	11340.38
Comoros	77.83	69.29	74.96	61.01	69.29	69.29	65.71	68.38	71.25	75.19	69.55	71.10	71.36
Congo Brazzaville	440.78	134.57	265.75	47.36	185.35	134.57	51.47	51.47	65.99	172.88	58.59	64.61	215.89
Congo Kinshasa	2166.97	1154.01	1662.15	580.89	1154.01	1154.01	545.02	545.02	566.88	1387.63	564.86	869.13	1393.39
Costa Rica	678.81	137.76	83.53	124.85	137.76	137.76	35.50	46.50	16.54	168.31	18.21	19.30	469.52
Cote d'Ivoire	2088.90	541.54	1070.86	472.86	541.54	541.54	93.29	93.29	112.78	501.05	99.39	76.37	1166.74
Croatia	1471.36	19.30	224.67	233.34	20.23	19.30	80.38	64.08	23.41	43.76	3.71	20.73	1109.57
Cuba	1502.59	135.17	374.20	959.88	135.17	135.17	47.69	32.64	24.13	300.96	15.96	17.18	962.56
Cyprus	626.07	25.47	63.13	140.32	25.47	25.47	8.42	2.49	5.51	27.76	3.19	3.46	463.16
Czechia	8638.71	8035.65	7962.83	7872.72	8035.65	8035.65	8005.61	8011.08	83.80	8066.73	8014.93	38.17	4442.72
Denmark	8140.85	612.87	757.13	2145.44	612.87	612.87	353.92	266.22	331.65	1761.29	188.87	241.82	5605.33
Djibouti	2261.97	1342.50	1528.03	523.20	1342.50	1342.50	1137.38	1212.81	1105.49	1414.66	1244.15	1130.44	1743.95
Dominica	9.35	0.47	4.40	5.45	0.47	0.47	0.47	0.47	2.12	0.45	0.47	0.46	7.15
Dominican Republic	12758.62	3657.20	6936.64	2439.45	3657.20	3657.20	391.20	391.20	91.06	1510.04	405.31	342.52	7359.00
Ecuador	29892.14	5638.80	12145.61	18604.29	5260.72	5638.80	2453.71	4576.84	3273.12	5317.10	680.62	656.16	16855.67
Egypt	17160.91	8608.61	12412.15	2847.97	8608.61	8608.61	4539.43	4539.43	4185.28	6214.59	4417.73	4094.84	10986.53

Table A.1 (continued)

Country	Root Mean Squared Error (RMSE)												
	SA	SMA	LT	QT	ST	SES	HLT	DT	ARIMA	LSTM	HWT	SSM	Sutte-Arima
El Salvador	1842.50	845.77	1438.64	311.16	845.77	845.77	174.40	174.40	52.24	245.92	70.79	100.11	974.95
Equatorial Guinea	952.53	471.11	729.28	130.01	611.29	471.11	179.30	219.06	251.77	839.16	294.92	279.70	614.17
Eritrea	24.42	0.00	7.63	2.35	0.00	0.00	0.02	0.00	0.00	0.20	0.00	0.00	19.50
Estonia	1178.93	67.62	183.69	81.05	67.62	67.62	4.45	14.32	8.11	103.98	22.96	3.86	906.13
Eswatini	223.18	66.95	146.61	74.02	69.58	66.95	13.43	21.22	5.89	93.61	10.79	10.17	121.42
Ethiopia	719.11	521.37	606.29	418.27	521.37	521.37	404.94	404.94	393.39	554.83	401.79	405.36	540.96
Fiji	11.21	0.00	3.54	1.05	0.00	0.00	0.01	0.00	1.56	0.31	0.00	0.00	8.34
Finland	4885.86	423.00	956.48	1803.20	423.00	423.00	365.39	351.19	428.98	1157.88	314.52	355.46	3100.56
France	125209.43	5341.45	9072.66	40552.07	9519.18	5341.45	2332.62	1382.73	1795.12	4760.12	1698.26	1360.82	90898.69
Gabon	1999.01	976.49	1684.28	593.47	1433.96	976.49	91.68	91.68	697.90	2710.33	173.42	661.51	680.82
Gambia	19.73	1.70	8.09	8.98	2.21	1.70	4.03	0.30	4.94	3.74	3.65	3.53	10.20
Georgia	558.09	70.25	145.43	242.40	70.25	70.25	21.09	16.21	34.67	28.52	20.01	23.53	350.34
Germany	118817.87	5723.37	14470.35	9134.71	7625.81	5723.37	2454.60	1274.27	1502.16	28881.94	345.36	1059.00	89415.97
Ghana	6227.69	1495.43	4238.33	1601.11	2750.16	1495.43	1192.37	1192.37	1342.14	3815.55	1054.87	930.10	2753.52
Greece	1853.07	77.67	279.21	165.65	77.67	77.67	109.69	85.26	172.81	188.50	102.07	153.34	1362.26
Grenada	15.59	0.71	0.84	3.37	1.58	0.71	1.22	0.35	4.00	0.39	0.36	1.21	9.45
Guatemala	3539.28	2244.41	3024.98	1618.46	2244.41	2244.41	1155.07	1155.07	811.68	50986.36	819.02	902.13	2134.38
Guinea	1068.45	262.98	797.91	285.43	262.98	262.98	216.87	216.87	107.05	733.38	116.20	87.67	520.98
Guinea-Bissau	2881.47	873.45	1782.64	874.13	873.45	873.45	131.85	131.85	73.96	607.02	136.23	128.61	1619.64
Guyana	109.23	23.77	43.70	23.35	26.35	23.77	3.72	5.83	7.52	17.82	3.04	2.97	63.90
Haiti	1264.54	1031.00	1183.39	964.04	1114.06	1031.00	792.61	792.61	561.24	415.27	651.57	594.27	857.48
Holy See	7.83	0.00	1.00	1.18	0.00	0.00	0.42	0.06	1.10	1.01	0.92	0.73	5.52
Honduras	3783.58	1822.58	2892.11	667.52	1822.58	1822.58	705.75	705.75	550.45	1002.04	761.31	627.78	2219.77
Hungary	2855.35	333.49	752.67	1451.99	371.33	333.49	69.52	43.03	38.53	166.79	38.45	24.13	1840.77
Iceland	1034.91	2.47	483.76	503.71	3.33	2.47	1.03	0.49	0.96	8.32	1.03	1.07	902.20
India	136699.63	68109.98	104769.65	21023.20	71364.68	68109.98	29256.57	29256.57	23783.35	6814.80	26719.94	26649.03	81982.50
Indonesia	19316.43	6678.90	11162.58	1519.63	6678.90	6678.90	1544.53	1544.53	452.01	2153.18	1138.52	697.74	11151.17
Iran	99703.35	23394.05	21782.97	14597.98	28632.43	23394.05	5253.49	5315.77	3565.82	35772.98	1002.49	2154.98	65965.57
Iraq	4246.24	2053.83	2560.91	1118.82	2093.92	2053.83	1192.24	1192.24	1110.48	1922.81	1214.59	1178.24	2876.89
Ireland	18295.24	731.59	3147.76	11694.04	731.59	731.59	1635.49	1339.86	1457.63	423.11	1535.05	1288.66	11648.48
Israel	11256.65	300.65	1362.31	3390.68	300.65	300.65	113.41	101.52	114.58	566.06	216.68	96.02	8413.08
Italy	148054.09	6410.82	20293.24	6440.35	6410.82	6410.82	5243.23	4227.71	1952.00	14728.23	2200.66	1574.86	113815.91
Jamaica	443.91	49.32	157.82	363.78	51.05	49.32	9.17	22.05	30.15	114.01	33.16	31.43	288.04
Japan	12071.08	383.82	1746.65	8397.59	1303.33	383.82	752.52	544.99	745.98	526.55	310.60	646.57	7932.74
Jordan	507.75	110.30	110.45	138.57	123.25	110.30	18.34	22.55	21.47	119.77	69.09	36.19	348.93
Kazakhstan	7769.52	3392.47	5094.04	441.19	3392.47	3392.47	1918.95	1918.95	1807.07	4255.35	1966.38	1972.71	5087.98
Kenya	1293.26	718.62	939.49	350.75	718.62	718.62	475.07	475.07	448.28	505.47	482.53	474.94	890.04
Korea-South	4878.31	292.05	3833.55	5725.69	292.05	292.05	60.23	130.67	50.15	124.93	152.92	89.04	5605.83
Kosovo	789.02	86.02	210.01	471.80	86.02	86.02	40.80	17.26	60.84	166.86	14.51	49.02	481.44
Kuwait	20399.54	9637.10	16340.61	4632.42	9637.10	9637.10	1557.52	1557.52	735.16	12227.91	285.15	316.99	10249.86
Kyrgyzstan	1236.11	411.89	642.00	136.53	411.89	411.89	135.90	135.90	105.04	427.65	125.12	132.89	759.29
Laos	11.71	0.00	4.06	1.56	0.00	0.00	0.00	0.00	2.48	0.39	0.26	0.38	8.49
Latvia	717.93	75.05	40.10	29.67	75.05	75.05	15.64	15.30	17.94	169.79	17.25	15.61	518.39
Lebanon	783.69	228.50	166.02	311.10	233.20	228.50	106.02	126.11	176.61	244.12	189.45	179.87	620.25
Lesotho	1.71	0.82	1.62	1.06	0.82	0.82	0.83	0.70	0.46	899458302.32	0.82	0.30	1.02
Liberia	218.05	47.32	105.27	103.27	65.28	47.32	7.16	9.77	5.56	83.46	8.88	6.62	126.70
Libya	86.09	49.48	47.02	29.83	49.48	49.48	48.91	49.33	45.09	49.20	49.17	45.96	68.35
Liechtenstein	44.65	0.00	25.96	37.35	0.00	0.00	0.04	0.01	0.00	4.63	0.35	0.00	41.00
Lithuania	1107.82	107.49	42.14	96.54	107.49	107.49	9.18	22.59	18.15	122.15	26.47	10.37	799.83
Luxembourg	2470.30	69.97	685.48	542.60	69.97	69.97	27.64	8.56	40.86	712.15	11.46	33.44	1975.69
Madagascar	522.16	354.75	404.97	311.89	394.07	354.75	257.89	257.89	330.81	371.39	280.03	287.41	432.33
Malawi	172.89	134.68	148.97	102.59	134.68	134.68	117.35	122.73	117.55	142.54	120.59	118.17	136.01
Malaysia	5023.89	626.25	202.63	310.56	689.96	626.25	153.45	198.02	199.92	1076.77	266.91	229.66	3728.92
Maldives	1308.01	448.25	960.74	245.73	448.25	448.25	52.98	52.98	73.82	448.40	53.40	53.33	658.32

(continued on next page)

Table A.1 (continued)

Country	Root Mean Squared Error (RMSE)												
	SA	SMA	LT	QT	ST	SES	HLT	DT	ARIMA	LSTM	HWT	SSM	Sutte-Arima
Mali	942.74	307.12	570.58	247.15	307.12	307.12	82.90	82.90	33.65	156.73	73.99	48.49	536.93
Malta	423.35	70.56	47.36	29.01	88.18	70.56	17.38	20.61	47.55	109.23	10.29	39.77	280.53
Mauritania	335.05	313.89	328.32	323.61	331.32	313.89	280.72	280.72	153.14	561205.67	225.79	154.29	227.50
Mauritius	205.26	1.90	70.57	32.90	1.90	1.90	1.82	1.89	1.91	4.05	6.08	1.91	167.32
Mexico	66417.18	30081.57	49598.68	5420.24	30081.57	30081.57	9377.33	9377.33	3932.35	32235.89	4278.54	4734.54	36500.21
Moldova	6064.44	1657.92	3078.89	1276.13	1657.92	1657.92	68.24	68.24	235.72	1428.14	235.22	133.07	3436.42
Monaco	58.84	1.96	20.97	20.09	2.88	1.96	1.30	1.51	2.70	1.13	2.37	2.64	49.96
Mongolia	139.68	57.93	106.70	72.38	112.42	57.93	47.98	47.98	53.19	3547.06	33.77	54.40	99.64
Montenegro	204.50	0.00	58.14	22.08	0.00	0.00	0.76	0.35	1.28	2.05	0.01	1.15	161.46
Morocco	6022.13	836.11	2473.33	3049.35	836.11	836.11	546.31	546.31	104.59	47.89	208.99	102.68	3684.01
Mozambique	183.70	93.49	129.32	34.97	107.00	93.49	46.86	53.06	58.25	81.14	55.85	58.00	126.11
MS Zaandam	5.41	0.00	2.26	1.82	0.00	0.00	0.00	0.00	1.45	0.02	0.12	0.85	3.88
Namibia	13.56	5.27	6.19	11.48	5.27	5.27	5.27	5.27	5.27	5.04	5.16	5.27	12.37
Nepal	988.74	795.88	928.85	720.63	918.34	795.88	588.58	588.58	678.21	23660.37	781.43	674.64	787.50
Netherlands	31760.48	1851.77	1770.01	10414.90	1914.31	1851.77	905.18	650.39	472.33	1163.51	317.56	323.55	22462.33
New Zealand	938.88	5.38	284.43	94.05	6.33	5.38	4.74	1.88	1.93	2.95	3.59	1.75	751.28
Nicaragua	563.69	547.39	553.60	541.09	547.39	547.39	535.88	540.84	540.18	550.14	540.84	540.77	524.11
Niger	701.50	57.09	132.93	291.82	57.09	57.09	74.52	37.29	70.27	70.90	27.78	61.39	438.42
Nigeria	7564.04	3060.08	5675.38	210.56	3060.08	3060.08	647.29	647.29	285.42	1949.59	548.03	500.09	4063.44
North Macedonia	1535.71	320.98	409.80	353.26	320.98	320.98	106.15	124.65	89.43	308.55	104.24	108.22	1026.29
Norway	5118.41	153.88	1335.91	1198.17	153.88	153.88	125.79	83.47	101.56	288.84	46.22	83.39	4127.17
Oman	7732.91	4187.48	5905.64	2078.36	4187.48	4187.48	1952.93	1952.93	4201.33	5101.66	1017.94	4201.17	6016.45
Pakistan	51041.77	20037.04	36041.63	1106.57	20037.04	20037.04	3377.58	3377.58	1777.17	22444.18	3123.76	3104.73	27630.69
Panama	9356.23	2544.55	4238.31	2308.34	2544.55	2544.55	766.67	766.67	624.58	4887.82	826.07	806.05	5767.54
Papua New Guinea	5.64	0.00	0.43	4.67	0.00	0.00	0.02	0.00	0.76	0.10	0.13	0.00	3.67
Paraguay	758.32	137.99	441.82	266.75	137.99	137.99	110.35	31.11	38.83	535.40	129.16	55.89	417.69
Peru	117762.10	49472.20	85813.83	3003.68	50001.87	49472.20	13224.27	13224.27	7951.29	4454.97	9672.48	4987.09	65126.28
Philippines	12175.43	3491.12	5352.59	1814.50	4106.41	3491.12	1085.21	1085.21	916.51	2733.80	1157.42	1082.90	7544.00
Poland	17341.42	3929.62	7174.95	4022.84	3929.62	3929.62	166.86	166.86	693.66	7977.33	346.77	370.09	10261.61
Portugal	22283.72	2550.50	2787.03	5959.11	2782.41	2550.50	93.28	284.08	142.96	3989.23	126.66	123.31	15226.20
Qatar	41911.97	18086.55	30752.31	2166.86	20741.60	18086.55	4334.43	4334.43	2171.22	42465.24	3418.33	3382.59	23123.78
Romania	14204.89	1932.72	4551.83	6053.09	1932.72	1932.72	732.80	732.80	751.13	2515.82	507.18	509.22	8682.31
Russia	317213.43	97049.36	219554.68	66716.83	115587.34	97049.36	15907.71	15907.71	25348.32	56723.02	17605.09	18413.40	159860.56
Rwanda	257.56	54.38	77.66	75.42	54.38	54.38	33.21	39.98	51.69	86.77	56.09	51.87	188.64
Saint Kitts and Nevis	9.48	0.00	2.75	1.08	0.00	0.00	0.01	0.00	2.64	0.25	0.14	0.05	6.40
Saint Lucia	11.25	0.00	2.91	1.30	0.00	0.00	0.26	0.01	1.61	0.41	0.00	0.01	8.31
Saint Vincent and the Grenadines	15.67	5.15	4.42	3.89	5.15	5.15	4.88	5.12	2.45	4.74	5.16	4.11	10.34
San Marino	448.43	13.49	27.92	117.07	36.30	13.49	41.42	33.10	58.32	67.98	12.17	47.84	305.78
Sao Tome and Principe	343.65	156.03	279.29	51.52	176.50	156.03	72.94	145.23	81.26	268.30	140.99	78.79	202.66
Saudi Arabia	66062.14	25586.86	46796.66	4094.61	25586.86	25586.86	5082.92	5082.92	73029.24	25575.11	1700.30	4329.10	30744.23
Senegal	2794.29	888.88	1929.56	266.27	888.88	888.88	205.95	205.95	404.30	214.27	269.60	282.44	1331.55
Serbia	8449.23	714.76	1926.01	5488.50	908.33	714.76	199.73	98.35	103.17	333.62	82.20	86.87	5515.05
Seychelles	5.77	0.00	3.79	5.90	0.00	0.00	0.00	0.00	0.81	0.35	0.09	0.00	5.16
Sierra Leone	664.18	284.21	532.85	77.51	382.81	284.21	20.87	20.87	73.29	325.27	40.39	53.91	308.71
Singapore	27163.70	5399.40	14889.46	13054.71	6108.27	5399.40	2548.80	2548.80	3707.30	3435.19	2913.82	3156.00	13966.48
Slovakia	1044.86	30.61	70.32	491.94	52.77	30.61	29.45	16.11	29.25	133.72	3.78	23.95	741.64
Slovenia	887.17	5.47	288.50	181.00	6.34	5.47	17.60	13.66	11.23	38.55	2.88	9.98	729.59
Somalia	1535.23	458.21	1041.26	453.42	458.21	458.21	61.53	61.53	86.47	105.23	157.62	54.78	798.26
South Africa	22728.33	12197.32	17599.89	6760.28	12867.56	12197.32	5478.05	5478.05	3724.16	10269.55	4228.15	4247.43	13449.91
South Sudan	730.67	537.56	682.18	460.24	637.55	537.56	358.44	358.44	273.12	437.41	371.16	288.25	479.78
Spain	154475.59	6156.42	21298.22	12385.15	11578.93	6156.42	5046.64	3238.09	3322.99	18521.14	1111.88	2647.68	116004.39
Sri Lanka	1109.75	432.97	633.34	193.79	486.73	432.97	264.12	295.40	330.55	433.14	352.95	352.76	776.36
Sudan	3730.85	2058.28	3202.11	1092.92	2188.26	2058.28	861.46	861.46	968.18	51970.00	1205.74	1105.39	2335.24
Suriname	16.63	13.54	13.97	17.74	13.54	13.54	13.54	13.54	13.53	13.43	13.60	13.53	14.96

**Table A.1** (continued)

Country	Root Mean Squared Error (RMSE)												
	SA	SMA	LT	QT	ST	SES	HLT	DT	ARIMA	LSTM	HWT	SSM	Sutte-Arima
Sweden	27119.62	5471.89	10635.71	7199.70	5471.89	5471.89	886.26	886.26	519.82	1726.16	1399.56	1047.60	16517.85
Switzerland	18775.88	242.66	5771.43	3877.84	319.96	242.66	326.65	218.70	340.43	257.85	100.29	300.57	15213.86
Syria	82.29	50.94	51.10	36.85	53.39	50.94	45.01	46.71	42.55	51.38	47.94	43.19	65.81
Taiwan*	241.01	1.43	110.91	106.50	1.43	1.43	0.98	0.53	1.91	17.75	1.50	1.41	221.18
Tajikistan	2961.37	1980.64	2754.67	1707.35	1980.64	1980.64	1030.15	1030.15	3024.23	1582.07	177.19	2726.44	1109.36
Tanzania	403.17	0.00	121.00	465.81	0.00	0.00	25.52	5.62	148.18	13.04	19.41	75.91	193.17
Thailand	1862.73	32.58	561.57	321.45	39.17	32.58	13.32	8.46	22.62	88.32	20.75	20.46	1513.18
Timor-Leste	17.61	0.00	1.81	18.41	0.00	0.00	0.08	0.00	0.16	0.22	0.37	0.14	11.93
Togo	340.57	127.13	236.07	97.89	250.16	127.13	43.92	43.92	132.13	1663.66	111.00	116.66	132.70
Trinidad and Tobago	65.68	0.47	33.69	43.35	0.47	0.47	0.44	0.47	5.58	1.99	2.62	0.46	55.72
Tunisia	700.85	26.42	91.61	154.38	28.90	26.42	10.52	14.71	10.55	21.98	27.88	11.65	530.41
Turkey	120982.68	12013.60	31120.63	68239.40	12013.60	12013.60	6220.25	4867.07	7752.45	2745.56	6487.28	6441.69	74800.47
Uganda	26106.93	8783.86	16126.56	3736.21	10083.82	8783.86	1405.50	1405.50	468.05	7922.56	971.22	478.98	14580.98
Ukraine	270.15	126.24	198.46	121.31	190.14	126.24	73.84	73.84	340.83	320704.78	308.61	321.78	65.37
United Arab Emirates	18193.36	4349.62	10014.08	6890.11	4349.62	4349.62	504.75	504.75	540.11	3433.22	786.23	675.25	10182.16
United Kingdom	206670.37	26418.36	70535.17	96580.76	26418.36	26418.36	15425.34	15425.34	15167.83	37639.04	8473.57	11982.49	123335.70
Uruguay	1308978.66	235302.30	466840.41	450252.94	282555.76	235302.30	22679.13	22679.13	52651.18	405739.50	35813.48	35304.89	793166.73
US	532.32	58.54	14.02	32.98	58.54	58.54	10.92	13.03	16.93	50.06	21.07	12.66	379.19
Uzbekistan	2606.74	614.24	1055.46	826.95	614.24	614.24	92.85	144.90	53.11	878.98	302.84	96.04	1596.53
Venezuela	1054.62	748.61	795.98	628.48	780.09	748.61	642.82	651.31	602.51	736.74	645.07	612.03	850.49
Vietnam	195.09	11.61	35.47	104.50	50.73	11.61	41.92	10.30	67.53	41.55	47.56	61.84	134.04
West Bank and Gaza	288.48	53.10	58.28	55.71	53.10	53.10	46.81	50.12	50.83	51.12	53.10	51.01	232.81
Western Sahara	5.84	2.24	1.53	1.32	2.24	2.24	2.23	2.24	2.57	2.14	2.18	2.57	4.95
Yemen	243.10	151.06	225.77	138.53	216.30	151.06	46.77	46.77	14.05	19904.89	13.75	16.93	117.82
Zambia	886.10	303.38	742.57	289.04	303.38	303.38	383.50	383.50	1119.18	893273.55	742.00	1039.65	212.83
Zimbabwe	105.61	81.91	85.28	70.06	86.04	81.91	72.12	76.22	73.04	81.45	75.98	75.63	85.68

**Table A.2**

Mean Absolute Percentage Error for the Developed Time Series Models for the Countries under Study.

Country	Mean Absolute Percentage Error (MAPE)												
	SA	SMA	LT	QT	ST	SES	HLT	DT	ARIMA	LSTM	HWT	SSM	Sutte-Arima
Afghanistan	92.44	40.07	72.17	22.03	40.07	40.07	16.07	16.07	4.48	13.64	10.70	4.92	49.17
Albania	74.03	10.42	16.04	14.65	10.42	10.42	1.87	2.10	3.69	16.90	3.00	1.87	47.50
Algeria	83.66	19.53	43.60	12.06	19.53	19.53	0.73	0.73	1.96	7.71	0.78	0.76	47.95
Andorra	62.35	0.74	16.66	5.90	0.74	0.74	1.57	1.34	1.21	0.75	1.01	0.16	49.82
Angola	83.02	25.27	43.09	7.46	29.94	25.27	12.69	16.00	11.14	40.31	14.47	13.45	53.01
Antigua and Barbuda	63.61	0.64	14.96	7.11	0.64	0.64	0.60	0.69	3.15	0.97	1.51	2.99	51.50
Argentina	87.24	35.57	56.65	17.31	38.54	35.57	17.83	17.83	13.94	44.34	14.90	15.05	54.71
Armenia	88.43	37.66	60.64	19.79	37.66	37.66	19.76	19.76	15.81	40.09	17.33	16.46	55.61
Australia	59.99	1.33	20.01	20.48	1.56	1.33	0.95	0.36	1.46	2.67	1.16	1.29	49.19
Austria	61.07	2.39	17.09	18.40	2.39	2.39	0.44	0.24	2.05	4.77	0.24	1.82	48.86
Azerbaijan	84.92	28.69	48.75	7.87	28.69	28.69	10.22	10.22	7.00	11.44	8.03	8.33	51.76
Bahamas	73.45	3.19	10.77	37.03	3.19	3.19	4.80	3.26	6.69	1.55	3.53	5.59	46.44
Bahrain	87.80	26.31	58.02	4.94	34.89	26.31	2.48	2.48	7.99	15.90	8.38	6.73	44.29
Bangladesh	92.70	38.33	72.07	13.58	38.33	38.33	14.48	14.48	2.07	13.79	9.37	10.15	48.45
Barbados	65.76	6.33	6.92	6.63	6.33	6.33	3.72	4.49	3.52	6.67	4.85	3.80	51.54
Belarus	88.67	22.88	57.42	19.51	22.88	22.88	0.19	0.19	1.78	17.16	0.25	0.26	47.80
Belgium	71.59	4.12	6.44	27.84	4.12	4.12	2.12	1.55	1.82	6.98	1.34	1.41	48.88
Belize	66.23	0.00	11.49	27.51	0.00	0.00	0.05	0.00	11.24	1.99	1.87	0.00	44.38
Benin	80.11	74.61	38.03	147.16	67.04	74.61	143.27	93.69	137.05	74.08	69.61	133.06	33.25
Bhutan	88.05	19.61	63.05	40.30	73.20	19.61	42.92	42.92	85.34	1536820.50	17.11	97.15	90.24
Bolivia	92.92	42.15	73.75	24.34	44.68	42.15	19.45	19.45	15.62		16.84	17.02	8.90
Bosnia and Herzegovina	75.82	6.94	19.00	29.28	6.94	6.94	3.98	3.63	3.24	3.20	1.63	2.59	48.02
Botswana	77.65	22.31	24.26	12.95	22.31	22.31	19.49	21.09	9.34	21.21	19.90	17.40	52.80
Brazil	91.88	37.50	70.05	16.94	37.50	37.50	13.09	13.09	48.49	45.49	3.78	3.74	23.49
Brunei	51.43	0.16	33.84	53.35	1.18	0.16	0.67	0.37	0.10	1.46	1.45	0.10	49.95
Bulgaria	79.18	10.46	29.92	26.81	10.46	10.46	4.88	4.88	6.98	23.83	3.76	4.79	45.98
Burkina Faso	70.46	5.42	5.36	11.29	6.27	5.42	2.10	1.03	0.67	12.07	1.02	0.60	49.74
Burma	78.59	10.70	24.41	45.44	11.34	10.70	4.97	7.13	8.63	13.65	10.12	8.77	53.71
Burundi	90.99	61.72	68.54	41.05	61.72	61.72	60.79	61.72	54.53	61.51	57.77	57.34	73.75
Cabo Verde	88.84	13.75	57.77	25.10	13.75	13.75	21.62	21.62	22.27	27.45	19.72	19.89	37.77
Cambodia	53.04	1.25	31.79	49.08	1.25	1.25	1.25	1.25	1.26	2.15	0.76	1.22	50.56
Cameroon	87.06	31.72	55.05	10.47	40.87	31.72	13.67	13.67	14.68	35.17	15.22	13.11	54.91
Canada	79.87	11.54	30.40	31.25	11.54	11.54	1.96	1.96	1.92	12.54	0.72	1.04	48.42
Central African Republic	96.24	44.88	85.69	52.35	73.81	44.88	13.64	13.64	43.98	3473.02	45.91	40.83	67.25
Chad	93.72	33.22	75.37	11.15	49.76	33.22	3.60	3.60	5.84	21.68	6.86	4.26	46.06
Chile	91.06	40.44	68.49	25.96	40.44	40.44	17.53	17.53	10.04	54.70	10.60	11.72	52.09
China	17.83	0.07	28.98	22.61	0.16	0.07	0.01	0.02	4.32	0.48	0.33	0.01	52.16
Colombia	89.11	31.78	61.33	8.53	31.78	31.78	8.39	8.39	3.93	25.12	6.16	1.18	50.01
Comoros	96.93	66.21	87.81	61.88	66.21	66.21	64.52	65.97	69.04	73.74	66.85	68.87	79.90
Congo Brazzaville	86.16	20.29	50.70	8.29	32.11	20.29	9.44	9.44	11.73	29.85	10.60	11.72	42.68
Congo Kinshasa	90.58	38.81	66.67	20.15	38.81	38.81	17.19	17.19	17.83	50.32	18.20	26.76	56.49
Costa Rica	70.28	11.36	7.81	9.25	11.36	11.36	2.16	3.02	1.49	15.08	1.61	1.56	48.83
Cote d'Ivoire	83.42	17.31	42.00	17.64	17.31	17.31	3.30	3.30	4.03	17.40	3.57	2.62	46.92
Croatia	65.69	0.80	8.45	10.39	0.84	0.80	3.10	2.50	0.84	1.93	0.14	0.75	49.54
Cuba	76.70	5.83	19.14	46.08	5.83	5.83	2.14	1.44	1.04	14.43	0.72	0.77	49.18
Cyprus	67.12	2.40	5.51	14.96	2.40	2.40	0.75	0.23	0.45	2.75	0.28	0.30	49.66
Czechia	96.57	89.81	89.03	88.00	89.81	89.81	89.49	89.55	0.63	90.16	89.59	0.31	49.68
Denmark	70.50	4.71	6.08	17.84	4.71	4.71	2.55	1.93	2.32	14.55	1.28	1.70	48.59
Djibouti	86.62	40.93	52.81	16.43	40.93	40.93	34.17	36.40	33.21	44.32	37.22	33.96	64.19
Dominica	57.92	0.62	26.67	28.50	0.62	0.62	0.62	0.62	11.50	0.50	0.62	2.07	44.25
Dominican Republic	84.36	20.29	45.16	14.65	20.29	20.29	2.09	2.09	0.51	9.07	2.18	1.81	48.92
Ecuador	81.26	13.82	33.02	46.70	12.69	13.82	6.37	11.23	6.66	13.28	1.61	1.58	46.12
Egypt	88.97	34.60	61.09	9.50	34.60	34.60	16.45	16.45	15.13	25.19	15.88	14.42	55.38
El Salvador	91.97	34.44	70.19	14.69	34.44	34.44	6.53	6.53	1.93	7.33	2.54	3.62	48.69
Equatorial Guinea	91.43	37.33	67.94	11.18	53.69	37.33	14.88	17.81	20.85	74.36	23.90	22.97	57.70
Eritrea	62.61	0.00	18.55	5.36	0.00	0.00	0.05	0.01	0.00	0.50	0.00	0.00	50.00
Estonia	64.57	3.19	9.23	3.86	3.19	3.19	0.19	0.62	0.35	5.28	0.97	0.18	49.65
Eswatini	88.69	22.10	57.58	25.92	23.33	22.10	4.08	6.43	2.02	32.48	3.39	3.22	48.48
Ethiopia	90.79	47.35	68.65	36.28	47.35	47.35	32.69	32.69	31.51	53.25	32.22	32.73	62.30
Fiji	62.27	0.00	18.68	5.20	0.00	0.00	0.05	0.00	7.46	1.68	0.00	0.01	46.27
Finland	73.87	5.66	14.43	25.53	5.66	5.66	4.63	4.45	5.39	16.74	4.04	4.51	46.97
France	68.07	2.27	4.11	21.71	4.83	2.27	1.13	0.66	0.82	2.07	0.71	0.66	49.43
Gabon	94.22	36.89	77.85	26.60	64.41	36.89	3.81	3.81	27.02	61.32	7.58	25.91	34.00
Gambia	80.29	6.26	32.92	31.87	7.71	6.26	13.80	0.96	16.63	14.70	12.36	11.87	41.41
Georgia	75.87	8.43	19.80	30.75	8.43	8.43	2.23	1.70	3.67	3.25	2.13	2.47	47.76
Germany	65.86	2.82	6.78	4.61	3.97	2.82	1.10	0.56	0.60	15.48	0.15	0.43	49.58
Ghana	89.48	16.97	60.47	18.64	37.22	16.97	15.46	15.46	17.46	44.29	14.16	12.60	40.21
Greece	64.33	2.42	8.56	4.25	2.42	2.42	3.20	2.51	5.07	6.34	3.06	4.54	47.31
Grenada	69.22	2.17	3.05	14.65	6.62	2.17	4.74	1.16	15.56	1.47	1.26	4.73	41.97
Guatemala	93.54	45.86	76.33	35.17	45.86	45.86	21.45	21.45	14.84	440.77	14.98	16.27	53.41
Guinea	92.11	20.16	68.67	18.18	20.16	20.16	14.84	14.84	7.37	56.83	7.96	6.10	45.23
Guinea-Bissau	87.53	22.94	53.60	23.31	22.94	22.94	3.58	3.58	2.00	16.86	3.69	3.47	49.43
Guyana	79.53	14.03	31.33	16.02	16.26	14.03	2.28	3.14	4.67	11.20	1.79	1.76	46.84

**Table A.2** (continued)

Country	Mean Absolute Percentage Error (MAPE)												
	SA	SMA	LT	QT	ST	SES	HLT	DT	ARIMA	LSTM	HWT	SSM	Sutte-Arima
Haiti	96.03	63.37	85.87	63.21	75.30	63.37	45.60	45.60	28.42	25.47	34.72	30.34	59.33
Holy See	65.22	0.00	6.80	9.63	0.00	0.00	3.09	0.47	8.08	8.11	6.75	5.43	45.96
Honduras	90.87	34.39	67.08	12.98	34.39	34.39	11.83	11.83	9.23	18.11	12.76	10.47	52.28
Hungary	76.62	8.04	20.26	36.40	9.46	8.04	1.27	0.87	0.81	4.09	0.93	0.55	49.46
Iceland	57.37	0.11	26.05	23.96	0.17	0.11	0.05	0.02	0.04	0.44	0.05	0.05	50.01
India	91.22	36.45	67.55	11.03	39.26	36.45	14.57	14.57	11.76	4.27	13.11	13.08	53.64
Indonesia	85.00	24.34	47.85	6.49	24.34	24.34	5.36	5.36	1.71	7.95	3.88	2.49	49.29
Iran	72.12	14.20	15.12	8.33	18.51	14.20	3.03	3.06	2.25	23.56	0.43	1.45	48.08
Iraq	83.06	29.68	45.17	13.55	30.79	29.68	14.76	14.76	13.55	28.87	15.18	14.48	54.81
Ireland	74.31	2.65	12.35	44.83	2.65	2.65	5.73	4.74	4.99	1.68	5.36	4.45	47.34
Israel	66.93	1.33	6.82	19.97	1.33	1.33	0.59	0.50	0.43	3.05	0.86	0.42	50.02
Italy	64.45	2.51	7.64	2.48	2.51	2.51	1.91	1.55	0.63	6.16	0.74	0.50	49.56
Jamaica	80.02	7.50	28.53	61.03	7.86	7.50	1.38	3.18	4.46	19.20	4.88	4.64	51.85
Japan	72.95	2.05	9.89	48.03	7.80	2.05	3.94	2.90	3.85	3.07	1.64	3.37	47.96
Jordan	72.45	14.13	15.55	18.34	16.15	14.13	2.13	2.74	2.56	16.01	8.86	4.69	49.99
Kazakhstan	87.48	31.10	55.14	5.07	31.10	31.10	17.13	17.13	16.24	41.71	17.59	17.65	56.33
Kenya	88.43	38.10	59.90	15.94	38.10	38.10	23.54	23.54	22.19	26.28	23.99	23.53	58.66
Korea-South	43.24	2.07	33.66	46.85	2.07	2.07	0.45	0.75	0.37	0.98	0.91	0.52	49.72
Kosovo	77.18	7.37	20.58	43.29	7.37	7.37	3.19	1.31	4.84	15.46	1.11	3.93	47.20
Kuwait	92.66	37.07	72.93	20.80	37.07	37.07	6.47	6.47	2.35	49.66	1.20	1.32	47.10
Kyrgyzstan	83.05	21.94	41.46	9.50	21.94	21.94	6.54	6.54	4.97	24.20	5.89	6.37	50.91
Laos	61.65	0.00	20.43	6.54	0.00	0.00	0.02	0.00	10.92	2.01	1.28	1.70	44.54
Latvia	68.90	6.79	3.38	2.79	6.79	6.79	1.31	1.31	1.48	15.74	1.51	1.35	49.79
Lebanon	70.82	17.37	13.48	24.42	18.09	17.37	7.89	9.33	13.36	19.31	14.19	13.59	55.81
Lesotho	98.26	33.33	92.43	58.38	33.33	33.33	44.01	31.99	21.93	14146420544.13	33.33	16.06	53.12
Liberia	83.34	14.88	39.87	36.51	22.66	14.88	1.64	2.41	1.54	28.61	2.13	1.57	48.58
Libya	78.01	25.35	26.18	20.55	25.35	25.35	24.78	25.18	21.23	24.94	25.01	21.96	58.57
Liechtenstein	54.45	0.00	30.97	40.86	0.00	0.00	0.04	0.01	0.00	5.45	0.31	0.00	50.00
Lithuania	68.33	5.84	2.05	5.72	5.84	5.84	0.45	1.22	0.73	6.96	1.46	0.47	49.40
Luxembourg	61.94	1.61	16.30	10.66	1.61	1.61	0.50	0.18	0.75	17.48	0.23	0.61	49.55
Madagascar	88.93	50.43	63.99	45.53	59.80	50.43	36.11	36.11	46.76	55.05	39.35	40.27	70.17
Malawi	89.35	39.16	62.02	25.89	39.16	39.16	27.00	29.49	27.35	47.85	28.81	27.39	59.94
Malaysia	67.93	6.75	2.13	3.96	7.78	6.75	1.69	2.02	1.99	13.10	2.63	2.28	50.45
Maldives	91.16	24.38	65.87	15.03	24.38	24.38	3.38	3.38	4.72	25.93	3.42	3.44	46.05
Mali	86.72	22.78	51.30	21.57	22.78	22.78	5.29	5.29	1.93	11.88	4.72	2.78	49.48
Malta	70.60	10.93	7.63	4.33	14.19	10.93	2.53	2.96	5.42	17.49	1.43	4.50	46.92
Mauritania	97.80	82.12	93.37	90.76	95.07	82.12	72.12	72.12	35.39	34025.23	54.05	35.46	61.12
Mauritius	61.57	0.42	20.30	7.63	0.42	0.42	0.40	0.41	0.42	1.20	1.63	0.42	50.18
Mexico	90.77	33.12	65.87	5.95	33.12	33.12	9.43	9.43	3.60	26.48	3.83	4.25	49.61
Moldova	83.33	19.16	41.67	16.20	19.16	19.16	0.81	0.81	2.61	17.59	2.72	1.52	47.58
Monaco	60.20	1.75	20.74	16.61	2.78	1.75	1.18	1.35	2.39	0.98	2.14	2.34	51.10
Mongolia	90.42	35.03	68.71	46.81	72.16	35.03	26.21	26.21	32.78	791.12	20.99	32.55	63.69
Montenegro	63.12	0.00	16.86	6.03	0.00	0.00	0.21	0.10	0.33	0.62	0.00	0.30	49.83
Morocco	81.05	10.08	33.36	37.08	10.08	10.08	5.85	5.85	1.20	0.56	2.62	1.21	49.66
Mozambique	88.45	36.36	59.19	11.70	45.37	36.36	17.13	19.39	22.06	33.25	20.83	21.74	58.89
MS Zaandam	60.10	0.00	24.29	16.00	0.00	0.00	0.00	0.00	14.11	0.19	1.05	8.34	42.95
Namibia	64.32	18.84	19.74	44.56	18.84	18.84	18.84	18.84	18.84	18.23	18.57	18.84	58.36
Nepal	95.85	55.69	84.93	53.97	81.74	55.69	33.28	33.28	41.99	586.96	52.92	41.68	66.72
Netherlands	69.77	3.52	3.27	22.23	3.86	3.52	1.75	1.28	0.87	2.24	0.61	0.62	49.37
New Zealand	62.46	0.34	17.91	5.23	0.40	0.34	0.24	0.10	0.11	0.18	0.22	0.10	49.98
Nicaragua	95.69	78.35	86.40	77.83	78.35	78.35	78.00	78.38	78.04	81.59	78.14	78.09	76.99
Niger	74.75	5.59	13.98	29.26	5.59	5.59	6.44	3.22	5.90	7.28	2.48	5.17	46.77
Nigeria	91.33	29.78	67.15	1.94	29.78	29.78	5.36	5.36	1.99	19.55	4.28	3.77	48.96
North Macedonia	75.77	12.75	19.64	17.32	12.75	12.75	3.45	4.19	2.82	12.66	3.35	3.56	50.67
Norway	61.25	1.62	15.14	11.76	1.62	1.62	1.30	0.88	1.02	3.29	0.50	0.85	49.40
Oman	90.35	37.88	65.49	17.82	37.88	37.88	15.13	15.13	38.02	51.94	5.77	38.02	66.44
Pakistan	89.30	27.33	61.33	1.41	27.33	27.33	4.00	4.00	2.16	34.03	3.67	3.65	48.24
Panama	81.21	16.83	35.49	19.88	16.83	16.83	4.00	4.00	3.30	37.64	4.29	4.17	49.98
Papua New Guinea	70.54	0.00	4.71	56.16	0.00	0.00	0.25	0.00	8.35	1.17	1.41	0.00	45.82
Paraguay	85.93	13.00	49.95	25.36	13.00	13.00	10.86	2.91	3.68	55.78	11.93	5.39	47.49
Peru	90.41	30.22	64.11	2.01	31.75	30.22	6.61	6.61	3.38	3.19	4.15	2.02	49.70
Philippines	80.25	17.18	33.56	12.01	22.26	17.18	3.75	3.75	3.51	13.44	3.96	3.76	49.64
Poland	80.24	15.23	32.81	17.46	15.23	15.23	0.66	0.66	2.71	34.01	1.46	1.56	47.78
Portugal	72.20	7.02	9.06	18.84	7.88	7.02	0.26	0.61	0.39	11.91	0.29	0.29	49.41
Qatar	90.37	31.98	64.71	3.23	39.67	31.98	7.13	7.13	3.46	88.88	5.40	5.33	49.79
Romania	78.04	9.25	25.08	30.78	9.25	9.25	3.33	3.33	3.31	12.80	2.27	2.28	47.85
Russia	89.92	23.19	61.67	15.17	29.21	23.19	3.65	3.65	5.62	11.43	4.06	4.24	45.84
Rwanda	76.56	13.42	22.69	21.75	13.42	13.42	8.02	9.63	12.73	22.82	13.84	12.77	55.69
Saint Kitts and Nevis	63.19	0.00	17.23	6.34	0.00	0.00	0.06	0.00	15.18	1.60	0.82	0.27	42.41
Saint Lucia	62.51	0.00	15.04	5.35	0.00	0.00	1.26	0.06	7.74	2.21	0.00	0.06	46.13
Saint Vincent and the Grenadines	73.61	13.86	13.28	18.34	13.86	13.86	12.81	13.73	10.05	12.16	14.07	10.08	48.17
San Marino	67.56	1.75	3.65	16.88	5.36	1.75	5.47	4.43	7.63	9.82	1.21	6.32	46.07
Sao Tome and Principe	93.24	25.61	72.55	14.50	34.15	25.61	17.05	22.31	16.58	55.37	21.27	16.95	50.96

(continued on next page)

**Table A.2** (continued)

Country	Mean Absolute Percentage Error (MAPE)												
	SA	SMA	LT	QT	ST	SES	HLT	DT	ARIMA	LSTM	HWT	SSM	Sutte-Arima
Saudi Arabia	89.96	30.04	62.80	3.24	30.04	30.04	6.51	6.51	100.00	31.90	2.17	3.63	43.21
Senegal	89.18	23.76	60.91	6.03	23.76	23.76	5.55	5.55	10.58	7.09	7.25	7.59	43.27
Serbia	76.13	5.80	17.31	46.50	8.00	5.80	1.19	0.63	0.75	2.63	0.57	0.67	49.73
Seychelles	52.49	0.00	33.81	48.58	0.00	0.00	0.00	0.00	6.23	3.06	0.75	0.00	46.88
Sierra Leone	93.23	32.72	73.61	10.69	49.12	32.72	2.57	2.57	7.88	40.75	4.37	5.95	44.00
Singapore	85.37	14.43	46.67	36.54	16.96	14.43	6.75	6.75	9.64	7.55	7.73	8.36	44.33
Slovakia	69.25	1.90	4.00	31.49	3.42	1.90	1.62	0.91	1.58	8.61	0.20	1.30	49.16
Slovenia	60.37	0.31	18.72	9.50	0.38	0.31	1.06	0.84	0.67	2.51	0.18	0.60	49.65
Somalia	89.70	23.04	60.37	22.19	23.04	23.04	3.16	3.16	4.12	5.50	7.45	2.82	47.01
South Africa	90.68	38.81	67.33	22.59	42.36	38.81	15.94	15.94	10.14	35.35	11.52	11.55	52.58
South Sudan	96.82	54.82	87.33	51.15	77.02	54.82	35.20	35.20	28.74	45.90	36.43	29.99	56.91
Spain	65.57	2.25	7.87	4.74	4.72	2.25	1.90	1.26	1.23	7.54	0.41	1.00	49.26
Sri Lanka	83.73	23.60	44.50	11.39	29.00	23.60	12.28	14.17	16.64	24.44	17.87	17.84	56.82
Sudan	94.95	44.15	79.97	26.38	48.31	44.15	18.67	18.67	21.29	443.98	25.74	24.01	58.04
Suriname	62.98	20.87	24.46	55.55	20.87	20.87	20.87	20.87	20.83	19.71	21.64	20.83	58.85
Sweden	79.37	13.35	30.88	19.60	13.35	13.35	2.36	2.36	1.34	4.01	3.68	2.81	48.54
Switzerland	61.09	0.72	17.86	9.74	1.01	0.72	0.90	0.61	0.92	0.81	0.29	0.82	49.50
Syria	82.02	37.86	41.21	25.15	41.59	37.86	32.53	33.90	30.52	39.01	34.97	31.02	63.05
Taiwan*	54.64	0.24	24.44	20.87	0.24	0.24	0.21	0.10	0.32	3.92	0.27	0.24	50.15
Tajikistan	97.45	56.63	89.46	54.06	56.63	56.63	30.74	30.74	100.00	48.64	3.66	63.27	38.35
Tanzania	79.21	0.00	23.38	85.76	0.00	0.00	4.43	1.03	25.43	2.49	3.40	13.16	37.28
Thailand	61.06	0.83	17.56	7.83	1.10	0.83	0.39	0.25	0.68	2.73	0.63	0.62	49.60
Timor-Leste	73.37	0.00	6.17	73.39	0.00	0.00	0.30	0.01	0.57	0.89	1.43	0.52	49.71
Togo	88.30	29.93	60.73	25.72	64.21	29.93	8.52	8.52	25.93	178.31	21.92	23.11	35.49
Trinidad and Tobago	56.51	0.19	28.29	32.71	0.19	0.19	0.19	0.19	4.09	1.58	2.18	0.19	47.93
Tunisia	66.32	2.00	7.47	14.57	2.28	2.00	0.66	0.97	0.67	1.59	2.16	0.74	50.20
Turkey	76.86	6.73	19.83	40.63	6.73	6.73	3.26	2.57	4.01	1.49	3.41	3.38	47.62
Uganda	86.85	24.73	52.73	10.88	29.71	24.73	4.08	4.08	1.25	23.50	2.83	1.26	48.84
Ukraine	87.33	26.60	58.22	29.05	53.08	26.60	25.36	25.36	110.55	27498.45	101.97	105.97	25.19
United Arab Emirates	85.34	17.22	46.63	29.03	17.22	17.22	1.99	1.99	2.02	14.79	3.11	2.68	48.01
United Kingdom	78.82	8.85	26.98	33.86	8.85	8.85	4.85	4.85	4.64	13.56	2.58	3.70	47.20
Uruguay	78.95	12.15	28.08	25.29	15.35	12.15	1.11	1.11	2.54	22.78	1.79	1.77	48.05
US	68.11	5.86	1.57	3.69	5.86	5.86	1.19	1.53	2.02	5.22	2.19	1.39	48.62
Uzbekistan	80.44	15.40	31.96	24.57	15.40	15.40	2.02	3.14	1.27	24.12	6.77	2.09	49.39
Venezuela	87.43	52.73	60.18	43.53	56.44	52.73	45.09	45.62	42.36	52.78	44.81	42.93	68.16
Vietnam	59.97	3.46	9.85	30.05	15.46	3.46	10.71	2.59	17.52	12.66	12.56	16.13	40.96
West Bank and Gaza	67.98	10.86	10.57	15.27	10.86	10.86	9.57	10.23	10.41	10.43	10.87	10.44	54.72
Western Sahara	72.60	18.52	15.11	15.10	18.52	18.52	18.51	18.52	22.37	18.27	18.37	22.37	60.08
Yemen	97.35	49.82	89.12	52.98	83.91	49.82	14.72	14.72	5.03	2171.03	4.33	4.34	46.72
Zambia	94.25	28.17	78.65	31.43	28.17	28.17	32.79	32.79	98.65	31642.75	65.35	92.59	19.65
Zimbabwe	84.61	38.48	49.47	27.13	47.27	38.48	28.72	32.04	29.91	39.93	32.88	32.56	60.98

**Table A.3**

Actual and Predicted Cases with 95% Confidence Intervals for Afghanistan using the Time Series Models.

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	6402	764 (-10287,11815)	6053 (5369,6737)	2595 (-4867,10057)	5843 (4746,6939)	6053 (5369,6737)	6053 (6053,6053)	6329 (5788,6870)
5/17/2020	6664	764 (-10547,12074)	6053 (4855,7251)	2626 (-5066,10318)	6099 (4997,7201)	6053 (5078,7028)	6053 (6053,6053)	6638 (-20517,33793)
5/18/2020	7072	764 (-10909,12436)	6053 (4056,8050)	2657 (-5368,10682)	6363 (5157,7568)	6053 (4652,7454)	6053 (6053,6053)	6946 (-53378,67270)
5/19/2020	7653	764 (-11392,12920)	6053 (2917,9189)	2688 (-5796,11172)	6633 (5188,8079)	6053 (4070,8036)	6053 (6053,6053)	7255 (-93406,107916)
5/20/2020	8145	764 (-11888,13416)	6053 (1953,10153)	2719 (-6237,11675)	6911 (5226,8597)	6053 (3502,8604)	6053 (6053,6053)	7564 (-139562,154689)
5/21/2020	8676	764 (-12408,13935)	6053 (912,11194)	2750 (-6701,12201)	7196 (5255,9138)	6053 (2918,9188)	6053 (6053,6053)	7872 (-191141,206886)
5/22/2020	9216	764 (-12944,14472)	6053 (-146,12252)	2781 (-7183,12745)	7489 (5283,9695)	6053 (2323,9783)	6053 (6053,6053)	8181 (-247634,263997)
5/23/2020	9998	764 (-13567,15094)	6053 (-1679,13785)	2812 (-7755,13380)	7789 (5219,10358)	6053 (1620,10486)	6053 (6053,6053)	8490 (-308652,325632)
5/24/2020	10582	764 (-14193,15720)	6053 (-2824,14930)	2843 (-8330,14016)	8096 (5180,11013)	6053 (932,11174)	6053 (6053,6053)	8798 (-373885,391482)
5/25/2020	11173	764 (-14823,16351)	6053 (-3982,16088)	2874 (-8907,14656)	8411 (5158,11665)	6053 (250,11856)	6053 (6053,6053)	9107 (-443078,461293)
5/26/2020	11831	764 (-15473,17001)	6053 (-5272,17378)	2905 (-9505,15315)	8734 (5132,12336)	6053 (-448,12554)	6053 (6053,6053)	9416 (-516019,534851)
5/27/2020	12456	764 (-16131,17659)	6053 (-6497,18603)	2936 (-10109,15982)	9065 (5119,13011)	6053 (-1149,13255)	6053 (6053,6053)	9724 (-592525,611974)
5/28/2020	13036	764 (-16786,18313)	6053 (-7634,19740)	2967 (-10710,16644)	9403 (5128,13678)	6053 (-1839,13945)	6053 (6053,6053)	10033 (-672438,692505)
5/29/2020	13659	764 (-17447,18974)	6053 (-8855,20961)	2998 (-11315,17312)	9750 (5150,14350)	6053 (-2533,14639)	6053 (6053,6053)	10342 (-755620,776304)
5/30/2020	14525	764 (-18157,19685)	6053 (-10552,22658)	3029 (-11973,18031)	10105 (5129,15080)	6053 (-3284,15390)	6053 (6053,6053)	10650 (-841948,863249)
5/31/2020	15205	764 (-18876,20403)	6053 (-11885,23991)	3060 (-12637,18758)	10467 (5120,15815)	6053 (-4039,16145)	6053 (6053,6053)	10959 (-931311,953229)
6/1/2020	15750	764 (-19578,21105)	6053 (-12953,25059)	3091 (-13283,19466)	10838 (5149,16528)	6053 (-4768,16874)	6053 (6053,6053)	11268 (-1023610,1046146)
6/2/2020	16509	764 (-20300,21828)	6053 (-14441,26547)	3122 (-13950,20195)	11218 (5172,17263)	6053 (-5520,17626)	6053 (6053,6053)	11577 (-1118755,1141908)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3003	5/16/2020	6402	6329 (5788,6870)	6436 (6380,6492)	6104 (5519,6688)	6419 (5702,7137)	6434 (6376,6491)	3406 (-2467,9278)
	5/17/2020	6664	6638 (-20517,33793)	6842 (6757,6928)	6481 (5996,6966)	6805 (-125526,139137)	6839 (6750,6929)	3624 (-2292,9540)
	5/18/2020	7072	6946 (-53378,67270)	7278 (7164,7391)	6894 (6450,7338)	7185 (-285898,300267)	7274 (7152,7396)	3815 (-2262,9891)
	5/19/2020	7653	7255 (-93406,107916)	7736 (7588,7884)	7339 (6847,7832)	7569 (-482177,497314)	7730 (7567,7893)	4042 (-2299,10383)
	5/20/2020	8145	7564 (-139562,154689)	8209 (8015,8403)	7827 (7306,8348)	7940 (-705562,721442)	8200 (7984,8417)	4320 (-2269,10908)
	5/21/2020	8676	7872 (-191141,206886)	8693 (8439,8947)	8366 (7829,8902)	8324 (-956749,973397)	8681 (8398,8964)	4602 (-2240,11443)
	5/22/2020	9216	8181 (-247634,263997)	9184 (8858,9510)	8963 (8432,9494)	8701 (-1231139,1248542)	9168 (8804,9531)	4868 (-2237,11974)
	5/23/2020	9998	8490 (-308652,325632)	9680 (9271,10089)	9630 (9072,10189)	9073 (-1525878,1544024)	9659 (9203,10115)	5109 (-2352,12569)
	5/24/2020	10582	8798 (-373885,391482)	10182 (9679,10684)	10375 (9831,10918)	9459 (-1842716,1861634)	10153 (9593,10713)	5411 (-2393,13214)
	5/25/2020	11173	9107 (-443078,461293)	10687 (10083,11292)	11223 (10706,11739)	9838 (-2178659,2198335)	10648 (9974,11323)	5672 (-2478,13822)
	5/26/2020	11831	9416 (-516019,534851)	11197 (10483,11911)	12199 (11661,12738)	10222 (-2533538,2553982)	11145 (10347,11943)	5936 (-2581,14452)
	5/27/2020	12456	9724 (-592525,611974)	11711 (10880,12543)	13332 (12617,14047)	10593 (-2904194,2925380)	11642 (10712,12573)	6170 (-2726,15065)
	5/28/2020	13036	10033 (-672438,692505)	12229 (11274,13184)	14661 (13542,15779)	10978 (-3292222,3314177)	12140 (11069,13212)	6435 (-2834,15705)
	5/29/2020	13659	10342 (-755620,776304)	12751 (11666,13837)	16234 (14507,17961)	11355 (-3695700,3718410)	12639 (11418,13859)	6694 (-2954,16343)
	5/30/2020	14525	10650 (-841948,863249)	13278 (12056,14499)	18136 (15661,20610)	11726 (-4113234,4136687)	13137 (11761,14514)	6951 (-3128,17029)
	5/31/2020	15205	10959 (-931311,953229)	13808 (12445,15171)	20483 (16958,24008)	12113 (-4546621,4570846)	13636 (12096,15175)	7258 (-3249,17765)
	6/1/2020	15750	11268 (-1023610,1046146)	14342 (12833,15852)	23448 (18439,28457)	12492 (-4994194,5019177)	14134 (12425,15843)	7542 (-3372,18456)
	6/2/2020	16509	11577 (-1118755,1141908)	14881 (13219,16542)	27276 (20316,34236)	12876 (-5456187,5481938)	14633 (12748,16518)	7797 (-3547,19142)

**Table A.4**

Actual and Predicted Cases with 95% Confidence Intervals for Albania using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	933	266 (-1043,1574)	916 (883,949)	787 (500,1074)	1025 (845,1206)	916 (883,949)	916 (916,916)	924 (908,941)
5/17/2020	946	266 (-1055,1587)	916 (857,975)	795 (504,1086)	1043 (858,1229)	916 (868,964)	916 (916,916)	935 (891,979)
5/18/2020	948	266 (-1061,1592)	916 (853,979)	804 (516,1092)	1061 (863,1260)	916 (863,969)	916 (916,916)	946 (864,1028)
5/19/2020	949	266 (-1064,1595)	916 (851,981)	813 (530,1096)	1079 (865,1294)	916 (860,972)	916 (916,916)	956 (829,1083)
5/20/2020	964	266 (-1072,1603)	916 (822,1010)	822 (540,1104)	1098 (873,1322)	916 (850,982)	916 (916,916)	967 (789,1145)
5/21/2020	969	266 (-1079,1610)	916 (812,1020)	831 (551,1111)	1116 (879,1352)	916 (843,989)	916 (916,916)	977 (743,1212)
5/22/2020	981	266 (-1087,1619)	916 (789,1043)	840 (560,1119)	1134 (888,1380)	916 (833,999)	916 (916,916)	988 (692,1284)
5/23/2020	989	266 (-1096,1627)	916 (773,1059)	848 (569,1128)	1152 (895,1408)	916 (823,1009)	916 (916,916)	999 (636,1361)
5/24/2020	998	266 (-1104,1635)	916 (755,1077)	857 (579,1136)	1170 (903,1437)	916 (813,1019)	916 (916,916)	1009 (577,1442)
5/25/2020	1004	266 (-1112,1643)	916 (744,1088)	866 (588,1144)	1188 (911,1466)	916 (804,1028)	916 (916,916)	1020 (513,1527)
5/26/2020	1029	266 (-1123,1654)	916 (695,1137)	875 (595,1155)	1206 (922,1491)	916 (790,1042)	916 (916,916)	1030 (445,1616)
5/27/2020	1050	266 (-1136,1667)	916 (653,1179)	884 (600,1168)	1224 (935,1514)	916 (774,1058)	916 (916,916)	1041 (374,1708)
5/28/2020	1076	266 (-1151,1683)	916 (602,1230)	893 (602,1183)	1242 (950,1535)	916 (754,1078)	916 (916,916)	1052 (299,1804)
5/29/2020	1099	266 (-1168,1699)	916 (557,1275)	901 (603,1200)	1260 (966,1555)	916 (733,1099)	916 (916,916)	1062 (221,1904)
5/30/2020	1122	266 (-1186,1717)	916 (512,1320)	910 (602,1218)	1278 (983,1573)	916 (711,1121)	916 (916,916)	1073 (140,2006)
5/31/2020	1137	266 (-1203,1734)	916 (483,1349)	919 (603,1236)	1296 (1000,1592)	916 (690,1142)	916 (916,916)	1084 (55,2112)
6/1/2020	1143	266 (-1219,1750)	916 (471,1361)	928 (604,1252)	1314 (1015,1613)	916 (671,1161)	916 (916,916)	1094 (-32,2221)
6/2/2020	1164	266 (-1236,1767)	916 (430,1402)	937 (605,1268)	1332 (1032,1633)	916 (652,1180)	916 (916,916)	1105 (-123,2332)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3004	933	924 (908,940)	931 (921,941)	865 (731,999)	931 (902,960)	931 (921,941)	472 (-431,1375)	
	946	934 (892,976)	946 (928,964)	863 (715,1012)	946 (683,1209)	945 (927,963)	482 (-424,1388)	
	948	945 (867,1022)	961 (934,988)	862 (707,1018)	961 (402,1520)	958 (932,985)	489 (-416,1393)	
	949	955 (836,1074)	977 (940,1014)	860 (700,1021)	976 (60,1892)	971 (936,1007)	494 (-407,1395)	
	964	965 (798,1132)	992 (944,1040)	858 (687,1029)	991 (-334,2316)	984 (940,1028)	499 (-405,1402)	
	969	975 (756,1195)	1008 (949,1068)	856 (676,1036)	1006 (-775,2787)	997 (943,1050)	507 (-397,1411)	
	981	985 (709,1262)	1024 (952,1096)	854 (662,1045)	1021 (-1258,3299)	1009 (947,1072)	515 (-390,1420)	
	989	995 (658,1332)	1040 (955,1126)	852 (649,1055)	1036 (-1779,3851)	1022 (950,1094)	525 (-380,1431)	
	998	1005 (603,1407)	1056 (956,1155)	849 (635,1064)	1051 (-2337,4439)	1035 (952,1117)	532 (-374,1438)	
	1004	1015 (545,1485)	1072 (958,1187)	847 (622,1073)	1066 (-2929,5061)	1047 (955,1140)	541 (-365,1447)	
	1029	1025 (483,1567)	1089 (959,1218)	845 (604,1086)	1081 (-3554,5716)	1060 (957,1162)	548 (-362,1458)	
	1050	1035 (419,1651)	1105 (960,1251)	843 (585,1102)	1096 (-4209,6401)	1072 (959,1186)	559 (-355,1474)	
	1076	1045 (351,1738)	1122 (960,1284)	842 (562,1121)	1111 (-4893,7115)	1085 (960,1209)	570 (-351,1490)	
	1099	1054 (280,1828)	1139 (959,1318)	840 (539,1141)	1126 (-5606,7858)	1097 (961,1233)	581 (-346,1509)	
	1122	1064 (207,1921)	1155 (958,1352)	838 (514,1163)	1141 (-6346,8628)	1109 (963,1256)	589 (-346,1525)	
	1137	1074 (131,2016)	1173 (957,1388)	837 (490,1184)	1156 (-7112,9424)	1122 (963,1281)	598 (-345,1542)	
	1143	1083 (53,2114)	1190 (955,1424)	836 (469,1202)	1171 (-7904,10245)	1134 (964,1305)	605 (-345,1556)	
	1164	1093 (-28,2213)	1207 (954,1460)	834 (446,1222)	1186 (-8720,11091)	1147 (964,1330)	611 (-347,1569)	

**Table A.5**

Actual and Predicted Cases with 95% Confidence Intervals for Algeria using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	6821	1346 (-9384,12077)	6629 (6253,7005)	4255 (-775,9285)	7216 (6442,7990)	6629 (6253,7005)	6629 (6629,6629)	6806 (6459,7153)	
5/17/2020	7019	1346 (-9579,12272)	6629 (5865,7393)	4304 (-874,9482)	7445 (6640,8250)	6629 (6027,7231)	6629 (6629,6629)	6986 (-3269,17240)	
5/18/2020	7201	1346 (-9765,12458)	6629 (5508,7750)	4353 (-962,9669)	7679 (6828,8529)	6629 (5816,7442)	6629 (6629,6629)	7165 (-15506,29837)	
5/19/2020	7377	1346 (-9947,12639)	6629 (5163,8095)	4403 (-1046,9851)	7917 (7010,8824)	6629 (5613,7645)	6629 (6629,6629)	7345 (-30411,45100)	
5/20/2020	7542	1346 (-10122,12815)	6629 (4840,8418)	4452 (-1124,10027)	8160 (7184,9135)	6629 (5418,7840)	6629 (6629,6629)	7524 (-47598,62647)	
5/21/2020	7728	1346 (-10301,12994)	6629 (4475,8783)	4501 (-1206,10208)	8408 (7364,9451)	6629 (5216,8042)	6629 (6629,6629)	7704 (-66806,82214)	
5/22/2020	7918	1346 (-10485,13178)	6629 (4103,9155)	4551 (-1293,10394)	8660 (7549,9772)	6629 (5010,8248)	6629 (6629,6629)	7884 (-87846,103614)	
5/23/2020	8113	1346 (-10673,13366)	6629 (3720,9538)	4600 (-1384,10583)	8918 (7738,10098)	6629 (4798,8460)	6629 (6629,6629)	8063 (-110574,126700)	
5/24/2020	8306	1346 (-10864,13557)	6629 (3342,9916)	4649 (-1477,10775)	9180 (7930,10431)	6629 (4584,8674)	6629 (6629,6629)	8243 (-134873,151359)	
5/25/2020	8503	1346 (-11058,13751)	6629 (2956,10302)	4698 (-1574,10970)	9448 (8125,10771)	6629 (4368,8890)	6629 (6629,6629)	8422 (-160649,177494)	
5/26/2020	8697	1346 (-11253,13946)	6629 (2576,10682)	4748 (-1672,11167)	9720 (8321,11119)	6629 (4151,9107)	6629 (6629,6629)	8602 (-187823,205027)	
5/27/2020	8857	1346 (-11443,14136)	6629 (2262,10996)	4797 (-1764,11358)	9997 (8511,11484)	6629 (3942,9316)	6629 (6629,6629)	8782 (-216327,233890)	
5/28/2020	8997	1346 (-11626,14319)	6629 (1988,11270)	4846 (-1849,11542)	10280 (8690,11869)	6629 (3745,9513)	6629 (6629,6629)	8961 (-246102,264024)	
5/29/2020	9134	1346 (-11803,14496)	6629 (1719,11539)	4896 (-1928,11719)	10567 (8862,12273)	6629 (3555,9703)	6629 (6629,6629)	9141 (-277096,295378)	
5/30/2020	9267	1346 (-11974,14667)	6629 (1459,11799)	4945 (-2001,11890)	10860 (9026,12695)	6629 (3373,9885)	6629 (6629,6629)	9320 (-309264,327905)	
5/31/2020	9394	1346 (-12141,14834)	6629 (1210,12048)	4994 (-2068,12056)	11158 (9183,13134)	6629 (3198,10060)	6629 (6629,6629)	9500 (-342564,361564)	
6/1/2020	9513	1346 (-12302,14995)	6629 (976,12282)	5043 (-2130,12217)	11461 (9333,13590)	6629 (3029,10229)	6629 (6629,6629)	9680 (-376959,396319)	
6/2/2020	9626	1346 (-12458,15151)	6629 (755,12503)	5093 (-2186,12372)	11770 (9476,14064)	6629 (2866,10392)	6629 (6629,6629)	9859 (-412417,432135)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3005	6821	6806 (6459,7153)	6818 (6780,6855)	6878 (6766,6991)	6815 (6450,7181)	6815 (6777,6853)	3504 (-2998,10005)		
	7019	6986 (-3269,17240)	7008 (6938,7077)	7095 (6963,7226)	7002 (-32765,46768)	7001 (6929,7072)	3600 (-3002,10202)		
	7201	7165 (-15506,29837)	7200 (7097,7303)	7316 (7147,7484)	7188 (-81397,95773)	7187 (7078,7296)	3698 (-2994,10389)		
	7377	7345 (-30411,45100)	7394 (7254,7533)	7543 (7324,7761)	7374 (-140617,155365)	7372 (7222,7523)	3794 (-2983,10570)		
	7542	7524 (-47598,62647)	7589 (7410,7768)	7776 (7493,8059)	7561 (-208878,223999)	7558 (7363,7753)	3888 (-2966,10743)		
	7728	7704 (-66806,82214)	7786 (7565,8007)	8016 (7670,8363)	7747 (-285136,300629)	7744 (7501,7987)	3981 (-2957,10920)		
	7918	7884 (-87846,103614)	7985 (7719,8250)	8263 (7853,8673)	7933 (-368638,384504)	7930 (7635,8225)	4081 (-2943,11106)		
	8113	8063 (-110574,126700)	8185 (7873,8498)	8517 (8042,8992)	8119 (-458805,475044)	8116 (7766,8466)	4184 (-2929,11297)		
	8306	8243 (-134873,151359)	8387 (8025,8749)	8779 (8235,9323)	8306 (-555184,571795)	8302 (7894,8709)	4290 (-2911,11491)		
	8503	8422 (-160649,177494)	8591 (8177,9005)	9048 (8431,9665)	8492 (-657397,674380)	8488 (8020,8955)	4393 (-2898,11684)		
	8697	8602 (-187823,205027)	8797 (8329,9264)	9326 (8630,10022)	8678 (-765128,782484)	8673 (8142,9204)	4497 (-2884,11878)		
	8857	8782 (-216327,233890)	9004 (8480,9527)	9613 (8821,10405)	8864 (-878111,895839)	8859 (8262,9456)	4600 (-2866,12067)		
	8997	8961 (-246102,264024)	9212 (8631,9794)	9909 (9001,10817)	9050 (-996108,1014208)	9045 (8380,9710)	4699 (-2845,12243)		
	9134	9141 (-277096,295378)	9423 (8781,10065)	10215 (9173,11257)	9236 (-1118915,1137388)	9231 (8495,9967)	4795 (-2822,12412)		
	9267	9320 (-309264,327905)	9635 (8931,10339)	10531 (9339,11724)	9422 (-1246349,1265194)	9417 (8608,10226)	4891 (-2794,12576)		
	9394	9500 (-342564,361564)	9849 (9081,10617)	10859 (9499,12220)	9609 (-1378249,1397466)	9603 (8719,10487)	4993 (-2754,12740)		
	9513	9680 (-376959,396319)	10064 (9231,10898)	11199 (9656,12743)	9795 (-1514468,1534057)	9788 (8827,10750)	5099 (-2704,12902)		
	9626	9859 (-412417,432135)	10282 (9381,11182)	11552 (9808,13297)	9981 (-1654872,1674833)	9974 (8933,11015)	5204 (-2649,13058)		

**Table A.6**

Actual and Predicted Cases with 95% Confidence Intervals for Andorra using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	761	289 (-637,1214)	761 (761,761)	818 (706,931)	798 (725,871)	761 (761,761)	761 (761,761)	762 (760,765)
5/17/2020	761	289 (-637,1214)	761 (761,761)	827 (706,949)	796 (725,866)	761 (761,761)	761 (761,761)	764 (760,768)
5/18/2020	761	289 (-637,1214)	761 (761,761)	836 (705,968)	792 (725,860)	761 (761,761)	761 (761,761)	765 (760,770)
5/19/2020	761	289 (-637,1214)	761 (761,761)	845 (705,986)	788 (724,853)	761 (761,761)	761 (761,761)	766 (759,773)
5/20/2020	762	289 (-638,1215)	761 (759,763)	854 (705,1004)	784 (723,844)	761 (760,762)	761 (761,761)	767 (759,775)
5/21/2020	762	289 (-638,1215)	761 (759,763)	863 (705,1022)	778 (721,835)	761 (760,762)	761 (761,761)	768 (759,778)
5/22/2020	762	289 (-638,1215)	761 (759,763)	872 (704,1041)	772 (719,825)	761 (760,762)	761 (761,761)	770 (759,780)
5/23/2020	762	289 (-638,1215)	761 (759,763)	881 (704,1059)	765 (715,814)	761 (760,762)	761 (761,761)	771 (758,783)
5/24/2020	762	289 (-638,1216)	761 (759,763)	890 (703,1078)	757 (710,803)	761 (760,762)	761 (761,761)	772 (758,786)
5/25/2020	763	289 (-639,1216)	761 (757,765)	899 (702,1096)	748 (702,793)	761 (759,763)	761 (761,761)	773 (757,789)
5/26/2020	763	289 (-639,1216)	761 (757,765)	908 (702,1115)	738 (692,784)	761 (759,763)	761 (761,761)	774 (757,792)
5/27/2020	763	289 (-639,1216)	761 (757,765)	917 (701,1133)	728 (680,776)	761 (759,763)	761 (761,761)	775 (756,795)
5/28/2020	763	289 (-639,1216)	761 (757,765)	926 (701,1152)	716 (664,769)	761 (759,763)	761 (761,761)	777 (755,798)
5/29/2020	764	289 (-639,1217)	761 (755,767)	935 (700,1171)	704 (644,764)	761 (758,764)	761 (761,761)	778 (754,801)
5/30/2020	764	289 (-640,1217)	761 (755,767)	944 (699,1189)	691 (622,759)	761 (758,764)	761 (761,761)	779 (754,804)
5/31/2020	764	289 (-640,1217)	761 (755,767)	953 (699,1208)	677 (598,756)	761 (758,764)	761 (761,761)	780 (753,808)
6/1/2020	765	289 (-640,1217)	761 (753,769)	962 (698,1226)	662 (571,753)	761 (757,765)	761 (761,761)	781 (752,811)
6/2/2020	844	289 (-650,1227)	761 (598,924)	971 (708,1235)	646 (519,773)	761 (722,800)	761 (761,761)	783 (751,814)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3006	761	762 (760,765)	762 (749,775)	759 (756,763)	762 (760,765)	762 (749,775)	381 (-362,1125)	
	761	763 (760,767)	763 (742,784)	760 (757,763)	764 (760,769)	763 (742,784)	382 (-362,1125)	
	761	764 (760,769)	763 (734,793)	760 (757,763)	765 (758,771)	763 (734,793)	382 (-362,1125)	
	761	765 (760,771)	765 (724,805)	760 (758,763)	765 (757,774)	764 (724,805)	382 (-361,1126)	
	762	766 (760,773)	765 (714,817)	760 (758,763)	764 (755,773)	765 (714,816)	383 (-361,1126)	
	762	767 (759,775)	766 (702,831)	761 (758,763)	765 (754,775)	766 (701,830)	383 (-360,1126)	
	762	768 (759,777)	767 (689,844)	761 (758,763)	766 (754,778)	767 (689,844)	384 (-359,1127)	
	762	769 (759,779)	768 (676,860)	761 (758,764)	766 (753,779)	767 (676,859)	384 (-359,1127)	
	762	770 (758,782)	769 (662,875)	761 (758,764)	768 (752,784)	768 (662,875)	384 (-358,1127)	
	763	771 (758,784)	769 (647,892)	761 (758,764)	768 (750,786)	769 (647,891)	385 (-358,1127)	
	763	772 (758,786)	770 (632,909)	761 (758,764)	769 (749,789)	770 (631,908)	385 (-357,1127)	
	763	773 (757,788)	771 (616,927)	761 (759,764)	767 (746,789)	771 (615,926)	386 (-356,1128)	
	763	773 (757,790)	772 (599,945)	761 (759,764)	768 (745,791)	771 (598,944)	386 (-355,1128)	
	764	774 (756,792)	773 (582,964)	762 (758,765)	769 (744,794)	772 (581,963)	387 (-355,1128)	
	764	775 (755,795)	774 (564,984)	762 (758,765)	769 (742,795)	773 (563,983)	387 (-354,1128)	
	764	776 (755,797)	775 (545,1004)	762 (758,765)	771 (742,800)	774 (544,1003)	388 (-354,1129)	
	765	777 (754,799)	776 (526,1025)	762 (758,765)	771 (740,802)	775 (525,1024)	388 (-353,1129)	
	844	777 (753,801)	777 (507,1047)	762 (724,800)	771 (738,805)	775 (505,1045)	388 (-362,1139)	

**Table A.7**

Actual and Predicted Cases with 95% Confidence Intervals for Angola using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	48	11 (-62,84)	48 (48,48)	34 (6,62)	52 (44,60)	45 (39,51)	48 (48,48)	49 (47,52)
5/17/2020	48	11 (-62,84)	48 (48,48)	34 (6,62)	53 (44,62)	45 (39,51)	48 (48,48)	50 (47,54)
5/18/2020	50	11 (-63,85)	48 (44,52)	34 (6,63)	55 (46,64)	45 (38,52)	48 (48,48)	51 (47,56)
5/19/2020	52	11 (-65,87)	48 (40,56)	35 (5,65)	56 (47,65)	45 (36,54)	48 (48,48)	52 (47,58)
5/20/2020	52	11 (-66,88)	48 (40,56)	35 (5,66)	58 (48,67)	45 (35,55)	48 (48,48)	53 (47,60)
5/21/2020	58	11 (-69,90)	48 (28,68)	36 (2,69)	59 (50,68)	45 (31,59)	48 (48,48)	54 (47,62)
5/22/2020	60	11 (-71,93)	48 (24,72)	36 (1,71)	61 (53,69)	45 (28,62)	48 (48,48)	56 (47,64)
5/23/2020	61	11 (-73,95)	48 (23,73)	36 (-1,74)	62 (55,70)	45 (26,64)	48 (48,48)	57 (47,66)
5/24/2020	69	11 (-77,99)	48 (7,89)	37 (-4,78)	64 (56,72)	45 (21,69)	48 (48,48)	58 (47,69)
5/25/2020	70	11 (-80,102)	48 (5,91)	37 (-7,81)	65 (57,73)	45 (17,73)	48 (48,48)	59 (46,71)
5/26/2020	70	11 (-83,105)	48 (5,91)	38 (-9,84)	67 (59,75)	45 (15,75)	48 (48,48)	60 (46,73)
5/27/2020	71	11 (-85,107)	48 (3,93)	38 (-10,86)	69 (61,76)	45 (13,77)	48 (48,48)	61 (46,76)
5/28/2020	74	11 (-87,109)	48 (-3,99)	38 (-12,88)	70 (63,78)	45 (10,80)	48 (48,48)	62 (45,78)
5/29/2020	81	11 (-91,113)	48 (-17,113)	39 (-14,92)	72 (63,81)	45 (6,84)	48 (48,48)	63 (45,81)
5/30/2020	84	11 (-94,116)	48 (-23,119)	39 (-17,95)	74 (64,84)	45 (3,87)	48 (48,48)	64 (44,83)
5/31/2020	86	11 (-97,119)	48 (-26,122)	39 (-19,98)	75 (64,86)	45 (-1,91)	48 (48,48)	65 (44,86)
6/1/2020	86	11 (-100,122)	48 (-26,122)	40 (-21,101)	77 (66,89)	45 (-3,93)	48 (48,48)	66 (43,89)
6/2/2020	86	11 (-102,124)	48 (-26,122)	40 (-23,103)	79 (67,90)	45 (-6,96)	48 (48,48)	67 (43,91)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	48	49 (47,51)	50 (48,52)	42 (30,54)	49 (47,51)	49 (47,51)	25 (-19,70)	
5/17/2020	48	50 (47,53)	50 (47,53)	41 (29,54)	50 (47,53)	50 (47,53)	26 (-19,70)	
5/18/2020	50	51 (47,54)	52 (48,56)	41 (26,55)	50 (46,54)	51 (47,55)	26 (-19,71)	
5/19/2020	52	52 (47,56)	53 (48,57)	40 (24,57)	51 (47,55)	52 (47,57)	27 (-20,73)	
5/20/2020	52	52 (47,57)	54 (49,59)	40 (22,58)	52 (47,57)	53 (48,58)	28 (-19,74)	
5/21/2020	58	53 (47,59)	55 (50,60)	39 (17,62)	53 (47,59)	54 (48,60)	28 (-21,77)	
5/22/2020	60	54 (47,60)	57 (51,62)	39 (13,65)	55 (48,61)	55 (48,62)	30 (-21,80)	
5/23/2020	61	55 (47,62)	57 (51,63)	38 (10,67)	56 (49,62)	56 (48,63)	30 (-22,82)	
5/24/2020	69	55 (47,63)	59 (53,65)	38 (4,72)	56 (49,64)	57 (49,65)	31 (-24,86)	
5/25/2020	70	56 (47,65)	60 (53,67)	37 (0,75)	57 (49,65)	58 (49,66)	32 (-25,89)	
5/26/2020	70	57 (47,66)	62 (54,69)	37 (-4,78)	57 (49,66)	59 (49,68)	33 (-26,91)	
5/27/2020	71	57 (47,68)	62 (55,70)	37 (-7,80)	58 (49,67)	60 (50,70)	33 (-28,93)	
5/28/2020	74	58 (46,69)	64 (56,72)	36 (-11,83)	59 (50,69)	61 (50,71)	32 (-30,95)	
5/29/2020	81	58 (46,71)	65 (57,73)	36 (-15,87)	61 (51,71)	62 (50,73)	33 (-32,98)	
5/30/2020	84	59 (46,72)	67 (58,75)	35 (-20,90)	62 (51,73)	63 (51,75)	35 (-32,103)	
5/31/2020	86	59 (45,74)	68 (59,76)	35 (-24,94)	63 (51,74)	64 (51,77)	36 (-34,106)	
6/1/2020	86	60 (45,75)	69 (60,78)	35 (-28,97)	63 (51,75)	65 (51,78)	37 (-35,108)	
6/2/2020	86	61 (45,76)	70 (61,79)	34 (-31,99)	64 (51,76)	66 (51,80)	36 (-37,109)	

**Table A.8**

Actual and Predicted Cases with 95% Confidence Intervals for Antigua and Barbuda using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	25	9 (-22,40)	25 (25,25)	26 (24,29)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/17/2020	25	9 (-22,40)	25 (25,25)	27 (24,30)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/18/2020	25	9 (-22,40)	25 (25,25)	27 (24,30)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/19/2020	25	9 (-22,40)	25 (25,25)	27 (24,31)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/20/2020	25	9 (-22,40)	25 (25,25)	28 (24,32)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/21/2020	25	9 (-22,40)	25 (25,25)	28 (24,32)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/22/2020	25	9 (-22,40)	25 (25,25)	28 (24,33)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/23/2020	25	9 (-22,40)	25 (25,25)	28 (23,34)	27 (23,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/24/2020	25	9 (-22,40)	25 (25,25)	29 (23,34)	27 (22,32)	25 (25,25)	25 (25,25)	25 (25,25)
5/25/2020	25	9 (-22,40)	25 (25,25)	29 (23,35)	27 (22,31)	25 (25,25)	25 (25,25)	25 (25,25)
5/26/2020	25	9 (-22,40)	25 (25,25)	29 (23,35)	27 (22,31)	25 (25,25)	25 (25,25)	25 (25,25)
5/27/2020	25	9 (-22,40)	25 (25,25)	30 (23,36)	27 (22,31)	25 (25,25)	25 (25,25)	25 (25,25)
5/28/2020	25	9 (-22,40)	25 (25,25)	30 (23,37)	26 (22,31)	25 (25,25)	25 (25,25)	25 (25,25)
5/29/2020	25	9 (-22,40)	25 (25,25)	30 (23,37)	26 (22,30)	25 (25,25)	25 (25,25)	25 (25,25)
5/30/2020	25	9 (-22,40)	25 (25,25)	31 (23,38)	26 (22,30)	25 (25,25)	25 (25,25)	25 (25,25)
5/31/2020	26	9 (-22,40)	25 (23,27)	31 (23,38)	26 (22,29)	25 (25,25)	25 (25,25)	25 (25,25)
6/1/2020	26	9 (-22,40)	25 (23,27)	31 (24,39)	25 (21,29)	25 (24,26)	25 (25,25)	25 (25,25)
6/2/2020	26	9 (-22,41)	25 (23,27)	31 (24,39)	25 (21,29)	25 (24,26)	25 (25,25)	25 (25,25)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3008	25	25 (25,25)	25 (23,27)	25 (25,25)	25 (25,25)	25 (23,27)	12 (-12,37)	
	25	25 (25,25)	25 (23,27)	25 (25,25)	25 (25,25)	25 (23,27)	12 (-12,37)	
	25	25 (25,25)	25 (22,28)	25 (25,25)	25 (25,25)	25 (22,28)	12 (-12,37)	
	25	25 (25,25)	25 (21,28)	25 (25,25)	25 (24,25)	25 (22,28)	12 (-12,37)	
	25	25 (25,25)	25 (21,28)	25 (25,25)	25 (24,25)	25 (21,28)	12 (-12,37)	
	25	25 (25,25)	25 (20,29)	25 (25,25)	25 (24,25)	25 (20,29)	12 (-12,37)	
	25	25 (25,25)	25 (20,29)	25 (25,25)	25 (25,25)	25 (20,29)	12 (-13,37)	
	25	25 (25,25)	24 (19,30)	25 (25,25)	25 (25,25)	24 (19,30)	12 (-13,37)	
	25	25 (25,25)	24 (18,31)	25 (25,25)	25 (24,25)	24 (18,31)	12 (-13,37)	
	25	25 (25,25)	24 (17,32)	25 (25,25)	25 (24,25)	24 (17,32)	12 (-13,37)	
	25	25 (25,25)	24 (16,33)	25 (25,25)	25 (24,25)	24 (16,33)	12 (-13,37)	
	25	25 (25,25)	24 (15,33)	25 (25,25)	25 (24,25)	24 (15,33)	12 (-13,37)	
	25	25 (25,25)	24 (14,34)	25 (25,25)	25 (24,25)	24 (14,34)	12 (-13,37)	
	25	25 (25,25)	24 (13,35)	25 (25,25)	25 (25,26)	24 (13,35)	12 (-13,37)	
	25	25 (25,25)	24 (12,36)	25 (25,25)	25 (24,25)	24 (12,36)	12 (-13,37)	
	25	25 (25,25)	24 (10,37)	25 (25,26)	25 (24,25)	24 (10,38)	12 (-13,37)	
	26	25 (25,25)	24 (9,39)	25 (25,26)	25 (24,25)	24 (9,39)	12 (-13,37)	
	26	25 (25,25)	24 (8,40)					

**Table A.9**

Actual and Predicted Cases with 95% Confidence Intervals for Argentina using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	7805	1481 (-10913,13876)	7479 (6840,8118)	4651 (-1531,10833)	7737 (7604,7870)	7134 (5819,8449)	7479 (7479,7479)	7713 (7254,8172)
5/17/2020	8068	1481 (-11174,14136)	7479 (6325,8633)	4705 (-1686,11095)	7976 (7817,8135)	7134 (5540,8728)	7479 (7479,7479)	7970 (-11283,27224)
5/18/2020	8371	1481 (-11463,14425)	7479 (5731,9227)	4758 (-1870,11387)	8219 (8005,8434)	7134 (5223,9045)	7479 (7479,7479)	8228 (-34487,50942)
5/19/2020	8809	1481 (-11832,14794)	7479 (4872,10086)	4812 (-2137,11762)	8468 (8085,8850)	7134 (4803,9465)	7479 (7479,7479)	8485 (-62752,79722)
5/20/2020	9283	1481 (-12250,15213)	7479 (3943,11015)	4866 (-2457,12189)	8721 (8121,9321)	7134 (4324,9944)	7479 (7479,7479)	8742 (-95346,112830)
5/21/2020	9931	1481 (-12761,15723)	7479 (2673,12285)	4920 (-2876,12715)	8979 (8040,9917)	7134 (3730,10538)	7479 (7479,7479)	8999 (-131771,149769)
5/22/2020	10649	1481 (-13351,16313)	7479 (1266,13692)	4973 (-3379,13326)	9241 (7884,10599)	7134 (3046,11222)	7479 (7479,7479)	9257 (-171667,190180)
5/23/2020	11353	1481 (-13988,16950)	7479 (-114,15072)	5027 (-3932,13986)	9509 (7707,11310)	7134 (2320,11948)	7479 (7479,7479)	9514 (-214760,233788)
5/24/2020	12076	1481 (-14662,17625)	7479 (-1531,16489)	5081 (-4523,14684)	9781 (7516,12047)	7134 (1564,12704)	7479 (7479,7479)	9771 (-260832,280374)
5/25/2020	12628	1481 (-15320,18283)	7479 (-2613,17571)	5134 (-5092,15361)	10059 (7384,12734)	7134 (848,13420)	7479 (7479,7479)	10029 (-309701,329758)
5/26/2020	13228	1481 (-15978,18940)	7479 (-3789,18747)	5188 (-5658,16035)	10342 (7273,13410)	7134 (142,14126)	7479 (7479,7479)	10286 (-361219,381791)
5/27/2020	13933	1481 (-16658,19621)	7479 (-5171,20129)	5242 (-6248,16732)	10629 (7147,14111)	7134 (-587,14855)	7479 (7479,7479)	10543 (-415256,436342)
5/28/2020	14702	1481 (-17370,20333)	7479 (-6678,21636)	5296 (-6870,17462)	10922 (6996,14848)	7134 (-1349,15617)	7479 (7479,7479)	10800 (-471700,493301)
5/29/2020	15419	1481 (-18097,21059)	7479 (-8083,23041)	5349 (-7506,18205)	11220 (6844,15596)	7134 (-2121,16389)	7479 (7479,7479)	11058 (-530455,552570)
5/30/2020	16214	1481 (-18850,21812)	7479 (-9642,24600)	5403 (-8168,18974)	11523 (6674,16372)	7134 (-2919,17187)	7479 (7479,7479)	11315 (-591432,614062)
5/31/2020	16851	1481 (-19595,22558)	7479 (-10890,25848)	5457 (-8820,19734)	11831 (6531,17131)	7134 (-3702,17970)	7479 (7479,7479)	11572 (-654554,677698)
6/1/2020	17415	1481 (-20324,23286)	7479 (-11996,26954)	5511 (-9452,20473)	12145 (6425,17865)	7134 (-4459,18727)	7479 (7479,7479)	11829 (-719751,743410)
6/2/2020	18319	1481 (-21092,24055)	7479 (-13767,28725)	5564 (-10125,21254)	12464 (6282,18646)	7134 (-5261,19529)	7479 (7479,7479)	12087 (-786958,811132)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Surte-Arima	
3009	7805	7713 (7254,8172)	7763 (7681,7844)	6505 (3956,9053)	7763 (7207,8319)	7760 (7677,7843)	4037 (-3347,11422)	
	8068	7970 (-11283,27224)	8069 (7947,8191)	6533 (3745,9321)	8057 (-55109,71222)	8061 (7935,8188)	4192 (-3299,11684)	
	8371	8228 (-34487,50942)	8369 (8196,8542)	6554 (3486,9621)	8346 (-131530,148221)	8354 (8172,8536)	4343 (-3285,11971)	
	8809	8485 (-62752,79722)	8677 (8452,8902)	6557 (3103,10011)	8648 (-226798,244095)	8652 (8411,8892)	4490 (-3356,12336)	
	9283	8742 (-95346,112830)	8984 (8701,9267)	6549 (2639,10459)	8944 (-336283,354170)	8946 (8641,9251)	4663 (-3439,12765)	
	9931	8999 (-131771,149769)	9296 (8953,9640)	6533 (2047,11020)	9251 (-460088,478589)	9243 (8870,9616)	4856 (-3582,13293)	
	10649	9257 (-171667,190180)	9609 (9201,10018)	6513 (1352,11675)	9562 (-597136,616260)	9538 (9091,9984)	5072 (-3765,13909)	
	11353	9514 (-214760,233788)	9927 (9450,10403)	6490 (603,12378)	9858 (-744136,763852)	9834 (9311,10357)	5280 (-3996,14556)	
	12076	9771 (-260832,280374)	10245 (9697,10794)	6466 (-185,13118)	10153 (-900381,920686)	10129 (9525,10734)	5479 (-4271,15229)	
	12628	10029 (-309701,329758)	10567 (9944,11191)	6442 (-942,13826)	10441 (-1064902,1085785)	10425 (9736,11115)	5653 (-4557,15863)	
	13228	10286 (-361219,381791)	10892 (10190,11593)	6418 (-1691,14527)	10744 (-1238949,1260437)	10721 (9943,11499)	5785 (-4897,16468)	
	13933	10543 (-415256,436342)	11219 (10436,12001)	6394 (-2464,15253)	11040 (-1421236,1443315)	11017 (10147,11887)	5930 (-5255,17115)	
	14702	10800 (-471700,493301)	11549 (10682,12415)	6371 (-3270,16012)	11346 (-1612545,1635238)	11312 (10347,12277)	6091 (-5630,17813)	
	15419	11058 (-530455,552570)	11881 (10928,12834)	6348 (-4087,16783)	11658 (-1812848,1836164)	11608 (10545,12672)	6295 (-5970,18560)	
	16214	11315 (-591432,614062)	12216 (11174,13258)	6325 (-4930,17580)	11954 (-2020240,2044148)	11904 (10739,13069)	6483 (-6349,19314)	
	16851	11572 (-654554,677698)	12554 (11420,13688)	6303 (-5759,18364)	12248 (-2234325,2258822)	12200 (10930,13470)	6667 (-6722,20056)	
	17415	11829 (-719751,743410)	12894 (11666,14123)	6281 (-6562,19123)	12537 (-2454494,2479568)	12495 (11118,13873)	6814 (-7119,20746)	
	18319	12087 (-786958,811132)	13237 (11912,14563)	6259 (-7409,19927)	12840 (-2681831,2707511)	12791 (11303,14279)	6958 (-7563,21480)	

**Table A.10**

Actual and Predicted Cases with 95% Confidence Intervals for Armenia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	4283	750 (-6174,7674)	4044 (3576,4512)	2359 (-1411,6130)	4114 (3782,4445)	4044 (3576,4512)	4044 (4044,4044)	4178 (3916,4440)	
5/17/2020	4472	750 (-6362,7862)	4044 (3205,4883)	2387 (-1546,6319)	4251 (3866,4637)	4044 (3365,4723)	4044 (4044,4044)	4322 (-1943,10587)	
5/18/2020	4823	750 (-6663,8164)	4044 (2517,5571)	2414 (-1798,6626)	4392 (3812,4972)	4044 (3002,5086)	4044 (4044,4044)	4466 (-9346,18278)	
5/19/2020	5041	750 (-6924,8425)	4044 (2090,5998)	2441 (-2008,6890)	4536 (3830,5241)	4044 (2714,5374)	4044 (4044,4044)	4610 (-18364,27585)	
5/20/2020	5271	750 (-7176,8676)	4044 (1639,6449)	2468 (-2208,7145)	4683 (3868,5498)	4044 (2440,5648)	4044 (4044,4044)	4755 (-28766,38276)	
5/21/2020	5606	750 (-7462,8963)	4044 (982,7106)	2496 (-2446,7437)	4833 (3865,5800)	4044 (2119,5969)	4044 (4044,4044)	4899 (-40394,50192)	
5/22/2020	5928	750 (-7766,9266)	4044 (351,7737)	2523 (-2702,7747)	4986 (3850,6121)	4044 (1780,6308)	4044 (4044,4044)	5043 (-53132,63219)	
5/23/2020	6302	750 (-8096,9597)	4044 (-382,8470)	2550 (-2985,8086)	5142 (3809,6474)	4044 (1411,6677)	4044 (4044,4044)	5187 (-66893,77268)	
5/24/2020	6661	750 (-8441,9941)	4044 (-1085,9173)	2577 (-3284,8439)	5301 (3763,6840)	4044 (1030,7058)	4044 (4044,4044)	5332 (-81608,92271)	
5/25/2020	7113	750 (-8820,10320)	4044 (-1971,10059)	2605 (-3618,8828)	5464 (3682,7246)	4044 (610,7478)	4044 (4044,4044)	5476 (-97218,108170)	
5/26/2020	7402	750 (-9185,10686)	4044 (-2538,10626)	2632 (-3937,9201)	5630 (3634,7626)	4044 (215,7873)	4044 (4044,4044)	5620 (-113676,124917)	
5/27/2020	7774	750 (-9559,11059)	4044 (-3267,11355)	2659 (-4264,9583)	5799 (3585,8013)	4044 (-186,8274)	4044 (4044,4044)	5764 (-130941,142470)	
5/28/2020	8216	750 (-9954,11454)	4044 (-4133,12221)	2687 (-4613,9986)	5972 (3520,8423)	4044 (-610,8698)	4044 (4044,4044)	5909 (-148977,160794)	
5/29/2020	8676	750 (-10368,11869)	4044 (-5035,13123)	2714 (-4982,10410)	6147 (3439,8856)	4044 (-1055,9143)	4044 (4044,4044)	6053 (-167752,179858)	
5/30/2020	8927	750 (-10761,12261)	4044 (-5527,13615)	2741 (-5326,10808)	6327 (3398,9256)	4044 (-1467,9555)	4044 (4044,4044)	6197 (-187239,199634)	
5/31/2020	9282	750 (-11154,12654)	4044 (-6222,14310)	2768 (-5670,11206)	6509 (3365,9654)	4044 (-1877,9965)	4044 (4044,4044)	6341 (-207414,220096)	
6/1/2020	9492	750 (-11523,13024)	4044 (-6634,14722)	2796 (-5987,11579)	6696 (3368,10023)	4044 (-2257,10345)	4044 (4044,4044)	6486 (-228252,241224)	
6/2/2020	10009	750 (-11921,13422)	4044 (-7647,15735)	2823 (-6336,11981)	6885 (3344,10427)	4044 (-2671,10759)	4044 (4044,4044)	6630 (-249735,262995)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3010	4283	4178 (3916,4440)	4205 (4172,4238)	3586 (2219,4952)	4207 (3888,4525)	4203 (4170,4237)	2189 (-1916,6294)		
	4472	4322 (-1943,10587)	4372 (4320,4424)	3634 (2123,5145)	4362 (-19115,27840)	4369 (4314,4423)	2282 (-1917,6482)		
	4823	4466 (-9346,18278)	4542 (4468,4616)	3682 (1896,5468)	4504 (-45844,54851)	4537 (4459,4615)	2376 (-2032,6783)		
	5041	4610 (-18364,27585)	4714 (4616,4813)	3726 (1713,5739)	4675 (-81594,90943)	4707 (4602,4813)	2491 (-2071,7053)		
	5271	4755 (-28766,38276)	4888 (4762,5015)	3767 (1536,5999)	4857 (-125161,134876)	4879 (4742,5015)	2574 (-2142,7290)		
	5606	4899 (-40394,50192)	5064 (4907,5221)	3807 (1312,6301)	5015 (-172503,182533)	5050 (4879,5221)	2669 (-2236,7574)		
	5928	5043 (-53132,63219)	5241 (5052,5430)	3845 (1067,6622)	5185 (-224766,235136)	5223 (5013,5432)	2754 (-2359,7868)		
	6302	5187 (-66893,77268)	5420 (5196,5644)	3883 (790,6975)	5356 (-281639,292351)	5395 (5145,5645)	2862 (-2482,8206)		
	6661	5332 (-81608,92271)	5600 (5339,5861)	3921 (499,7342)	5512 (-341434,352458)	5567 (5273,5861)	2977 (-2607,8561)		
	7113	5476 (-97218,108170)	5781 (5482,6081)	3959 (170,7748)	5653 (-403034,414340)	5740 (5399,6081)	3072 (-2788,8931)		
	7402	5620 (-113676,124917)	5964 (5624,6304)	3999 (-136,8134)	5824 (-468880,480527)	5913 (5523,6302)	3186 (-2932,9303)		
	7774	5764 (-130941,142470)	6149 (5766,6531)	4039 (-448,8527)	6006 (-539468,551480)	6085 (5644,6526)	3263 (-3126,9652)		
	8216	5909 (-148977,160794)	6335 (5909,6761)	4080 (-782,8942)	6164 (-612675,625004)	6258 (5763,6752)	3358 (-3325,10040)		
	8676	6053 (-167752,179858)	6522 (6051,6994)	4121 (-1137,9379)	6334 (-689226,701894)	6430 (5880,6981)	3450 (-3548,10447)		
	8927	6197 (-187239,199634)	6711 (6192,7230)	4163 (-1459,9786)	6505 (-769070,782080)	6603 (5995,7211)	3574 (-3709,10856)		
	9282	6341 (-207414,220096)	6902 (6334,7469)	4206 (-1779,10192)	6661 (-851066,864387)	6776 (6108,7443)	3648 (-3925,11220)		
	9492	6486 (-228252,241224)	7094 (6476,7711)	4249 (-2070,10568)	6802 (-934325,947928)	6948 (6219,7678)	3728 (-4112,11569)		
	10009	6630 (-249735,262995)	7287 (6618,7956)	4292 (-2393,10977)	6972 (-1020711,1034656)	7121 (6328,7914)	3782 (-4363,11927)		

**Table A.11**

Actual and Predicted Cases with 95% Confidence Intervals for Australia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	7044	2853 (-5362,11067)	7035 (7017,7053)	7841 (6279,9404)	6803 (6331,7275)	7019 (6970,7068)	7035 (7035,7035)	7052 (7019,7085)	
5/17/2020	7054	2853 (-5372,11077)	7035 (6998,7072)	7926 (6288,9563)	6719 (6148,7291)	7019 (6959,7079)	7035 (7035,7035)	7069 (6947,7191)	
5/18/2020	7068	2853 (-5384,11090)	7035 (6970,7100)	8010 (6300,9721)	6626 (5943,7310)	7019 (6945,7093)	7035 (7035,7035)	7086 (6844,7328)	
5/19/2020	7072	2853 (-5392,11098)	7035 (6962,7108)	8095 (6306,9883)	6525 (5726,7324)	7019 (6937,7101)	7035 (7035,7035)	7104 (6718,7489)	
5/20/2020	7081	2853 (-5401,11106)	7035 (6945,7125)	8180 (6312,10047)	6414 (5491,7337)	7019 (6927,7111)	7035 (7035,7035)	7121 (6572,7670)	
5/21/2020	7095	2853 (-5411,11117)	7035 (6917,7153)	8264 (6320,10208)	6294 (5235,7353)	7019 (6916,7122)	7035 (7035,7035)	7138 (6407,7869)	
5/22/2020	7099	2853 (-5419,11125)	7035 (6910,7160)	8349 (6324,10373)	6164 (4964,7365)	7019 (6906,7132)	7035 (7035,7035)	7155 (6227,8084)	
5/23/2020	7114	2853 (-5429,11135)	7035 (6880,7190)	8433 (6331,10536)	6025 (4672,7378)	7019 (6895,7143)	7035 (7035,7035)	7172 (6031,8314)	
5/24/2020	7114	2853 (-5437,11143)	7035 (6880,7190)	8518 (6334,10702)	5876 (4366,7386)	7019 (6887,7151)	7035 (7035,7035)	7190 (5821,8559)	
5/25/2020	7126	2853 (-5446,11151)	7035 (6857,7213)	8602 (6337,10867)	5717 (4040,7395)	7019 (6877,7161)	7035 (7035,7035)	7207 (5597,8817)	
5/26/2020	7139	2853 (-5455,11161)	7035 (6831,7239)	8687 (6341,11032)	5549 (3693,7404)	7019 (6866,7172)	7035 (7035,7035)	7224 (5361,9087)	
5/27/2020	7150	2853 (-5465,11170)	7035 (6810,7260)	8771 (6346,11197)	5369 (3327,7411)	7019 (6855,7183)	7035 (7035,7035)	7241 (5113,9370)	
5/28/2020	7165	2853 (-5475,11181)	7035 (6780,7290)	8856 (6351,11361)	5180 (2940,7419)	7019 (6842,7196)	7035 (7035,7035)	7259 (4854,9664)	
5/29/2020	7184	2853 (-5487,11192)	7035 (6743,7327)	8940 (6357,11524)	4979 (2532,7427)	7019 (6828,7210)	7035 (7035,7035)	7276 (4583,9969)	
5/30/2020	7192	2853 (-5498,11203)	7035 (6727,7343)	9025 (6362,11688)	4768 (2105,7432)	7019 (6815,7223)	7035 (7035,7035)	7293 (4302,10284)	
5/31/2020	7202	2853 (-5509,11214)	7035 (6708,7362)	9110 (6367,11852)	4547 (1658,7435)	7019 (6802,7236)	7035 (7035,7035)	7310 (4010,10610)	
6/1/2020	7221	2853 (-5521,11226)	7035 (6670,7400)	9194 (6373,12015)	4314 (1189,7438)	7019 (6788,7250)	7035 (7035,7035)	7327 (3709,10946)	
6/2/2020	7229	2853 (-5532,11238)	7035 (6655,7415)	9279 (6378,12179)	4069 (700,7439)	7019 (6774,7264)	7035 (7035,7035)	7345 (3398,11291)	
Predicted Cases (95% Confidence Interval)									
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3011	7044	7049 (7021,7077)	7057 (6962,7151)	6956 (6785,7128)	7069 (7003,7135)	7056 (6962,7151)	3538 (-3335,10410)		
	7054	7064 (6973,7155)	7075 (6909,7242)	6954 (6770,7138)	7097 (5886,8308)	7075 (6908,7242)	3547 (-3326,10420)		
	7068	7078 (6903,7253)	7097 (6834,7360)	6953 (6754,7152)	7110 (5014,9205)	7096 (6833,7358)	3554 (-3324,10432)		
	7072	7092 (6818,7366)	7116 (6753,7480)	6950 (6741,7160)	7129 (3876,10381)	7114 (6751,7478)	3564 (-3314,10441)		
	7081	7105 (6720,7490)	7138 (6657,7619)	6948 (6728,7169)	7149 (2521,11776)	7135 (6654,7616)	3574 (-3303,10450)		
	7095	7118 (6613,7623)	7158 (6554,7761)	6946 (6712,7180)	7167 (1022,13312)	7154 (6550,7757)	3583 (-3294,10461)		
	7099	7131 (6496,7765)	7180 (6441,7918)	6943 (6698,7189)	7176 (-381,14732)	7174 (6435,7913)	3594 (-3282,10471)		
	7114	7143 (6372,7914)	7200 (6320,8080)	6941 (6682,7200)	7204 (-2164,16571)	7193 (6313,8073)	3605 (-3272,10481)		
	7114	7155 (6241,8068)	7222 (6191,8253)	6939 (6669,7208)	7225 (-4124,18574)	7213 (6182,8245)	3617 (-3258,10491)		
	7126	7166 (6104,8229)	7243 (6055,8432)	6937 (6656,7218)	7231 (-5916,20378)	7233 (6044,8421)	3625 (-3249,10498)		
	7139	7178 (5962,8394)	7265 (5910,8620)	6935 (6641,7229)	7244 (-7725,22212)	7253 (5898,8607)	3637 (-3235,10509)		
	7150	7189 (5815,8563)	7287 (5760,8813)	6934 (6627,7241)	7257 (-9583,24098)	7272 (5745,8799)	3648 (-3224,10519)		
	7165	7199 (5663,8735)	7309 (5603,9015)	6932 (6611,7253)	7270 (-11477,26017)	7292 (5586,8998)	3660 (-3211,10532)		
	7184	7210 (5507,8912)	7331 (5440,9222)	6931 (6594,7267)	7274 (-13258,27805)	7311 (5420,9203)	3672 (-3200,10544)		
	7192	7220 (5349,9091)	7354 (5270,9437)	6930 (6578,7281)	7296 (-15244,29837)	7331 (5247,9415)	3684 (-3188,10557)		
	7202	7229 (5186,9272)	7376 (5094,9657)	6929 (6563,7294)	7313 (-17337,31963)	7351 (5069,9632)	3695 (-3178,10568)		
	7221	7239 (5021,9456)	7399 (4913,9884)	6928 (6547,7309)	7314 (-19295,33923)	7371 (4885,9856)	3706 (-3168,10579)		
	7229	7248 (4854,9642)	7422 (4727,10117)	6927 (6531,7322)	7323 (-21233,35878)	7390 (4695,10085)	3717 (-3157,10591)		

**Table A.12**

Actual and Predicted Cases with 95% Confidence Intervals for Austria using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	16201	6426 (-12734,25585)	16109 (15929,16289)	17709 (14754,20664)	15717 (14767,16666)	16109 (15929,16289)	16109 (16109,16109)	16155 (16065,16246)	
5/17/2020	16242	6426 (-12774,25626)	16109 (15848,16370)	17900 (14794,21005)	15557 (14394,16720)	16109 (15885,16333)	16109 (16109,16109)	16203 (15429,16977)	
5/18/2020	16269	6426 (-12806,25657)	16109 (15795,16423)	18091 (14823,21359)	15378 (13994,16763)	16109 (15852,16366)	16109 (16109,16109)	16251 (14595,17907)	
5/19/2020	16321	6426 (-12847,25698)	16109 (15693,16525)	18282 (14861,21704)	15181 (13542,16820)	16109 (15804,16414)	16109 (16109,16109)	16299 (13577,19021)	
5/20/2020	16353	6426 (-12884,25735)	16109 (15631,16587)	18474 (14893,22054)	14964 (13058,16870)	16109 (15763,16455)	16109 (16109,16109)	16347 (12402,20292)	
5/21/2020	16404	6426 (-12926,25777)	16109 (15531,16687)	18665 (14929,22400)	14727 (12530,16924)	16109 (15714,16504)	16109 (16109,16109)	16395 (11087,21703)	
5/22/2020	16436	6426 (-12964,25815)	16109 (15468,16750)	18856 (14960,22752)	14470 (11969,16972)	16109 (15671,16547)	16109 (16109,16109)	16443 (9645,23241)	
5/23/2020	16486	6426 (-13006,25857)	16109 (15370,16848)	19047 (14994,23101)	14193 (11365,17021)	16109 (15623,16595)	16109 (16109,16109)	16490 (8086,24895)	
5/24/2020	16503	6426 (-13041,25893)	16109 (15337,16881)	19239 (15020,23457)	13895 (10730,17059)	16109 (15583,16635)	16109 (16109,16109)	16538 (6417,26659)	
5/25/2020	16539	6426 (-13077,25928)	16109 (15266,16952)	19430 (15045,23815)	13576 (10056,17095)	16109 (15543,16675)	16109 (16109,16109)	16586 (4646,28526)	
5/26/2020	16557	6426 (-13110,25961)	16109 (15231,16987)	19621 (15065,24177)	13235 (9347,17122)	16109 (15508,16710)	16109 (16109,16109)	16634 (2778,30490)	
5/27/2020	16591	6426 (-13143,25994)	16109 (15164,17054)	19812 (15085,24540)	12872 (8596,17148)	16109 (15473,16745)	16109 (16109,16109)	16682 (818,32546)	
5/28/2020	16628	6426 (-13176,26027)	16109 (15092,17126)	20003 (15105,24902)	12487 (7802,17171)	16109 (15436,16782)	16109 (16109,16109)	16730 (-1231,34691)	
5/29/2020	16655	6426 (-13208,26059)	16109 (15039,17179)	20195 (15123,25266)	12079 (6968,17190)	16109 (15400,16818)	16109 (16109,16109)	16778 (-3365,36920)	
5/30/2020	16685	6426 (-13240,26091)	16109 (14980,17238)	20386 (15140,25631)	11648 (6091,17205)	16109 (15364,16854)	16109 (16109,16109)	16826 (-5580,39231)	
5/31/2020	16731	6426 (-13274,26125)	16109 (14890,17328)	20577 (15160,25994)	11194 (5168,17220)	16109 (15326,16892)	16109 (16109,16109)	16874 (-7874,41621)	
6/1/2020	16733	6426 (-13304,26155)	16109 (14886,17332)	20768 (15174,26363)	10716 (4208,17224)	16109 (15294,16924)	16109 (16109,16109)	16921 (-10245,44087)	
6/2/2020	16759	6426 (-13333,26184)	16109 (14835,17383)	20960 (15187,26733)	10214 (3204,17225)	16109 (15262,16956)	16109 (16109,16109)	16969 (-12689,46627)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3012	16201	16149 (16070,16228)	16188 (15993,16383)	15806 (15033,16580)	16137 (16082,16193)	16187 (15992,16382)	8119 (-7723,23960)		
	16242	16191 (15596,16786)	16273 (15961,16585)	15790 (14959,16622)	16176 (15044,17307)	16271 (15959,16583)	8171 (-7660,24001)		
	16269	16232 (14977,17487)	16346 (15887,16804)	15778 (14900,16655)	16225 (13455,18995)	16342 (15884,16801)	8204 (-7620,24027)		
	16321	16272 (14232,18311)	16414 (15727,17101)	15765 (14830,16700)	16279 (11345,21214)	16408 (15721,17095)	8234 (-7596,24064)		
	16353	16311 (13385,19237)	16488 (15520,17456)	15753 (14765,16741)	16286 (9751,22822)	16479 (15510,17447)	8264 (-7571,24099)		
	16404	16349 (12449,20249)	16567 (15304,17829)	15741 (14695,16787)	16357 (7284,25430)	16554 (15291,17817)	8302 (-7541,24144)		
	16436	16386 (11438,21335)	16644 (15075,18213)	15730 (14629,16831)	16398 (4642,28155)	16627 (15058,18196)	8344 (-7501,24189)		
	16486	16422 (10360,22485)	16719 (14818,18620)	15720 (14561,16878)	16419 (2165,30673)	16697 (14796,18599)	8379 (-7472,24229)		
	16503	16458 (9222,23694)	16796 (14536,19056)	15711 (14502,16919)	16451 (-388,33290)	16769 (14509,19029)	8420 (-7429,24270)		
	16539	16493 (8032,24954)	16875 (14236,19514)	15702 (14443,16960)	16493 (-3185,36172)	16841 (14202,19480)	8454 (-7396,24303)		
	16557	16526 (6793,26260)	16954 (13920,19988)	15694 (14390,16998)	16542 (-6281,39365)	16913 (13879,19948)	8494 (-7351,24339)		
	16591	16559 (5512,27607)	17033 (13586,20480)	15686 (14337,17036)	16543 (-9054,42140)	16985 (13538,20432)	8528 (-7313,24370)		
	16628	16592 (4191,28992)	17113 (13235,20991)	15680 (14284,17075)	16607 (-12298,45512)	17057 (13179,20935)	8571 (-7267,24409)		
	16655	16623 (2835,30412)	17194 (12867,21520)	15673 (14234,17113)	16643 (-15671,48957)	17129 (12802,21455)	8612 (-7221,24444)		
	16685	16654 (1446,31862)	17275 (12485,22065)	15668 (14185,17150)	16658 (-18913,52229)	17201 (12410,21991)	8654 (-7173,24480)		
	16731	16684 (27,33341)	17357 (12088,22627)	15662 (14134,17191)	16684 (-22164,55532)	17273 (12003,22542)	8694 (-7128,24516)		
	16733	16713 (-1418,34845)	17440 (11676,23203)	15657 (14089,17226)	16721 (-25556,58999)	17345 (11581,23108)	8737 (-7076,24550)		
	16759	16742 (-2888,36372)	17523 (11251,23795)	15653 (14045,17260)	16765 (-29149,62679)	17417 (11144,23689)	8775 (-7030,24579)		

**Table A.13**

Actual and Predicted Cases with 95% Confidence Intervals for Azerbaijan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	3138	630 (-4286,5546)	2980 (2670,3290)	1970 (-318,4259)	3127 (3105,3149)	2980 (2670,3290)	2980 (2980,2980)	3067 (2897,3237)
5/17/2020	3274	630 (-4421,5681)	2980 (2404,3556)	1993 (-409,4395)	3215 (3132,3298)	2980 (2517,3443)	2980 (2980,2980)	3158 (540,5776)
5/18/2020	3387	630 (-4541,5801)	2980 (2182,3778)	2016 (-485,4517)	3305 (3190,3420)	2980 (2384,3576)	2980 (2980,2980)	3249 (-2475,8972)
5/19/2020	3518	630 (-4668,5928)	2980 (1926,4034)	2039 (-568,4645)	3396 (3241,3552)	2980 (2242,3718)	2980 (2980,2980)	3340 (-6147,12826)
5/20/2020	3631	630 (-4789,6050)	2980 (1704,4256)	2061 (-646,4768)	3489 (3303,3676)	2980 (2108,3852)	2980 (2980,2980)	3431 (-10384,17245)
5/21/2020	3749	630 (-4911,6171)	2980 (1473,4487)	2084 (-723,4891)	3584 (3368,3799)	2980 (1974,3986)	2980 (2980,2980)	3522 (-15122,22165)
5/22/2020	3855	630 (-5029,6289)	2980 (1265,4695)	2107 (-797,5011)	3679 (3441,3918)	2980 (1845,4115)	2980 (2980,2980)	3613 (-20313,27538)
5/23/2020	3982	630 (-5151,6411)	2980 (1016,4944)	2129 (-875,5134)	3777 (3513,4041)	2980 (1711,4249)	2980 (2980,2980)	3703 (-25922,33329)
5/24/2020	4122	630 (-5278,6538)	2980 (742,5218)	2152 (-959,5263)	3876 (3579,4173)	2980 (1570,4390)	2980 (2980,2980)	3794 (-31922,39510)
5/25/2020	4271	630 (-5412,6672)	2980 (450,5510)	2175 (-1050,5400)	3977 (3641,4312)	2980 (1422,4538)	2980 (2980,2980)	3885 (-38287,46058)
5/26/2020	4403	630 (-5548,6808)	2980 (191,5769)	2198 (-1142,5537)	4079 (3706,4452)	2980 (1273,4687)	2980 (2980,2980)	3976 (-44999,52952)
5/27/2020	4568	630 (-5690,6950)	2980 (-132,6092)	2220 (-1242,5683)	4183 (3765,4601)	2980 (1115,4845)	2980 (2980,2980)	4067 (-52041,60176)
5/28/2020	4759	630 (-5844,7104)	2980 (-507,6467)	2243 (-1354,5840)	4288 (3812,4764)	2980 (944,5016)	2980 (2980,2980)	4158 (-59399,67715)
5/29/2020	4989	630 (-6013,7273)	2980 (-958,6918)	2266 (-1482,6014)	4395 (3841,4950)	2980 (753,5207)	2980 (2980,2980)	4249 (-67058,75557)
5/30/2020	5246	630 (-6200,7460)	2980 (-1461,7421)	2288 (-1630,6207)	4504 (3850,5158)	2980 (542,5418)	2980 (2980,2980)	4340 (-75009,83690)
5/31/2020	5494	630 (-6399,7659)	2980 (-1947,7907)	2311 (-1791,6413)	4614 (3848,5380)	2980 (318,5642)	2980 (2980,2980)	4431 (-83241,92104)
6/1/2020	5662	630 (-6597,7857)	2980 (-2277,8237)	2334 (-1948,6616)	4726 (3860,5592)	2980 (99,5861)	2980 (2980,2980)	4522 (-91745,100789)
6/2/2020	5935	630 (-6809,8069)	2980 (-2812,8772)	2357 (-2121,6835)	4840 (3858,5822)	2980 (-134,6094)	2980 (2980,2980)	4613 (-100513,109738)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3013	3138	3067 (2897,3237)	3081 (3053,3108)	2969 (2637,3301)	3082 (2882,3283)	3079 (3051,3106)	1589 (-1447,4625)	
	3274	3158 (540,5776)	3184 (3135,3232)	3051 (2663,3439)	3181 (-7022,13383)	3179 (3130,3229)	1657 (-1447,4760)	
	3387	3249 (-2475,8972)	3286 (3216,3357)	3137 (2712,3562)	3280 (-19491,26051)	3279 (3206,3351)	1710 (-1455,4876)	
	3518	3340 (-6147,12826)	3391 (3296,3486)	3224 (2757,3691)	3382 (-34895,41658)	3379 (3281,3477)	1765 (-1470,5000)	
	3631	3431 (-10384,17245)	3496 (3374,3617)	3314 (2812,3816)	3484 (-52746,59713)	3478 (3352,3604)	1812 (-1491,5116)	
	3749	3522 (-15122,22165)	3602 (3452,3752)	3406 (2872,3940)	3587 (-72854,80028)	3579 (3423,3734)	1862 (-1511,5235)	
	3855	3613 (-20313,27538)	3709 (3529,3889)	3501 (2942,4061)	3689 (-94887,102266)	3678 (3490,3865)	1916 (-1522,5353)	
	3982	3703 (-25922,33329)	3817 (3605,4029)	3600 (3013,4186)	3793 (-118770,126356)	3778 (3557,3999)	1966 (-1540,5471)	
	4122	3794 (-31922,39510)	3925 (3680,4171)	3702 (3084,4319)	3891 (-144052,151834)	3878 (3621,4134)	2022 (-1557,5601)	
	4271	3885 (-38287,46058)	4035 (3754,4316)	3808 (3155,4460)	3990 (-170764,178744)	3978 (3684,4271)	2081 (-1576,5737)	
	4403	3976 (-44999,52952)	4146 (3828,4463)	3917 (3232,4602)	4092 (-198973,207157)	4077 (3745,4409)	2143 (-1590,5877)	
	4568	4067 (-52041,60176)	4257 (3902,4613)	4031 (3308,4754)	4194 (-228609,236997)	4177 (3805,4550)	2200 (-1617,6017)	
	4759	4158 (-59399,67715)	4369 (3974,4764)	4148 (3378,4918)	4297 (-259677,268272)	4277 (3863,4691)	2260 (-1651,6171)	
	4989	4249 (-67058,75557)	4483 (4047,4919)	4270 (3438,5102)	4400 (-292047,300846)	4377 (3920,4834)	2324 (-1695,6343)	
	5246	4340 (-75009,83690)	4597 (4119,5075)	4397 (3486,5308)	4503 (-325720,334727)	4476 (3975,4978)	2398 (-1743,6540)	
	5494	4431 (-83241,92104)	4712 (4190,5233)	4529 (3528,5530)	4601 (-360409,369612)	4576 (4029,5124)	2472 (-1803,6746)	
	5662	4522 (-91745,100789)	4828 (4261,5394)	4668 (3588,5748)	4701 (-396149,405550)	4676 (4081,5271)	2539 (-1865,6944)	
	5935	4613 (-100513,109738)	4945 (4332,5557)	4812 (3641,5983)	4802 (-433016,442621)	4776 (4133,5419)	2587 (-1965,7138)	

**Table A.14**

Actual and Predicted Cases with 95% Confidence Intervals for Bahamas using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	96	26 (-110,163)	96 (96,96)	81 (51,111)	114 (79,150)	96 (96,96)	96 (96,96)	97 (95,99)
5/17/2020	96	26 (-110,163)	96 (96,96)	82 (53,111)	117 (78,155)	96 (96,96)	96 (96,96)	98 (95,100)
5/18/2020	96	26 (-110,163)	96 (96,96)	83 (55,111)	119 (78,160)	96 (96,96)	96 (96,96)	99 (95,102)
5/19/2020	96	26 (-110,163)	96 (96,96)	84 (56,111)	122 (78,165)	96 (96,96)	96 (96,96)	99 (95,103)
5/20/2020	97	26 (-111,163)	96 (94,98)	84 (58,111)	124 (79,170)	96 (95,97)	96 (96,96)	100 (96,105)
5/21/2020	97	26 (-111,164)	96 (94,98)	85 (59,111)	127 (79,175)	96 (95,97)	96 (96,96)	101 (96,107)
5/22/2020	97	26 (-111,164)	96 (94,98)	86 (61,112)	129 (79,180)	96 (95,97)	96 (96,96)	102 (96,108)
5/23/2020	100	26 (-112,165)	96 (88,104)	87 (62,113)	132 (80,184)	96 (93,99)	96 (96,96)	103 (96,110)
5/24/2020	100	26 (-113,165)	96 (88,104)	88 (63,113)	135 (80,189)	96 (92,100)	96 (96,96)	104 (96,112)
5/25/2020	100	26 (-113,166)	96 (88,104)	89 (64,114)	137 (81,194)	96 (92,100)	96 (96,96)	104 (96,113)
5/26/2020	100	26 (-114,166)	96 (88,104)	90 (66,114)	140 (81,199)	96 (91,101)	96 (96,96)	105 (96,115)
5/27/2020	100	26 (-114,167)	96 (88,104)	91 (67,115)	143 (81,204)	96 (91,101)	96 (96,96)	106 (96,117)
5/28/2020	101	26 (-114,167)	96 (86,106)	92 (68,115)	145 (82,209)	96 (90,102)	96 (96,96)	107 (95,118)
5/29/2020	102	26 (-115,168)	96 (84,108)	93 (70,116)	148 (82,214)	96 (90,102)	96 (96,96)	108 (95,120)
5/30/2020	102	26 (-116,168)	96 (84,108)	94 (71,116)	151 (83,219)	96 (89,103)	96 (96,96)	109 (95,122)
5/31/2020	102	26 (-116,169)	96 (84,108)	95 (72,117)	153 (83,224)	96 (89,103)	96 (96,96)	109 (95,124)
6/1/2020	102	26 (-116,169)	96 (84,108)	96 (74,117)	156 (83,229)	96 (88,104)	96 (96,96)	110 (95,126)
6/2/2020	102	26 (-117,169)	96 (84,108)	96 (75,118)	159 (83,235)	96 (88,104)	96 (96,96)	111 (95,128)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	96	97 (95,99)	97 (94,100)	95 (94,97)	97 (95,99)	97 (94,100)	49 (-43,141)	
5/17/2020	96	98 (95,100)	98 (94,102)	96 (95,97)	97 (94,100)	98 (94,102)	49 (-42,141)	
5/18/2020	96	98 (95,101)	99 (94,105)	96 (96,97)	98 (94,101)	99 (94,104)	50 (-42,141)	
5/19/2020	96	99 (96,102)	100 (94,107)	97 (96,97)	99 (95,103)	100 (93,107)	50 (-41,141)	
5/20/2020	97	100 (96,104)	101 (93,109)	97 (96,98)	100 (95,105)	101 (93,109)	51 (-40,142)	
5/21/2020	97	100 (96,105)	102 (93,111)	97 (96,98)	101 (95,107)	102 (92,111)	51 (-40,142)	
5/22/2020	97	101 (96,106)	103 (93,114)	97 (97,98)	101 (95,108)	103 (92,113)	52 (-39,142)	
5/23/2020	100	102 (96,108)	104 (92,116)	98 (96,99)	102 (95,109)	103 (92,115)	52 (-39,143)	
5/24/2020	100	102 (96,109)	105 (92,118)	98 (96,100)	102 (94,110)	104 (91,118)	53 (-38,144)	
5/25/2020	100	103 (96,110)	106 (92,121)	98 (96,100)	103 (94,111)	105 (91,120)	54 (-37,145)	
5/26/2020	100	104 (96,111)	107 (91,123)	98 (96,101)	104 (94,113)	106 (90,122)	54 (-37,145)	
5/27/2020	100	104 (96,113)	108 (91,126)	99 (96,101)	105 (94,115)	107 (89,125)	54 (-37,145)	
5/28/2020	101	105 (96,114)	110 (91,129)	99 (96,101)	106 (95,117)	108 (89,127)	55 (-36,146)	
5/29/2020	102	105 (95,115)	111 (90,131)	99 (96,102)	106 (94,118)	109 (88,130)	55 (-35,146)	
5/30/2020	102	106 (95,116)	112 (90,134)	99 (96,102)	107 (94,120)	110 (87,132)	56 (-35,147)	
5/31/2020	102	106 (95,118)	113 (89,137)	99 (96,103)	107 (93,120)	111 (86,135)	57 (-34,147)	
6/1/2020	102	107 (95,119)	114 (88,139)	99 (96,103)	107 (93,122)	112 (86,138)	57 (-33,148)	
6/2/2020	102	108 (95,120)	115 (88,142)	99 (96,103)	108 (93,123)	112 (85,140)	58 (-33,148)	

**Table A.15**

Actual and Predicted Cases with 95% Confidence Intervals for Bahrain using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	6747	1090 (-9998,12178)	6583 (6262,6904)	3447 (-3022,9915)	6454 (5880,7028)	5816 (3991,7641)	6583 (6583,6583)	6848 (6328,7368)
5/17/2020	6956	1090 (-10204,12384)	6583 (5852,7314)	3487 (-3149,10123)	6692 (6146,7239)	5816 (3776,7856)	6583 (6583,6583)	7142 (-17734,32019)
5/18/2020	7184	1090 (-10425,12605)	6583 (5405,7761)	3527 (-3292,10345)	6936 (6410,7463)	5816 (3542,8090)	6583 (6583,6583)	7436 (-47808,62680)
5/19/2020	7532	1090 (-10713,12893)	6583 (4723,8443)	3567 (-3502,10635)	7186 (6618,7754)	5816 (3226,8406)	6583 (6583,6583)	7730 (-84441,99901)
5/20/2020	7888	1090 (-11032,13212)	6583 (4025,9141)	3607 (-3746,10959)	7442 (6801,8083)	5816 (2873,8759)	6583 (6583,6583)	8024 (-126682,142731)
5/21/2020	8174	1090 (-11343,13523)	6583 (3465,9701)	3646 (-3981,11274)	7704 (7008,8400)	5816 (2533,9099)	6583 (6583,6583)	8318 (-173888,190524)
5/22/2020	8414	1090 (-11636,13816)	6583 (2994,10172)	3686 (-4196,11569)	7971 (7249,8694)	5816 (2218,9414)	6583 (6583,6583)	8612 (-225591,242815)
5/23/2020	8802	1090 (-11958,14138)	6583 (2234,10932)	3726 (-4443,11895)	8245 (7467,9024)	5816 (1865,9767)	6583 (6583,6583)	8906 (-281435,299247)
5/24/2020	9138	1090 (-12289,14469)	6583 (1575,11591)	3766 (-4697,12230)	8525 (7689,9361)	5816 (1505,10127)	6583 (6583,6583)	9200 (-341137,359537)
5/25/2020	9171	1090 (-12555,14735)	6583 (1511,11655)	3806 (-4884,12497)	8812 (7988,9635)	5816 (1228,10404)	6583 (6583,6583)	9494 (-404464,423452)
5/26/2020	9366	1090 (-12809,14989)	6583 (1128,12038)	3846 (-5059,12751)	9104 (8304,9905)	5816 (964,10668)	6583 (6583,6583)	9788 (-471221,490797)
5/27/2020	9692	1090 (-13079,15259)	6583 (489,12677)	3886 (-5251,13023)	9403 (8620,10187)	5816 (679,10953)	6583 (6583,6583)	10082 (-541242,561406)
5/28/2020	10052	1090 (-13369,15549)	6583 (-216,13382)	3926 (-5463,13315)	9709 (8933,10484)	5816 (370,11262)	6583 (6583,6583)	10376 (-614381,635133)
5/29/2020	10449	1090 (-13680,15860)	6583 (-994,14160)	3966 (-5698,13630)	10021 (9240,10801)	5816 (34,11598)	6583 (6583,6583)	10670 (-690512,711852)
5/30/2020	10793	1090 (-14000,16180)	6583 (-1669,14835)	4006 (-5942,13954)	10339 (9551,11127)	5816 (-311,11943)	6583 (6583,6583)	10964 (-769522,791450)
5/31/2020	11398	1090 (-14370,16550)	6583 (-2854,16020)	4046 (-6238,14330)	10665 (9821,11508)	5816 (-717,12349)	6583 (6583,6583)	11258 (-851311,873827)
6/1/2020	11871	1090 (-14759,16940)	6583 (-3781,16947)	4086 (-6555,14727)	10997 (10079,11914)	5816 (-1145,12777)	6583 (6583,6583)	11552 (-935787,958891)
6/2/2020	12311	1090 (-15162,17342)	6583 (-4644,17810)	4126 (-6885,15137)	11335 (10336,12335)	5816 (-1584,13216)	6583 (6583,6583)	11846 (-1022869,1046560)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Surte-Arima	
3015	5/16/2020	6747	6848 (6328,7368)	6941 (6859,7022)	5945 (4373,7517)	6944 (6236,7652)	6941 (6858,7024)	3651 (-2418,9719)
	5/17/2020	6956	7142 (-17734,32019)	7289 (7139,7439)	6124 (4523,7725)	7305 (-127885,142495)	7288 (7133,7442)	3804 (-2320,9928)
	5/18/2020	7184	7436 (-47808,62680)	7635 (7411,7859)	6311 (4672,7950)	7666 (-293997,309330)	7631 (7397,7865)	3947 (-2252,10145)
	5/19/2020	7532	7730 (-84441,99901)	7982 (7683,8281)	6498 (4754,8242)	8027 (-496278,512332)	7973 (7656,8289)	4093 (-2246,10431)
	5/20/2020	7888	8024 (-126682,142731)	8332 (7954,8710)	6687 (4805,8569)	8388 (-729436,746213)	8314 (7909,8718)	4299 (-2184,10783)
	5/21/2020	8174	8318 (-173888,190524)	8684 (8224,9144)	6881 (4875,8886)	8749 (-989915,1007413)	8654 (8157,9151)	4501 (-2107,11109)
	5/22/2020	8414	8612 (-225591,1242815)	9039 (8494,9584)	7080 (4976,9183)	9110 (-1275127,1293347)	8995 (8401,9589)	4688 (-2024,11400)
	5/23/2020	8802	8906 (-281435,299247)	9397 (8763,10031)	7286 (5055,9516)	9471 (-1583105,1602047)	9336 (8639,10032)	4848 (-2002,11698)
	5/24/2020	9138	9200 (-341137,359537)	9758 (9032,10485)	7499 (5139,9859)	9832 (-1912285,1931948)	9676 (8873,10479)	5034 (-1958,12027)
	5/25/2020	9171	9494 (-404464,423452)	10122 (9300,10945)	7721 (5308,10133)	10192 (-2261391,2281776)	10017 (9103,10931)	5225 (-1845,12295)
	5/26/2020	9366	9788 (-471221,490797)	10489 (9568,11411)	7950 (5503,10398)	10553 (-2629339,2650445)	10358 (9328,11387)	5373 (-1769,12516)
	5/27/2020	9692	10082 (-541242,561406)	10859 (9835,11884)	8189 (5696,10682)	10914 (-3015206,3037034)	10698 (9549,11848)	5525 (-1708,12758)
	5/28/2020	10052	10376 (-614381,635133)	11233 (10103,12362)	8438 (5887,10988)	11275 (-3418201,3440750)	11039 (9766,12312)	5710 (-1629,13049)
	5/29/2020	10449	10670 (-690512,711852)	11609 (10370,12848)	8698 (6074,11321)	11635 (-3837615,3860885)	11379 (9978,12781)	5954 (-1501,13408)
	5/30/2020	10793	10964 (-769522,791450)	11988 (10637,13339)	8970 (6272,11667)	11996 (-427288,4296820)	11720 (10187,13253)	6178 (-1393,13748)
	5/31/2020	11398	11258 (-851311,873827)	12370 (10904,13836)	9254 (6439,12069)	12356 (-4723285,4747998)	12061 (10392,13729)	6372 (-1361,14105)
	6/1/2020	11871	11552 (-935787,958891)	12755 (11171,14340)	9553 (6608,12498)	12717 (-5188491,5213925)	12401 (10594,14209)	6607 (-1301,14515)
	6/2/2020	12311	11846 (-1022869,1046560)	13144 (11438,14849)	9866 (6790,12943)	13077 (-5667983,5694138)	12742 (10792,14692)	6814 (-1280,14908)

**Table A.16**

Actual and Predicted Cases with 95% Confidence Intervals for Bangladesh using the Time Series Models.

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	20995	2376 (-34119,38870)	20065 (18242,21888)	8368 (-16382,33117)	20418 (19287,21549)	20065 (18242,21888)	20065 (20065,20065)	20966 (19200,22731)
5/17/2020	22268	2376 (-35387,40138)	20065 (15747,24383)	8469 (-17454,34392)	21368 (19886,22850)	20065 (16751,23379)	20065 (20065,20065)	21934 (-252877,296745)
5/18/2020	23870	2376 (-36896,41647)	20065 (12607,27523)	8571 (-18774,35915)	22345 (20237,24453)	20065 (14980,25150)	20065 (20065,20065)	22902 (-590322,636125)
5/19/2020	25121	2376 (-38289,43040)	20065 (10155,29975)	8672 (-19975,37319)	23349 (20829,25868)	20065 (13436,26694)	20065 (20065,20065)	23870 (-1001340,1049080)
5/20/2020	26738	2376 (-39801,44552)	20065 (6986,33144)	8774 (-21300,38848)	24380 (21322,27438)	20065 (11736,28394)	20065 (20065,20065)	24838 (-1475178,1524854)
5/21/2020	28511	2376 (-41439,46190)	20065 (3511,36619)	8875 (-22756,40507)	25439 (21720,29159)	20065 (9892,30238)	20065 (20065,20065)	25806 (-2004590,2056202)
5/22/2020	30205	2376 (-43127,47879)	20065 (191,39939)	8977 (-24264,42218)	26527 (22136,30918)	20065 (8018,32112)	20065 (20065,20065)	26774 (-2584341,2637889)
5/23/2020	32078	2376 (-44904,49655)	20065 (-34804,43610)	9079 (-25862,44019)	27643 (22513,32773)	20065 (6055,34075)	20065 (20065,20065)	27742 (-3210433,3265917)
5/24/2020	33610	2376 (-46649,51400)	20065 (-6483,46613)	9180 (-27425,45785)	28787 (23015,34560)	20065 (4166,35964)	20065 (20065,20065)	28710 (-3879686,3937106)
5/25/2020	35585	2376 (-48485,53236)	20065 (-10354,50484)	9282 (-29081,47645)	29961 (23470,36453)	20065 (2175,37955)	20065 (20065,20065)	29678 (-4584946,4648852)
5/26/2020	36751	2376 (-50201,54952)	20065 (-12640,52770)	9383 (-30611,49377)	31165 (24151,38180)	20065 (363,39767)	20065 (20065,20065)	30646 (-5337675,5398968)
5/27/2020	38292	2376 (-51910,56661)	20065 (-15660,55790)	9485 (-32131,51101)	32399 (24900,39897)	20065 (-1434,41564)	20065 (20065,20065)	31614 (-6122358,6185587)
5/28/2020	40321	2376 (-53711,58462)	20065 (-19637,59767)	9586 (-33747,52920)	33662 (25600,41725)	20065 (-3342,43472)	20065 (20065,20065)	32582 (-6941925,7007090)
5/29/2020	42844	2376 (-55679,60431)	20065 (-24582,64712)	9688 (-35537,54913)	34957 (26158,43756)	20065 (-5452,45582)	20065 (20065,20065)	33550 (-7794956,7862057)
5/30/2020	44608	2376 (-57645,62396)	20065 (-28039,68169)	9790 (-37322,56901)	36282 (26794,45770)	20065 (-7539,47669)	20065 (20065,20065)	34519 (-8680189,8749226)
5/31/2020	47153	2376 (-59743,64494)	20065 (-33027,73157)	9891 (-39242,59025)	37639 (27337,47941)	20065 (-9777,49907)	20065 (20065,20065)	35487 (-9596495,9667468)
6/1/2020	49534	2376 (-61923,66674)	20065 (-37694,77824)	9993 (-41246,61231)	39027 (27855,50200)	20065 (-12097,52227)	20065 (20065,20065)	36455 (-10542858,10615767)
6/2/2020	52445	2376 (-64255,69006)	20065 (-43400,83530)	10094 (-43407,63595)	40448 (28257,52638)	20065 (-14586,54716)	20065 (20065,20065)	37423 (-11518353,11593199)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3016	20995	20966 (19200,22731)	21277 (21180,21374)	19845 (17590,22099)	21188 (18987,23388)	21153 (21052,21254)	11223 (-7929,30376)	
	22268	21934 (-252877,296745)	22527 (22343,22711)	20796 (18208,23385)	22384 (-2107054,2151822)	22331 (22112,22550)	11807 (-8032,31646)	
	23870	22902 (-590322,636125)	23830 (23555,24105)	21773 (18596,24951)	23579 (-4733798,4780956)	23467 (23092,23842)	12499 (-8189,33186)	
	25121	23870 (-1001340,1049080)	25191 (24817,25565)	22771 (19183,26359)	24751 (-7900154,7949656)	24588 (24044,25131)	13248 (-8114,34611)	
	26738	24838 (-1475178,1524854)	26609 (26124,27095)	23798 (19682,27914)	25939 (-11559681,11611560)	25774 (25034,26513)	14013 (-8111,36138)	
	28511	25806 (-2004590,2056202)	28085 (27471,28700)	24865 (20108,29622)	27099 (-15617628,15671827)	26865 (25915,27816)	14811 (-8170,37791)	
	30205	26774 (-2584341,2637889)	29616 (28851,30381)	25981 (20578,31384)	28274 (-20060952,20117500)	28052 (26874,29230)	15605 (-8262,39472)	
	32078	27742 (-3210433,3265917)	31199 (30261,32138)	27151 (21052,33250)	29410 (-24817278,24876098)	29170 (27745,30595)	16473 (-8334,41280)	
	33610	28710 (-3879686,3937106)	32832 (31694,33971)	28381 (21692,35069)	30606 (-29933985,29995197)	30313 (28631,31994)	17333 (-8359,43025)	
	35585	29678 (-4589496,4648852)	34513 (33146,35879)	29671 (22343,36999)	31801 (-35381244,35444846)	31479 (29522,33437)	18130 (-8537,44797)	
	36751	30646 (-5337675,5398968)	36238 (34614,37861)	31027 (23264,38789)	32973 (-41116687,41182633)	32582 (30339,34826)	19040 (-8456,46536)	
	38292	31614 (-6122358,6185587)	38005 (36096,39914)	32457 (24324,40589)	34162 (-47141465,47209788)	33769 (31226,36311)	19800 (-8529,48128)	
	40321	32582 (-6941925,7007090)	39812 (37588,42037)	33967 (25425,42510)	35321 (-53417355,53487998)	34877 (32021,37732)	20704 (-8527,49936)	
	42844	33550 (-7794956,7862057)	41658 (39088,44228)	35563 (26491,44636)	36496 (-59948546,60021538)	36036 (32859,39213)	21635 (-8644,51915)	
	44608	34519 (-8680189,8749226)	43540 (40594,46486)	37251 (27728,46774)	37632 (-66694763,66770026)	37184 (33670,40698)	22812 (-8451,54076)	
	47153	35487 (-9596495,9667468)	45457 (42106,48808)	39039 (28998,49081)	38828 (-73698279,73775935)	38302 (34444,42161)	23809 (-8551,56168)	
	49534	36455 (-10542858,10615767)	47407 (43620,51193)	40938 (30375,51502)	40023 (-80947151,81027197)	39481 (35265,43696)	24872 (-8639,58384)	
	52445	37423 (-11518353,11593199)	49388 (45138,53639)	42960 (31798,54122)	41195 (-88415675,88498066)	40587 (36005,45170)	25837 (-8973,60646)	

**Table A.17**

Actual and Predicted Cases with 95% Confidence Intervals for Barbados using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	86	31 (-77,139)	85 (83,87)	89 (83,94)	89 (83,96)	85 (83,87)	85 (85,85)	85 (85,86)
5/17/2020	88	31 (-79,141)	85 (79,91)	90 (85,94)	89 (84,95)	85 (81,89)	85 (85,85)	86 (85,86)
5/18/2020	88	31 (-79,141)	85 (79,91)	91 (86,96)	89 (85,94)	85 (80,90)	85 (85,85)	86 (85,87)
5/19/2020	90	31 (-81,143)	85 (75,95)	92 (87,96)	89 (85,93)	85 (78,92)	85 (85,85)	86 (85,87)
5/20/2020	90	31 (-81,143)	85 (75,95)	93 (88,97)	89 (85,92)	85 (78,92)	85 (85,85)	86 (85,88)
5/21/2020	90	31 (-82,144)	85 (75,95)	94 (88,99)	88 (85,92)	85 (77,93)	85 (85,85)	87 (85,88)
5/22/2020	90	31 (-82,144)	85 (75,95)	95 (89,101)	88 (84,92)	85 (77,93)	85 (85,85)	87 (85,88)
5/23/2020	92	31 (-83,145)	85 (71,99)	96 (90,102)	87 (83,92)	85 (76,94)	85 (85,85)	87 (85,89)
5/24/2020	92	31 (-84,146)	85 (71,99)	97 (90,103)	87 (81,92)	85 (75,95)	85 (85,85)	87 (85,89)
5/25/2020	92	31 (-84,146)	85 (71,99)	98 (91,105)	86 (80,93)	85 (75,95)	85 (85,85)	88 (86,90)
5/26/2020	92	31 (-84,147)	85 (71,99)	99 (91,106)	85 (78,93)	85 (75,95)	85 (85,85)	88 (86,90)
5/27/2020	92	31 (-85,147)	85 (71,99)	100 (91,108)	85 (76,93)	85 (74,96)	85 (85,85)	88 (86,90)
5/28/2020	92	31 (-85,147)	85 (71,99)	101 (91,110)	84 (75,93)	85 (74,96)	85 (85,85)	88 (86,91)
5/29/2020	92	31 (-85,147)	85 (71,99)	102 (91,112)	83 (73,93)	85 (74,96)	85 (85,85)	88 (86,91)
5/30/2020	92	31 (-86,148)	85 (71,99)	102 (91,114)	81 (70,92)	85 (74,96)	85 (85,85)	89 (86,91)
5/31/2020	92	31 (-86,148)	85 (71,99)	103 (91,116)	80 (68,92)	85 (73,97)	85 (85,85)	89 (86,92)
6/1/2020	92	31 (-86,148)	85 (71,99)	104 (91,118)	79 (66,92)	85 (73,97)	85 (85,85)	89 (86,92)
6/2/2020	92	31 (-86,148)	85 (71,99)	105 (91,120)	78 (63,92)	85 (73,97)	85 (85,85)	89 (86,93)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	86	85 (85,86)	85 (82,88)	85 (82,87)	85 (85,85)	85 (82,88)	43 (-42,128)	
5/17/2020	88	85 (85,86)	86 (81,90)	85 (79,90)	86 (86,86)	85 (81,90)	43 (-44,130)	
5/18/2020	88	86 (85,86)	86 (79,92)	85 (79,90)	86 (86,86)	86 (79,92)	43 (-44,130)	
5/19/2020	90	86 (85,87)	86 (78,94)	85 (77,92)	86 (85,86)	86 (78,94)	44 (-44,132)	
5/20/2020	90	86 (85,87)	86 (76,96)	85 (77,93)	85 (85,85)	86 (76,96)	44 (-45,132)	
5/21/2020	90	86 (85,87)	87 (75,98)	85 (76,93)	86 (85,86)	86 (75,98)	44 (-45,133)	
5/22/2020	90	86 (85,88)	87 (74,100)	85 (76,93)	86 (86,86)	87 (73,100)	44 (-45,133)	
5/23/2020	92	87 (85,88)	87 (72,102)	85 (75,94)	86 (86,86)	87 (72,102)	44 (-46,133)	
5/24/2020	92	87 (85,88)	87 (70,104)	85 (74,95)	87 (86,87)	87 (70,104)	44 (-46,134)	
5/25/2020	92	87 (85,88)	88 (69,107)	85 (74,95)	87 (86,87)	87 (68,106)	44 (-47,135)	
5/26/2020	92	87 (85,89)	88 (67,109)	85 (74,96)	87 (86,87)	88 (67,109)	44 (-47,135)	
5/27/2020	92	87 (85,89)	88 (65,111)	85 (73,96)	86 (86,87)	88 (65,111)	44 (-47,135)	
5/28/2020	92	87 (85,89)	89 (63,114)	85 (73,96)	87 (86,87)	88 (63,113)	44 (-47,136)	
5/29/2020	92	87 (85,89)	89 (62,116)	85 (73,97)	87 (86,88)	88 (61,116)	44 (-47,136)	
5/30/2020	92	88 (85,90)	89 (60,119)	85 (73,97)	87 (86,87)	89 (59,118)	45 (-47,136)	
5/31/2020	92	88 (86,90)	89 (58,121)	85 (73,97)	88 (87,88)	89 (57,121)	45 (-47,136)	
6/1/2020	92	88 (86,90)	90 (56,124)	85 (72,97)	88 (87,88)	89 (55,123)	45 (-47,137)	
6/2/2020	92	88 (86,90)	90 (53,127)	85 (72,97)	87 (87,88)	89 (53,126)	45 (-47,137)	

**Table A.18**

Actual and Predicted Cases with 95% Confidence Intervals for Belarus using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	28681	4073 (-44158,52304)	27730 (25866,29594)	13995 (-14791,42780)	31062 (26395,35728)	27730 (25866,29594)	27730 (27730,27730)	28659 (26838,30480)	
5/17/2020	29650	4073 (-45117,53263)	27730 (23967,31493)	14163 (-15418,43743)	32396 (27359,37433)	27730 (24760,30700)	27730 (27730,27730)	29595 (-244592,303782)	
5/18/2020	30572	4073 (-46049,54196)	27730 (22160,33300)	14331 (-16019,44681)	33766 (28291,39240)	27730 (23702,31758)	27730 (27730,27730)	30531 (-581255,642317)	
5/19/2020	31508	4073 (-46986,55133)	27730 (20325,35135)	14499 (-16625,45623)	35171 (29224,41118)	27730 (22643,32817)	27730 (27730,27730)	31467 (-991310,1054244)	
5/20/2020	32426	4073 (-47920,56066)	27730 (18526,36934)	14667 (-17227,46562)	36613 (30151,43076)	27730 (21595,33865)	27730 (27730,27730)	32403 (-1464027,1528833)	
5/21/2020	33371	4073 (-48864,57010)	27730 (16674,38786)	14835 (-17840,47511)	38092 (31087,45097)	27730 (20537,34923)	27730 (27730,27730)	33339 (-1992182,2058859)	
5/22/2020	34303	4073 (-49811,57957)	27730 (14847,40613)	15004 (-18456,48464)	39608 (32025,47192)	27730 (19480,35980)	27730 (27730,27730)	34275 (-2570551,2639101)	
5/23/2020	35244	4073 (-50764,58911)	27730 (13003,42457)	15172 (-19079,49422)	41162 (32968,49356)	27730 (18421,37039)	27730 (27730,27730)	35211 (-3195147,3265569)	
5/24/2020	36198	4073 (-51726,59872)	27730 (11133,44327)	15340 (-19710,50389)	42754 (33921,51587)	27730 (17355,38105)	27730 (27730,27730)	36147 (-3862799,3935092)	
5/25/2020	37144	4073 (-52692,60839)	27730 (9279,46181)	15508 (-20345,51361)	44385 (34879,53890)	27730 (16288,39172)	27730 (27730,27730)	37083 (-4570906,4645071)	
5/26/2020	38059	4073 (-53657,61803)	27730 (7485,47975)	15676 (-20978,52331)	46054 (35833,56275)	27730 (15229,40231)	27730 (27730,27730)	38018 (-5317290,5393327)	
5/27/2020	38956	4073 (-54617,62764)	27730 (5727,49733)	15844 (-21607,53295)	47763 (36782,58745)	27730 (14180,41280)	27730 (27730,27730)	38954 (-6100087,6177996)	
5/28/2020	39858	4073 (-55576,63722)	27730 (3959,51501)	16012 (-22233,54258)	49512 (37728,61297)	27730 (13137,42323)	27730 (27730,27730)	39890 (-6917683,6997464)	
5/29/2020	40764	4073 (-56534,64681)	27730 (2183,53277)	16181 (-22859,55220)	51302 (38676,63928)	27730 (12098,43362)	27730 (27730,27730)	40826 (-7768660,7850312)	
5/30/2020	41658	4073 (-57491,65638)	27730 (431,55029)	16349 (-23482,56180)	53132 (39623,66642)	27730 (11064,44396)	27730 (27730,27730)	41762 (-8651759,8735284)	
5/31/2020	42556	4073 (-58448,66594)	27730 (-1329,56789)	16517 (-24105,57139)	55004 (40571,69437)	27730 (10034,45426)	27730 (27730,27730)	42698 (-9565857,9651253)	
6/1/2020	43403	4073 (-59397,67543)	27730 (-2989,58449)	16685 (-24720,58090)	56917 (41512,72323)	27730 (9015,46445)	27730 (27730,27730)	43634 (-10509937,10597205)	
6/2/2020	44255	4073 (-60341,68488)	27730 (-4659,60119)	16853 (-25330,59036)	58873 (42449,75297)	27730 (8005,47455)	27730 (27730,27730)	44570 (-11483078,11572218)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3018	28681	28659 (26838,30480)	28705 (28456,28954)	27338 (24707,29970)	28648 (26849,30447)	28677 (28424,28930)	14837 (-12296,41971)		
	29650	29595 (-244592,303782)	29674 (29318,30031)	28425 (25906,30944)	29557 (-490365,549478)	29616 (29250,29983)	15322 (-12291,42934)		
	30572	30531 (-581255,642317)	30645 (30201,31089)	29574 (27227,31920)	30547 (-1173181,1234275)	30557 (30094,31020)	15810 (-12249,43870)		
	31508	31467 (-991310,1054244)	31627 (31055,32199)	30798 (28650,32946)	31476 (-1983308,2046259)	31500 (30898,32102)	16295 (-12215,44804)		
	32426	32403 (-1464027,1528833)	32620 (31874,33367)	32105 (30163,34047)	32417 (-2916622,2981457)	32444 (31653,33235)	16789 (-12161,45739)		
	33371	33339 (-1992182,2058859)	33622 (32680,34565)	33511 (31735,35287)	33376 (-3965426,4032178)	33387 (32381,34394)	17281 (-12116,46678)		
	34303	34275 (-2570551,2639101)	34632 (33482,35781)	35041 (33308,36773)	34339 (-5118840,5187517)	34330 (33095,35565)	17789 (-12050,47628)		
	35244	35211 (-3195147,3265569)	35649 (34280,37017)	36736 (34813,38658)	35248 (-6349672,6420168)	35273 (33795,36751)	18297 (-11985,48579)		
	36198	36147 (-3862799,3935092)	36675 (35072,38278)	38599 (36202,40997)	36157 (-7655451,7727765)	36216 (34480,37952)	18814 (-11913,49540)		
	37144	37083 (-4570906,4645071)	37710 (35859,39560)	40658 (37509,43806)	37148 (-9058298,9132594)	37159 (35149,39169)	19332 (-11838,50503)		
	38059	38018 (-5317290,5393327)	38753 (36642,40864)	42951 (38783,47118)	38076 (-10531707,10607860)	38102 (35804,40400)	19856 (-11750,51463)		
	38956	38954 (-6100087,6177996)	39804 (37422,42187)	45530 (40075,50985)	39018 (-12076858,12154895)	39045 (36446,41644)	20377 (-11657,52412)		
	39858	39890 (-6917683,6997464)	40864 (38199,43529)	48463 (41438,55489)	39976 (-13694987,13774940)	39988 (37076,42900)	20897 (-11561,53355)		
	40764	40826 (-7768660,7850312)	41933 (38974,44891)	51833 (42920,60747)	40939 (-15383673,15465551)	40931 (37694,44168)	21424 (-11453,54301)		
	41658	41762 (-8651759,8735284)	43009 (39747,46271)	55756 (44573,66939)	41849 (-17126470,17210168)	41874 (38300,45448)	21961 (-11329,55250)		
	42556	42698 (-9565857,9651253)	44095 (40519,47670)	60390 (46476,74304)	42758 (-18922388,19007904)	42817 (38895,46739)	22503 (-11195,56200)		
	43403	43634 (-10509937,10597205)	45188 (41290,49087)	65954 (48716,83191)	43749 (-20789863,20877360)	43760 (39480,48040)	23049 (-11044,57142)		
	44255	44570 (-11483078,11572218)	46290 (42059,50521)	72766 (51456,94075)	44677 (-22711069,22800423)	44703 (40054,49352)	23590 (-10891,58070)		

**Table A.19**

Actual and Predicted Cases with 95% Confidence Intervals for Belgium using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	54989	16191 (-59855,92236)	54644 (53968,55320)	48695 (36359,61031)	63730 (46598,80862)	54644 (53968,55320)	54644 (54644,54644)	55034 (54269,55799)	
5/17/2020	55280	16191 (-60140,92521)	54644 (53397,55891)	49246 (37162,61330)	64829 (46887,82770)	54644 (53641,55647)	54644 (54644,54644)	55411 (8633,102190)	
5/18/2020	55559	16191 (-60418,92799)	54644 (52851,56437)	49797 (37971,61623)	65927 (47159,84695)	54644 (53324,55964)	54644 (54644,54644)	55789 (-48253,159830)	
5/19/2020	55791	16191 (-60672,93053)	54644 (52396,56892)	50348 (38800,61896)	67023 (47393,86653)	54644 (53041,56247)	54644 (54644,54644)	56166 (-117533,229865)	
5/20/2020	55983	16191 (-60899,93280)	54644 (52020,57268)	50899 (39650,62148)	68118 (47589,88646)	54644 (52791,56497)	54644 (54644,54644)	56543 (-197405,310492)	
5/21/2020	56235	16191 (-61134,93515)	54644 (51526,57762)	51450 (40490,62409)	69210 (47787,90634)	54644 (52527,56761)	54644 (54644,54644)	56920 (-286652,400492)	
5/22/2020	56511	16191 (-61380,93761)	54644 (50985,58303)	52001 (41318,62683)	70300 (47990,92611)	54644 (52245,57043)	54644 (54644,54644)	57297 (-384391,498986)	
5/23/2020	56810	16191 (-61638,94019)	54644 (50399,58889)	52552 (42132,62971)	71388 (48202,94573)	54644 (51944,57344)	54644 (54644,54644)	57675 (-489949,605298)	
5/24/2020	57092	16191 (-61901,94282)	54644 (49846,59442)	53103 (42939,63266)	72472 (48414,96531)	54644 (51638,57650)	54644 (54644,54644)	58052 (-602790,718894)	
5/25/2020	57342	16191 (-62162,94543)	54644 (49356,59932)	53653 (43744,63563)	73554 (48616,98492)	54644 (51338,57950)	54644 (54644,54644)	58429 (-722476,839334)	
5/26/2020	57455	16191 (-62395,94776)	54644 (49134,60154)	54204 (44563,63846)	74632 (48778,100485)	54644 (51081,58207)	54644 (54644,54644)	58806 (-848638,966250)	
5/27/2020	57592	16191 (-62611,94992)	54644 (48866,60422)	54755 (45386,64125)	75706 (48915,102496)	54644 (50847,58441)	54644 (54644,54644)	59184 (-980960,1099327)	
5/28/2020	57849	16191 (-62834,95215)	54644 (48362,60926)	55306 (46199,64413)	76776 (49056,104496)	54644 (50601,58687)	54644 (54644,54644)	59561 (-1119170,1238292)	
5/29/2020	58061	16191 (-63055,95436)	54644 (47947,61341)	55857 (47006,64709)	77841 (49191,106492)	54644 (50357,58931)	54644 (54644,54644)	59938 (-1263029,1382904)	
5/30/2020	58186	16191 (-63263,95644)	54644 (47702,61586)	56408 (47810,65007)	78902 (49304,108501)	54644 (50131,59157)	54644 (54644,54644)	60315 (-1412322,1532953)	
5/31/2020	58381	16191 (-63470,95851)	54644 (47319,61969)	56959 (48604,65314)	79958 (49412,110505)	54644 (49906,59382)	54644 (54644,54644)	60692 (-1566861,1688246)	
6/1/2020	58517	16191 (-63667,96048)	54644 (47053,62235)	57510 (49391,65629)	81009 (49505,112514)	54644 (49692,59596)	54644 (54644,54644)	61070 (-1726473,1848612)	
6/2/2020	58615	16191 (-63854,96235)	54644 (46861,62427)	58061 (50166,65956)	82054 (49579,114530)	54644 (49494,59794)	54644 (54644,54644)	61447 (-1891003,2013897)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3019	54989	55011 (54291,55731)	54988 (54486,55489)	53105 (49414,56797)	54975 (54326,55624)	54980 (54478,55482)	27638 (-25969,81246)		
	55280	55368 (13752,96983)	55334 (54457,56210)	53092 (49091,57093)	55306 (-35803,146415)	55315 (54437,56192)	27835 (-25864,81535)		
	55559	55721 (-36510,147952)	55683 (54410,56955)	53096 (48802,57391)	55637 (-147464,258738)	55650 (54376,56923)	28007 (-25793,81807)		
	55791	56071 (-97408,209551)	56035 (54337,57732)	53092 (48528,57656)	55968 (-283476,395413)	55985 (54285,57685)	28170 (-25175,82055)		
	55983	56419 (-167259,280097)	56390 (54235,58544)	53082 (48273,57891)	56300 (-440321,552920)	56320 (54162,58477)	28329 (-25620,82277)		
	56235	56764 (-244912,358439)	56748 (54106,59389)	53070 (48002,58138)	56631 (-615526,728787)	56655 (54008,59301)	28491 (-25529,82511)		
	56511	57105 (-329524,443735)	57109 (53950,60267)	53056 (47711,58401)	56962 (-807368,921291)	56990 (53825,60154)	28667 (-25432,82767)		
	56810	57445 (-420444,535333)	57473 (53769,61177)	53041 (47400,58682)	57292 (-1014508,1129093)	57324 (53613,61035)	28857 (-25329,83043)		
	57092	57781 (-517146,632708)	57840 (53564,62116)	53026 (47082,58971)	57623 (-1235900,1351146)	57659 (53375,61944)	29058 (-25213,83329)		
	57342	58115 (-619197,735426)	58210 (53337,63084)	53012 (46766,59257)	57954 (-1470662,1586570)	57994 (53110,62878)	29248 (-25102,83599)		
	57455	58446 (-726228,843119)	58584 (53087,64080)	52997 (46486,59509)	58285 (-1718107,1834677)	58329 (52821,63838)	29431 (-24973,83834)		
	57592	58774 (-837922,955469)	58960 (52817,65103)	52982 (46224,59740)	58616 (-1977649,2094881)	58664 (52507,64821)	29588 (-24856,84032)		
	57849	59099 (-954000,1072198)	59340 (52526,66153)	52967 (45952,59981)	58947 (-2248711,2366604)	58999 (52170,65828)	29753 (-24739,84246)		
	58061	59422 (-1074216,1193060)	59722 (52217,67228)	52951 (45682,60221)	59278 (-2530822,2649377)	59334 (51811,66857)	29946 (-24591,84482)		
	58186	59742 (-1198349,1317834)	60108 (51888,68327)	52936 (45427,60446)	59608 (-2823552,2942768)	59669 (51429,67908)	30155 (-24408,84718)		
	58381	60060 (-1326201,1446322)	60496 (51541,69451)	52922 (45175,60669)	59939 (-3126528,3246406)	60004 (51027,68981)	30347 (-24240,84935)		
	58517	60375 (-1457591,1578342)	60888 (51177,70599)	52908 (44933,60883)	60269 (-3439401,3559940)	60339 (50604,70074)	30533 (-24070,85136)		
	58615	60688 (-1592354,1713729)	61282 (50796,71769)	52894 (44705,61082)	60600 (-3761888,3883088)	60674 (50161,71187)	30717 (-23890,85324)		

**Table A.20**

Actual and Predicted Cases with 95% Confidence Intervals for Belize using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	18	6 (-17,29)	18 (18,18)	18 (18,19)	22 (15,29)	18 (18,18)	18 (18,18)	18 (18,18)
5/17/2020	18	6 (-17,29)	18 (18,18)	19 (18,19)	22 (15,29)	18 (18,18)	18 (18,18)	18 (18,18)
5/18/2020	18	6 (-17,29)	18 (18,18)	19 (18,20)	22 (15,30)	18 (18,18)	18 (18,18)	18 (18,18)
5/19/2020	18	6 (-17,29)	18 (18,18)	19 (18,20)	22 (15,30)	18 (18,18)	18 (18,18)	18 (18,18)
5/20/2020	18	6 (-17,29)	18 (18,18)	19 (18,21)	22 (15,30)	18 (18,18)	18 (18,18)	18 (18,18)
5/21/2020	18	6 (-17,29)	18 (18,18)	19 (18,21)	23 (14,31)	18 (18,18)	18 (18,18)	18 (18,18)
5/22/2020	18	6 (-17,29)	18 (18,18)	20 (18,22)	23 (14,31)	18 (18,18)	18 (18,18)	18 (18,18)
5/23/2020	18	6 (-17,29)	18 (18,18)	20 (18,22)	23 (14,31)	18 (18,18)	18 (18,18)	18 (18,18)
5/24/2020	18	6 (-17,29)	18 (18,18)	20 (18,22)	23 (14,32)	18 (18,18)	18 (18,18)	18 (18,18)
5/25/2020	18	6 (-17,29)	18 (18,18)	20 (17,23)	23 (14,32)	18 (18,18)	18 (18,18)	18 (18,18)
5/26/2020	18	6 (-17,29)	18 (18,18)	20 (17,23)	23 (14,32)	18 (18,18)	18 (18,18)	18 (18,18)
5/27/2020	18	6 (-17,29)	18 (18,18)	21 (17,24)	23 (14,32)	18 (18,18)	18 (18,18)	18 (18,18)
5/28/2020	18	6 (-17,29)	18 (18,18)	21 (17,24)	23 (14,33)	18 (18,18)	18 (18,18)	18 (18,18)
5/29/2020	18	6 (-17,29)	18 (18,18)	21 (17,25)	24 (14,33)	18 (18,18)	18 (18,18)	18 (18,18)
5/30/2020	18	6 (-17,29)	18 (18,18)	21 (17,25)	24 (14,33)	18 (18,18)	18 (18,18)	18 (18,18)
5/31/2020	18	6 (-17,29)	18 (18,18)	21 (17,26)	24 (14,33)	18 (18,18)	18 (18,18)	18 (18,18)
6/1/2020	18	6 (-17,29)	18 (18,18)	22 (17,26)	24 (14,33)	18 (18,18)	18 (18,18)	18 (18,18)
6/2/2020	18	6 (-17,29)	18 (18,18)	22 (17,26)	24 (14,34)	18 (18,18)	18 (18,18)	18 (18,18)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3/2020	18	18 (18,18)	18 (17,19)	18 (18,19)	18 (18,18)	18 (17,19)	9 (-8,27)	
	18	18 (18,18)	18 (17,20)	18 (18,19)	18 (18,18)	18 (16,20)	9 (-8,27)	
	18	18 (18,18)	18 (16,20)	18 (18,19)	18 (18,19)	18 (16,20)	9 (-8,27)	
	18	18 (18,18)	19 (16,21)	18 (18,19)	18 (18,19)	18 (15,21)	9 (-8,27)	
	18	18 (18,18)	19 (16,22)	18 (18,19)	18 (18,19)	18 (13,23)	9 (-8,27)	
	18	18 (18,18)	19 (15,23)	18 (18,19)	18 (18,19)	18 (12,24)	9 (-8,27)	
	18	18 (18,18)	19 (15,24)	18 (18,19)	18 (18,19)	18 (11,25)	10 (-7,27)	
	18	18 (18,18)	19 (15,24)	18 (18,19)	18 (18,19)	18 (10,26)	10 (-7,27)	
	18	18 (18,18)	20 (14,25)	18 (18,19)	18 (18,19)	18 (8,28)	10 (-7,27)	
	18	18 (18,18)	20 (14,26)	18 (18,19)	19 (18,19)	18 (7,29)	10 (-7,27)	
	18	18 (18,18)	20 (14,27)	18 (18,19)	18 (18,19)	18 (5,31)	10 (-6,27)	
	18	18 (18,18)	21 (14,28)	18 (18,19)	18 (18,19)	18 (3,33)	10 (-6,27)	
	18	18 (18,18)	21 (13,28)	18 (18,19)	18 (18,19)	18 (1,35)	10 (-6,27)	
	18	18 (18,18)	21 (13,29)	18 (18,19)	18 (18,19)	18 (0,36)	11 (-6,27)	
	18	18 (18,18)	22 (13,30)	18 (18,19)	18 (18,19)	18 (-2,38)	11 (-5,27)	
	18	18 (18,18)	22 (13,30)	18 (18,19)	18 (18,19)	18 (-4,40)	11 (-5,27)	
	18	18 (18,18)	22 (13,31)	18 (18,19)	19 (18,19)	18 (-6,42)	11 (-5,27)	
	18	18 (18,18)	22 (13,32)	18 (18,19)	18 (18,19)	18 (-8,44)	11 (-4,27)	

**Table A.21**

Actual and Predicted Cases with 95% Confidence Intervals for Benin using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	339	39 (-550,627)	339 (339,339)	133 (-270,537)	330 (313,348)	64 (-475,603)	339 (339,339)	357 (322,392)
5/17/2020	339	39 (-550,627)	339 (339,339)	135 (-267,537)	346 (330,361)	64 (-475,603)	339 (339,339)	371 (258,484)
5/18/2020	339	39 (-550,627)	339 (339,339)	136 (-264,537)	362 (333,391)	64 (-475,603)	339 (339,339)	385 (167,603)
5/19/2020	130	39 (-479,556)	339 (-71,749)	138 (-209,485)	379 (134,624)	64 (-407,535)	339 (339,339)	399 (56,742)
5/20/2020	130	39 (-431,509)	339 (-71,749)	140 (-170,450)	396 (76,716)	64 (-361,489)	339 (339,339)	413 (-73,899)
5/21/2020	135	39 (-397,474)	339 (-61,739)	141 (-142,424)	413 (46,781)	64 (-329,457)	339 (339,339)	427 (-217,1071)
5/22/2020	135	39 (-371,448)	339 (-61,739)	143 (-119,405)	432 (27,836)	64 (-303,431)	339 (339,339)	441 (-375,1257)
5/23/2020	135	39 (-350,428)	339 (-61,739)	144 (-101,390)	450 (13,887)	64 (-283,411)	339 (339,339)	455 (-547,1457)
5/24/2020	191	39 (-342,419)	339 (49,629)	146 (-87,379)	469 (19,920)	64 (-273,401)	339 (339,339)	469 (-731,1669)
5/25/2020	191	39 (-334,411)	339 (49,629)	148 (-75,371)	489 (23,954)	64 (-266,394)	339 (339,339)	483 (-926,1892)
5/26/2020	208	39 (-331,408)	339 (82,596)	149 (-66,365)	509 (31,987)	64 (-262,390)	339 (339,339)	497 (-1132,2126)
5/27/2020	210	39 (-328,405)	339 (86,592)	151 (-58,360)	529 (37,1021)	64 (-259,387)	339 (339,339)	511 (-1348,2370)
5/28/2020	210	39 (-326,403)	339 (86,592)	152 (-51,356)	550 (43,1058)	64 (-256,384)	339 (339,339)	525 (-1575,2625)
5/29/2020	224	39 (-326,403)	339 (114,564)	154 (-45,353)	572 (50,1094)	64 (-255,383)	339 (339,339)	539 (-1811,2889)
5/30/2020	224	39 (-326,403)	339 (114,564)	156 (-40,351)	594 (56,1132)	64 (-255,383)	339 (339,339)	553 (-2056,3162)
5/31/2020	232	39 (-327,404)	339 (129,549)	157 (-35,350)	617 (63,1171)	64 (-256,384)	339 (339,339)	567 (-2310,3444)
6/1/2020	243	39 (-329,406)	339 (151,527)	159 (-32,350)	640 (70,1210)	64 (-258,386)	339 (339,339)	581 (-2572,3734)
6/2/2020	244	39 (-331,408)	339 (153,525)	161 (-29,350)	664 (77,1251)	64 (-259,387)	339 (339,339)	595 (-2843,4033)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3021	339	347 (331,364)	346 (326,365)	304 (234,373)	330 (313,347)	346 (326,365)	175 (-147,497)	
	339	353 (320,386)	359 (324,394)	309 (244,373)	330 (310,350)	359 (323,394)	182 (-134,497)	
	339	358 (305,411)	372 (327,418)	314 (254,374)	329 (307,351)	372 (324,419)	186 (-124,496)	
	130	363 (288,438)	386 (330,442)	318 (127,509)	327 (291,364)	385 (326,443)	193 (-83,468)	
	130	367 (268,465)	400 (334,465)	321 (82,561)	325 (256,395)	398 (328,467)	180 (-70,431)	
	135	370 (247,493)	413 (339,487)	325 (59,591)	328 (257,399)	411 (331,491)	187 (-45,420)	
	135	373 (226,521)	427 (345,510)	328 (43,613)	333 (244,422)	424 (333,514)	195 (-25,415)	
	135	376 (204,548)	441 (350,532)	331 (32,630)	326 (223,429)	437 (336,537)	221 (7,436)	
	191	379 (182,575)	455 (356,555)	334 (37,631)	327 (218,436)	449 (338,561)	229 (25,432)	
	191	381 (160,602)	470 (362,577)	337 (41,632)	327 (211,442)	462 (340,585)	246 (50,442)	
	208	383 (138,628)	484 (368,600)	339 (46,632)	326 (200,452)	475 (342,608)	253 (64,442)	
	210	384 (116,653)	499 (374,623)	341 (51,631)	324 (179,470)	488 (344,632)	263 (80,446)	
	210	386 (94,678)	513 (381,646)	343 (55,631)	328 (180,475)	501 (346,656)	260 (82,438)	
	224	387 (73,702)	528 (387,669)	345 (60,629)	333 (177,488)	514 (348,681)	267 (94,440)	
	224	388 (52,725)	543 (394,693)	347 (65,628)	326 (161,490)	527 (349,705)	274 (105,443)	
	232	389 (31,748)	558 (400,716)	348 (70,627)	327 (158,496)	540 (351,730)	282 (116,447)	
	243	390 (10,771)	574 (407,740)	350 (75,625)	326 (153,500)	553 (352,754)	291 (128,453)	
	244	391 (-10,792)	589 (414,764)	351 (79,623)	326 (145,507)	566 (353,779)	298 (138,457)	

**Table A.22**

Actual and Predicted Cases with 95% Confidence Intervals for Bhutan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	21	3 (-32,38)	21 (21,21)	9 (-15,33)	13 (-3,29)	7 (-20,34)	21 (21,21)	23 (19,27)
5/17/2020	21	3 (-32,38)	21 (21,21)	9 (-15,33)	13 (-2,29)	7 (-20,34)	21 (21,21)	25 (19,31)
5/18/2020	21	3 (-32,38)	21 (21,21)	9 (-14,33)	14 (-2,29)	7 (-20,34)	21 (21,21)	27 (19,35)
5/19/2020	21	3 (-32,38)	21 (21,21)	9 (-14,33)	14 (-1,29)	7 (-20,34)	21 (21,21)	29 (18,39)
5/20/2020	21	3 (-32,38)	21 (21,21)	9 (-14,33)	14 (0,29)	7 (-20,34)	21 (21,21)	31 (18,44)
5/21/2020	21	3 (-32,38)	21 (21,21)	9 (-14,33)	15 (0,29)	7 (-20,34)	21 (21,21)	33 (17,49)
5/22/2020	21	3 (-32,38)	21 (21,21)	10 (-14,33)	15 (1,29)	7 (-20,34)	21 (21,21)	35 (16,54)
5/23/2020	24	3 (-33,39)	21 (15,27)	10 (-14,33)	15 (1,30)	7 (-21,35)	21 (21,21)	37 (14,59)
5/24/2020	24	3 (-33,40)	21 (15,27)	10 (-15,34)	16 (1,30)	7 (-22,36)	21 (21,21)	39 (13,65)
5/25/2020	27	3 (-34,41)	21 (9,33)	10 (-16,35)	16 (1,31)	7 (-23,37)	21 (21,21)	41 (11,70)
5/26/2020	27	3 (-35,42)	21 (9,33)	10 (-16,36)	17 (1,32)	7 (-24,38)	21 (21,21)	43 (9,76)
5/27/2020	28	3 (-36,43)	21 (7,35)	10 (-17,37)	17 (1,33)	7 (-25,39)	21 (21,21)	45 (8,82)
5/28/2020	31	3 (-38,44)	21 (1,41)	10 (-18,39)	17 (0,35)	7 (-26,40)	21 (21,21)	47 (5,88)
5/29/2020	31	3 (-39,45)	21 (1,41)	10 (-19,40)	18 (0,36)	7 (-28,42)	21 (21,21)	49 (3,94)
5/30/2020	33	3 (-40,46)	21 (-3,45)	10 (-20,41)	18 (-1,37)	7 (-29,43)	21 (21,21)	50 (1,100)
5/31/2020	43	3 (-43,49)	21 (-22,64)	10 (-23,44)	19 (-3,41)	7 (-32,46)	21 (21,21)	52 (-2,106)
6/1/2020	43	3 (-46,52)	21 (-22,64)	11 (-26,47)	19 (-5,43)	7 (-34,48)	21 (21,21)	54 (-4,113)
6/2/2020	47	3 (-48,55)	21 (-30,72)	11 (-28,50)	19 (-7,46)	7 (-37,51)	21 (21,21)	56 (-7,120)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3022	21	23 (19,27)	12 (8,17)	25 (17,32)	23 (20,25)	11 (6,16)	8 (-17,33)	
	21	25 (19,31)	3 (-3,9)	31 (16,47)	23 (18,29)	0 (-7,7)	3 (-28,34)	
	21	27 (19,35)	3 (-3,9)	42 (15,70)	24 (15,34)	0 (-7,7)	2 (-32,35)	
	21	29 (18,39)	3 (-3,9)	62 (15,109)	25 (12,38)	0 (-7,7)	2 (-33,36)	
	21	31 (18,44)	3 (-3,9)	103 (20,186)	26 (9,42)	0 (-7,7)	2 (-34,37)	
	21	33 (17,49)	3 (-3,9)	204 (39,368)	26 (6,47)	0 (-7,7)	2 (-34,37)	
	21	35 (16,54)	3 (-3,9)	470 (104,836)	26 (3,50)	0 (-7,7)	2 (-35,38)	
	24	37 (14,59)	3 (-3,9)	1126 (289,1963)	27 (0,53)	0 (-7,7)	2 (-36,39)	
	24	39 (13,65)	3 (-3,9)	2692 (779,4606)	27 (-3,56)	0 (-7,7)	2 (-36,40)	
	27	41 (11,70)	3 (-3,9)	6444 (2072,10816)	27 (-5,59)	0 (-7,7)	2 (-37,41)	
	27	43 (9,76)	3 (-3,9)	15458 (5431,25485)	27 (-8,62)	0 (-7,7)	3 (-37,43)	
	28	45 (8,82)	3 (-3,9)	37098 (14031,60165)	27 (-10,65)	0 (-7,7)	2 (-39,43)	
	31	47 (5,88)	3 (-3,9)	89050 (35825,142274)	28 (-13,68)	0 (-7,7)	2 (-40,45)	
	31	49 (3,94)	3 (-3,9)	213881 (90677,337086)	27 (-16,70)	0 (-7,7)	2 (-41,46)	
	33	50 (1,100)	3 (-3,9)	513751 (227822,799680)	27 (-18,73)	0 (-7,7)	2 (-42,47)	
	43	52 (-2,106)	3 (-3,9)	1233912 (568944,1898879)	27 (-20,75)	0 (-7,7)	2 (-45,50)	
	43	54 (-4,113)	3 (-3,9)	2962762 (1413657,4511867)	28 (-22,77)	0 (-7,7)	4 (-46,54)	
	47	56 (-7,120)	3 (-3,9)	7114326 (3499310,10729341)	28 (-24,79)	0 (-7,7)	4 (-49,56)	

**Table A.23**

Actual and Predicted Cases with 95% Confidence Intervals for Bolivia using the Time Series Models.

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	3826	438 (-6202,7078)	3577 (3089,4065)	1501 (-3056,6058)	3472 (2777,4166)	2964 (1274,4654)	3577 (3577,3577)	3749 (3412,4086)
5/17/2020	4088	438 (-6464,7340)	3577 (2575,4579)	1519 (-3283,6321)	3627 (2822,4433)	2964 (1001,4927)	3577 (3577,3577)	3930 (-6114,13974)
5/18/2020	4263	438 (-6668,7544)	3577 (2232,4922)	1537 (-3452,6526)	3788 (2938,4637)	2964 (789,5139)	3577 (3577,3577)	4111 (-18097,26319)
5/19/2020	4481	438 (-6881,7757)	3577 (1805,5349)	1555 (-3631,6741)	3952 (3052,4852)	3577 (1496,5658)	3577 (3577,3577)	4292 (-32693,41277)
5/20/2020	4919	438 (-7196,8072)	3577 (947,6207)	1573 (-3915,7061)	4121 (3055,5188)	3577 (1375,5779)	3577 (3577,3577)	4473 (-49525,58471)
5/21/2020	5187	438 (-7500,8376)	3577 (421,6733)	1591 (-4186,7368)	4295 (3087,5502)	3577 (1189,5965)	3577 (3577,3577)	4654 (-68337,77645)
5/22/2020	5579	438 (-7839,8715)	3577 (-347,7501)	1609 (-4495,7713)	4473 (3087,5859)	3577 (915,6239)	3577 (3577,3577)	4835 (-88945,98614)
5/23/2020	5915	438 (-8185,9061)	3577 (-1005,8159)	1627 (-4810,8064)	4655 (3092,6218)	3577 (606,6548)	3577 (3577,3577)	5016 (-111205,121236)
5/24/2020	6263	438 (-8538,9414)	3577 (-1688,8842)	1645 (-5132,8422)	4843 (3101,6584)	3577 (272,6882)	3577 (3577,3577)	5197 (-135004,145398)
5/25/2020	6660	438 (-8910,9786)	3577 (-2466,9620)	1663 (-5474,8799)	5035 (3100,6970)	3577 (-95,7249)	3577 (3577,3577)	5378 (-160251,171007)
5/26/2020	7136	438 (-9314,10191)	3577 (-3399,10553)	1681 (-5848,9210)	5231 (3070,7393)	3577 (-507,7661)	3577 (3577,3577)	5559 (-186868,197985)
5/27/2020	7768	438 (-9779,10655)	3577 (-4637,11791)	1699 (-6286,9684)	5433 (2978,7888)	3577 (-996,8150)	3577 (3577,3577)	5740 (-214787,226266)
5/28/2020	8387	438 (-10287,11163)	3577 (-5851,13005)	1717 (-6768,10202)	5639 (2847,8431)	3577 (-1536,8690)	3577 (3577,3577)	5921 (-243951,255793)
5/29/2020	8731	438 (-10773,11649)	3577 (-6525,13679)	1735 (-7225,10695)	5851 (2766,8935)	3577 (-2041,9195)	3577 (3577,3577)	6102 (-274310,286513)
5/30/2020	9592	438 (-11342,12218)	3577 (-8212,15366)	1753 (-7769,11275)	6067 (2594,9540)	3577 (-2646,9800)	3577 (3577,3577)	6283 (-305819,318384)
5/31/2020	9982	438 (-11889,12765)	3577 (-8977,16131)	1771 (-8288,11831)	6289 (2470,10107)	3577 (-3217,10371)	3577 (3577,3577)	6464 (-338436,351364)
6/1/2020	10531	438 (-12448,13324)	3577 (-10053,17207)	1789 (-8818,12396)	6515 (2347,10683)	3577 (-3796,10950)	3577 (3577,3577)	6645 (-372128,385417)
6/2/2020	10991	438 (-13000,13876)	3577 (-10954,18108)	1807 (-9340,12954)	6747 (2247,11247)	3577 (-4365,11519)	3577 (3577,3577)	6826 (-406859,420510)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3023	3826	3749 (3412,4086)	3774 (3723,3826)	3604 (3170,4039)	3781 (3381,4181)	3808 (3762,3854)	1993 (-1601,5586)	
	4088	3930 (-6114,13974)	3979 (3898,4059)	3798 (3291,4304)	3977 (-23363,31317)	4046 (3983,4110)	2106 (-1636,5848)	
	4263	4111 (-18097,26319)	4184 (4075,4293)	3994 (3480,4507)	4180 (-57470,65831)	4292 (4212,4372)	2215 (-1619,6050)	
	4481	4292 (-32693,41277)	4391 (4249,4533)	4193 (3667,4720)	4371 (-97781,106523)	4546 (4449,4643)	2313 (-1629,6255)	
	4919	4473 (-49525,58471)	4600 (4422,4777)	4398 (3743,5054)	4562 (-143882,153006)	4806 (4690,4922)	2412 (-1743,6567)	
	5187	4654 (-68337,77645)	4810 (4596,5025)	4610 (3855,5366)	4768 (-196591,206127)	5074 (4936,5211)	2549 (-1792,6889)	
	5579	4835 (-88945,98614)	5023 (4768,5277)	4830 (3937,5723)	4968 (-254463,264400)	5348 (5185,5511)	2671 (-1889,7231)	
	5915	5016 (-11205,121236)	5237 (4940,5533)	5059 (4035,6084)	5174 (-317519,327868)	5628 (5436,5820)	2808 (-1970,7586)	
	6263	5197 (-135004,145398)	5453 (5112,5793)	5298 (4144,6451)	5371 (-384559,395300)	5914 (5688,6140)	2898 (-2115,7910)	
	6660	5378 (-160251,171007)	5670 (5284,6057)	5547 (4253,6841)	5574 (-455903,467050)	6206 (5942,6470)	3020 (-2243,8284)	
	7136	5559 (-186868,197985)	5890 (5456,6324)	5808 (4347,7270)	5764 (-530420,541948)	6503 (6196,6811)	3130 (-2418,8679)	
	7768	5740 (-214787,226266)	6111 (5628,6595)	6082 (4388,7776)	5955 (-608089,619999)	6806 (6450,7162)	3266 (-2626,9157)	
	8387	5921 (-243951,255793)	6334 (5800,6869)	6369 (4407,8332)	6161 (-689810,702132)	7114 (6704,7523)	3427 (-2843,9697)	
	8731	6102 (-274310,286513)	6559 (5972,7147)	6670 (4493,8848)	6362 (-774982,787705)	7427 (6958,7895)	3579 (-3039,10196)	
	9592	6283 (-305819,318384)	6786 (6144,7428)	6987 (4504,9469)	6567 (-863799,876934)	7744 (7211,8277)	3668 (-3392,10729)	
	9982	6464 (-338436,351364)	7015 (6316,7713)	7320 (4585,10055)	6764 (-955527,969055)	8066 (7462,8669)	3823 (-3650,11296)	
	10531	6645 (-372128,385417)	7245 (6489,8001)	7672 (4691,10653)	6967 (-1050468,1064402)	8392 (7713,9070)	3898 (-4008,11803)	
	10991	6826 (-406859,420510)	7477 (6662,8293)	8043 (4842,11245)	7157 (-1147826,1162140)	8722 (7962,9482)	4049 (-4277,12375)	

**Table A.24**

Actual and Predicted Cases with 95% Confidence Intervals for Bosnia and Herzegovina using the Time Series Models.

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	2267	581 (-2724,3886)	2236 (2175,2297)	1778 (818,2737)	2575 (1971,3179)	2236 (2175,2297)	2236 (2236,2236)	2266 (2207,2325)
5/17/2020	2290	581 (-2746,3908)	2236 (2130,2342)	1798 (836,2760)	2635 (1994,3276)	2236 (2150,2322)	2236 (2236,2236)	2294 (1979,2609)
5/18/2020	2304	581 (-2763,3925)	2236 (2103,2369)	1818 (859,2777)	2696 (2010,3383)	2236 (2132,2340)	2236 (2236,2236)	2322 (1669,2975)
5/19/2020	2321	581 (-2780,3942)	2236 (2069,2403)	1838 (883,2794)	2758 (2025,3490)	2236 (2113,2359)	2236 (2236,2236)	2350 (1291,3409)
5/20/2020	2338	581 (-2797,3958)	2236 (2036,2436)	1859 (906,2811)	2820 (2040,3600)	2236 (2094,2378)	2236 (2236,2236)	2378 (853,3902)
5/21/2020	2350	581 (-2812,3974)	2236 (2013,2459)	1879 (931,2827)	2883 (2053,3713)	2236 (2078,2394)	2236 (2236,2236)	2406 (363,4448)
5/22/2020	2372	581 (-2829,3991)	2236 (1969,2503)	1899 (955,2844)	2947 (2068,3825)	2236 (2058,2414)	2236 (2236,2236)	2433 (-174,5041)
5/23/2020	2391	581 (-2846,4008)	2236 (1932,2540)	1920 (977,2862)	3011 (2084,3938)	2236 (2038,2434)	2236 (2236,2236)	2461 (-755,5678)
5/24/2020	2401	581 (-2862,4024)	2236 (1913,2559)	1940 (1002,2878)	3076 (2097,4055)	2236 (2020,2452)	2236 (2236,2236)	2489 (-1378,6356)
5/25/2020	2406	581 (-2876,4038)	2236 (1903,2569)	1960 (1028,2892)	3142 (2107,4176)	2236 (2006,2466)	2236 (2236,2236)	2517 (-2038,7073)
5/26/2020	2416	581 (-2889,4051)	2236 (1883,2589)	1980 (1055,2905)	3208 (2116,4300)	2236 (1992,2480)	2236 (2236,2236)	2545 (-2736,7826)
5/27/2020	2435	581 (-2903,4065)	2236 (1846,2626)	2001 (1082,2920)	3275 (2127,4423)	2236 (1977,2495)	2236 (2236,2236)	2573 (-3468,8614)
5/28/2020	2462	581 (-2919,4081)	2236 (1793,2679)	2021 (1106,2936)	3343 (2140,4545)	2236 (1958,2514)	2236 (2236,2236)	2601 (-4233,9435)
5/29/2020	2485	581 (-2936,4098)	2236 (1748,2724)	2041 (1129,2953)	3411 (2155,4667)	2236 (1938,2534)	2236 (2236,2236)	2629 (-5030,10288)
5/30/2020	2494	581 (-2952,4114)	2236 (1730,2742)	2061 (1154,2969)	3480 (2168,4792)	2236 (1920,2552)	2236 (2236,2236)	2657 (-5858,11172)
5/31/2020	2510	581 (-2968,4130)	2236 (1699,2773)	2082 (1178,2985)	3550 (2181,4919)	2236 (1902,2570)	2236 (2236,2236)	2685 (-6716,12085)
6/1/2020	2524	581 (-2984,4146)	2236 (1672,2800)	2102 (1203,3001)	3620 (2194,5047)	2236 (1884,2588)	2236 (2236,2236)	2713 (-7602,13027)
6/2/2020	2535	581 (-2999,4161)	2236 (1650,2822)	2122 (1228,3017)	3691 (2205,5177)	2236 (1867,2605)	2236 (2236,2236)	2740 (-8516,13997)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3024	2267	2265 (2208,2323)	2257 (2231,2284)	2210 (2097,2322)	2261 (2212,2309)	2257 (2231,2284)	1142 (-1064,3347)	
	2290	2293 (1989,2597)	2291 (2252,2329)	2227 (2108,2345)	2282 (1901,2663)	2289 (2250,2328)	1160 (-1051,3370)	
	2304	2320 (1691,2949)	2306 (2253,2360)	2243 (2124,2362)	2302 (1508,3096)	2305 (2251,2359)	1165 (-1052,3383)	
	2321	2347 (1329,3366)	2341 (2269,2414)	2258 (2138,2378)	2324 (1009,3640)	2338 (2265,2411)	1182 (-1039,3403)	
	2338	2374 (911,3838)	2359 (2269,2449)	2273 (2151,2394)	2346 (427,4265)	2355 (2264,2445)	1189 (-1039,3416)	
	2350	2402 (443,4360)	2392 (2281,2503)	2287 (2165,2409)	2374 (-293,5041)	2385 (2273,2497)	1204 (-1027,3435)	
	2372	2429 (-69,4926)	2413 (2281,2544)	2301 (2176,2425)	2395 (-1048,5838)	2405 (2272,2538)	1214 (-1023,3450)	
	2391	2455 (-622,5533)	2443 (2288,2598)	2314 (2185,2442)	2417 (-1858,6692)	2433 (2277,2590)	1230 (-1011,3471)	
	2401	2482 (-1213,6178)	2467 (2289,2645)	2327 (2196,2457)	2437 (-2703,7577)	2455 (2275,2635)	1242 (-1003,3487)	
	2406	2509 (-1840,6858)	2496 (2292,2699)	2339 (2209,2470)	2455 (-3571,8482)	2481 (2276,2687)	1257 (-989,3502)	
	2416	2536 (-2500,7571)	2521 (2292,2750)	2352 (2221,2482)	2476 (-4481,9433)	2504 (2272,2736)	1266 (-980,3513)	
	2435	2562 (-3191,8316)	2550 (2294,2806)	2363 (2233,2494)	2496 (-5430,10422)	2530 (2270,2789)	1279 (-969,3527)	
	2462	2589 (-3913,9091)	2577 (2292,2861)	2375 (2241,2510)	2523 (-6461,11507)	2553 (2266,2841)	1294 (-957,3545)	
	2485	2615 (-4664,9895)	2605 (2292,2918)	2387 (2247,2526)	2542 (-7520,12604)	2578 (2261,2895)	1312 (-943,3566)	
	2494	2642 (-5442,10726)	2633 (2290,2975)	2398 (2255,2541)	2563 (-8613,13738)	2602 (2255,2949)	1328 (-929,3584)	
	2510	2668 (-6247,11583)	2661 (2288,3035)	2409 (2261,2556)	2581 (-9728,14890)	2627 (2249,3005)	1340 (-918,3599)	
	2524	2694 (-7077,12466)	2689 (2284,3094)	2419 (2268,2571)	2598 (-10855,16052)	2651 (2241,3061)	1353 (-908,3614)	
	2535	2721 (-7932,13373)	2718 (2281,3156)	2430 (2275,2585)	2617 (-12007,17242)	2676 (2233,3119)	1366 (-897,3628)	

**Table A.25**

Actual and Predicted Cases with 95% Confidence Intervals for Botswana using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	24	7 (-27,40)	24 (24,24)	21 (17,26)	30 (18,42)	24 (24,24)	24 (24,24)	24 (24,24)
5/17/2020	25	7 (-28,41)	24 (22,26)	22 (16,27)	31 (19,42)	24 (23,25)	24 (24,24)	24 (24,25)
5/18/2020	25	7 (-28,42)	24 (22,26)	22 (16,28)	31 (19,43)	24 (22,26)	24 (24,24)	24 (24,25)
5/19/2020	25	7 (-28,42)	24 (22,26)	22 (17,28)	32 (20,44)	24 (22,26)	24 (24,24)	24 (24,25)
5/20/2020	25	7 (-28,42)	24 (22,26)	22 (17,28)	33 (20,45)	24 (22,26)	24 (24,24)	25 (24,25)
5/21/2020	29	7 (-30,43)	24 (14,34)	23 (16,30)	33 (21,45)	24 (20,28)	24 (24,24)	25 (24,25)
5/22/2020	30	7 (-31,45)	24 (12,36)	23 (15,31)	34 (22,45)	24 (18,30)	24 (24,24)	25 (24,25)
5/23/2020	30	7 (-32,46)	24 (12,36)	23 (14,32)	34 (23,46)	24 (17,31)	24 (24,24)	25 (24,25)
5/24/2020	35	7 (-34,48)	24 (2,46)	23 (12,35)	35 (24,46)	24 (14,34)	24 (24,24)	25 (24,26)
5/25/2020	35	7 (-36,50)	24 (2,46)	24 (11,37)	36 (26,46)	24 (13,35)	24 (24,24)	25 (24,26)
5/26/2020	35	7 (-37,51)	24 (2,46)	24 (10,38)	36 (27,46)	24 (11,37)	24 (24,24)	25 (24,26)
5/27/2020	35	7 (-38,52)	24 (2,46)	24 (10,39)	37 (28,46)	24 (10,38)	24 (24,24)	25 (24,26)
5/28/2020	35	7 (-39,53)	24 (2,46)	24 (9,40)	38 (29,47)	24 (10,38)	24 (24,24)	25 (24,26)
5/29/2020	35	7 (-40,53)	24 (2,46)	25 (9,40)	38 (29,47)	24 (9,39)	24 (24,24)	25 (25,26)
5/30/2020	35	7 (-40,54)	24 (2,46)	25 (9,41)	39 (30,48)	24 (8,40)	24 (24,24)	26 (25,26)
5/31/2020	35	7 (-41,55)	24 (2,46)	25 (9,41)	40 (31,48)	24 (8,40)	24 (24,24)	26 (25,27)
6/1/2020	38	7 (-42,55)	24 (-3,51)	25 (9,42)	40 (32,49)	24 (7,41)	24 (24,24)	26 (25,27)
6/2/2020	40	7 (-43,57)	24 (-7,55)	26 (8,43)	41 (32,49)	24 (6,42)	24 (24,24)	26 (25,27)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3025	24	24 (24,24)	25 (23,26)	24 (24,24)	24 (24,24)	24 (22,26)	12 (-11,35)	
	25	24 (24,24)	25 (23,27)	24 (23,25)	24 (24,25)	24 (22,27)	13 (-11,36)	
	25	24 (24,24)	26 (23,28)	24 (23,26)	24 (24,25)	25 (22,28)	13 (-11,37)	
	25	24 (24,25)	26 (23,29)	24 (23,26)	24 (24,25)	25 (21,28)	13 (-10,37)	
	25	24 (24,25)	27 (23,30)	24 (23,26)	24 (24,25)	25 (21,29)	13 (-10,37)	
	29	24 (24,25)	27 (23,31)	24 (20,28)	25 (24,25)	25 (20,30)	14 (-11,38)	
	30	24 (24,25)	28 (23,32)	24 (19,30)	25 (24,25)	25 (20,31)	14 (-11,40)	
	30	24 (24,25)	28 (23,33)	24 (18,31)	25 (24,25)	25 (20,31)	15 (-11,41)	
	35	24 (24,25)	29 (24,34)	24 (15,34)	25 (24,25)	26 (19,32)	15 (-13,43)	
	35	24 (24,25)	29 (24,34)	24 (13,35)	25 (24,26)	26 (19,33)	16 (-13,45)	
	35	24 (24,25)	30 (24,35)	24 (12,37)	25 (24,26)	26 (18,34)	16 (-14,46)	
	35	25 (24,25)	30 (24,36)	24 (11,38)	25 (24,26)	26 (18,34)	16 (-15,47)	
	35	25 (24,25)	31 (25,37)	24 (11,38)	25 (25,26)	26 (17,35)	15 (-16,47)	
	35	25 (24,25)	31 (25,38)	24 (10,39)	25 (24,26)	26 (17,36)	16 (-16,47)	
	35	25 (24,25)	32 (25,38)	25 (10,39)	25 (24,26)	27 (17,37)	16 (-16,48)	
	35	25 (24,25)	32 (26,39)	25 (9,40)	25 (25,26)	27 (16,38)	16 (-16,49)	
	38	25 (24,25)	33 (26,40)	25 (8,41)	25 (25,26)	27 (16,38)	16 (-17,50)	
	40	25 (24,25)	34 (27,41)	25 (7,42)	25 (25,26)	27 (15,39)	17 (-17,51)	

**Table A.26**

Actual and Predicted Cases with 95% Confidence Intervals for Brazil using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	233511	28611 (-372993,430215)	220291 (194380,246202)	97298 (-169680,364276)	216712 (183785,249638)	220291 (194380,246202)
5/17/2020	241080	28611 (-380477,437700)	220291 (179545,261037)	98462 (-174865,371789)	226117 (194938,257296)	220291 (186147,254435)
5/18/2020	255368	28611 (-392592,449815)	220291 (151540,289042)	99626 (-184742,383994)	235777 (202019,269534)	220291 (171785,268797)
5/19/2020	271885	28611 (-407162,464384)	220291 (119167,321415)	100790 (-197141,398721)	245693 (206789,284597)	220291 (154556,286026)
5/20/2020	291579	28611 (-424212,481435)	220291 (80567,360015)	101954 (-212111,416020)	255870 (209068,302673)	220291 (134492,306090)
5/21/2020	310087	28611 (-442135,499357)	220291 (44291,396291)	103119 (-227977,434214)	266311 (211063,321560)	220291 (114003,326579)
5/22/2020	330890	28611 (-461378,518601)	220291 (3517,437065)	104283 (-245210,453775)	277019 (212142,341896)	220291 (92243,348339)
5/23/2020	347398	28611 (-480190,537412)	220291 (-28839,469421)	105447 (-261960,472854)	287997 (214667,361327)	220291 (71613,368969)
5/24/2020	363211	28611 (-498554,555776)	220291 (-59832,500414)	106611 (-278219,491441)	299248 (218464,380033)	220291 (51864,388718)
5/25/2020	374898	28611 (-515612,572834)	220291 (-82739,523321)	107775 (-293094,508645)	310776 (224446,397107)	220291 (33975,406607)
5/26/2020	391222	28611 (-532792,590014)	220291 (-114734,555316)	108940 (-308093,525972)	322584 (230819,414349)	220291 (15934,424648)
5/27/2020	411821	28611 (-550975,608198)	220291 (-155108,595690)	110104 (-324138,544345)	334675 (236571,432778)	220291 (-3372,443954)
5/28/2020	438238	28611 (-571110,628332)	220291 (-206885,647467)	111268 (-342222,564758)	347052 (240558,453547)	220291 (-25094,465676)
5/29/2020	465166	28611 (-592895,650117)	220291 (-259664,700246)	112432 (-362020,586884)	359719 (243176,476261)	220291 (-48720,489302)
5/30/2020	498440	28611 (-617184,674406)	220291 (-324881,765463)	113596 (-384428,611621)	372678 (243344,502012)	220291 (-75271,515853)
5/31/2020	514849	28611 (-640531,697754)	220291 (-357043,797625)	114760 (-405777,635298)	385933 (245676,526191)	220291 (-100223,540805)
6/1/2020	526447	28611 (-662344,719567)	220291 (-379775,820357)	115925 (-425467,657316)	399488 (250635,548341)	220291 (-123027,563609)
6/2/2020	555383	28611 (-685615,742837)	220291 (-436489,877071)	117089 (-446666,680844)	413345 (254499,572191)	220291 (-147518,588100)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SES	HLT	DT	ARIMA	
5/16/2020	233511	220291 (220291,220291)	229369 (211577,247160)	229369 (211577,247160)	240356 (237736,242976)	
5/17/2020	241080	220291 (220291,220291)	240196 (-30596925,31077317)	240196 (-30596925,31077317)	263475 (256815,270135)	
5/18/2020	255368	220291 (220291,220291)	251024 (-68690135,69192183)	251024 (-68690135,69192183)	289753 (277385,302121)	
5/19/2020	271885	220291 (220291,220291)	261851 (-115089640,115613343)	261851 (-115089640,115613343)	319284 (299504,339063)	
5/20/2020	291579	220291 (220291,220291)	272679 (-168577189,169122546)	272679 (-168577189,169122546)	352151 (323235,381068)	
5/21/2020	310087	220291 (220291,220291)	283506 (-228333897,228900909)	283506 (-228333897,228900909)	388433 (348644,428221)	
5/22/2020	330890	220291 (220291,220291)	294334 (-293768558,294357226)	294334 (-293768558,294357226)	428195 (375801,480590)	
5/23/2020	347398	220291 (220291,220291)	305161 (-364429784,365040107)	305161 (-364429784,365040107)	471502 (404776,538228)	
5/24/2020	363211	220291 (220291,220291)	315989 (-439958703,440590681)	315989 (-439958703,440590681)	518407 (435640,601173)	
5/25/2020	374898	220291 (220291,220291)	326817 (-520061267,520714900)	326817 (-520061267,520714900)	568961 (468466,669455)	
5/26/2020	391222	220291 (220291,220291)	337644 (-604490877,605166165)	337644 (-604490877,605166165)	623209 (503323,743094)	
5/27/2020	411821	220291 (220291,220291)	348472 (-693036883,693733827)	348472 (-693036883,693733827)	681191 (540279,822102)	
5/28/2020	438238	220291 (220291,220291)	359299 (-785516639,786235238)	359299 (-785516639,786235238)	742944 (579401,906487)	
5/29/2020	465166	220291 (220291,220291)	370127 (-881769805,882510059)	370127 (-881769805,882510059)	808500 (620751,996249)	
5/30/2020	498440	220291 (220291,220291)	380954 (-981654156,982416065)	380954 (-981654156,982416065)	877890 (664393,1091386)	
5/31/2020	514849	220291 (220291,220291)	391782 (-1085042411,1085825975)	391782 (-1085042411,1085825975)	951139 (710384,1191894)	
6/1/2020	526447	220291 (220291,220291)	402610 (-1191819788,1192625007)	402610 (-1191819788,1192625007)	1028272 (758783,1297761)	
6/2/2020	555383	220291 (220291,220291)	413437 (-1301882087,1302708961)	413437 (-1301882087,1302708961)	1109310 (809641,1408979)	

**Table A.26** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	233511	178932 (71957,285907)	237414 (203853,270975)	236533 (234940,238125)	127442 (-80452,335337)
5/17/2020	241080	182445 (71424,293466)	254536 (-574282179,574791250)	254202 (250624,257779)	139218 (-64596,343032)
5/18/2020	255368	185339 (64937,305742)	271657 (-1284385974,1284929287)	272230 (265547,278912)	151395 (-52409,355200)
5/19/2020	271885	187607 (54587,320626)	288775 (-2149262009,2149839560)	289586 (279125,300047)	165641 (-39281,370563)
5/20/2020	291579	189436 (40535,338336)	305892 (-3146186822,3146798607)	306800 (292280,321321)	182646 (-24022,389314)
5/21/2020	310087	190911 (24870,356953)	323007 (-4259850441,4260496454)	324329 (305413,343245)	202902 (-4338,410143)
5/22/2020	330890	192156 (7239,377072)	340120 (-5479247242,5479927482)	341913 (318170,365656)	223513 (15810,431217)
5/23/2020	347398	193266 (-10026,396558)	357231 (-6795952643,6796667105)	359350 (330403,388296)	245907 (39281,452533)
5/24/2020	363211	194322 (-26836,415480)	374341 (-8203262060,8204010741)	376766 (342313,411220)	268781 (64436,473126)
5/25/2020	374898	195364 (-42127,432856)	391450 (-9695708279,9696491178)	394251 (353993,434509)	293573 (93268,493877)
5/26/2020	391222	196448 (-57567,450463)	408557 (-11268673632,11269490745)	411743 (365378,458108)	319095 (123414,514777)
5/27/2020	411821	197559 (-74183,469300)	425662 (-12918225508,12919076832)	429203 (376447,481959)	348047 (157253,538841)
5/28/2020	438238	198681 (-93075,490437)	442764 (-14640930149,14641815677)	446661 (387250,506073)	379750 (193705,565796)
5/29/2020	465166	199793 (-113840,513426)	459865 (-16433806854,16434726584)	464134 (397812,530456)	415090 (233903,596277)
5/30/2020	498440	200897 (-137454,539248)	476965 (-18294198406,18295152335)	481607 (408124,555091)	451628 (274988,628267)
5/31/2020	514849	201994 (-159706,563694)	494062 (-20219721921,20220710046)	499074 (418188,579960)	490468 (319021,661915)
6/1/2020	526447	203084 (-180008,586177)	511159 (-22208249052,22209271370)	516540 (428020,605060)	527274 (360946,693602)
6/2/2020	555383	204182 (-201934,610299)	528254 (-24257822855,24258879363)	534010 (437630,630390)	565126 (403421,726831)

**Table A.27**

Actual and Predicted Cases with 95% Confidence Intervals for Brunei using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	141	68 (-74,211)	141 (141,141)	174 (110,237)	114 (60,167)	138 (132,144)	141 (141,141)	141 (141,141)
5/17/2020	141	68 (-74,211)	141 (141,141)	175 (110,241)	109 (52,167)	138 (132,144)	141 (141,141)	141 (141,142)
5/18/2020	141	68 (-74,211)	141 (141,141)	177 (110,245)	105 (43,167)	138 (132,144)	141 (141,141)	141 (141,142)
5/19/2020	141	68 (-74,211)	141 (141,141)	179 (110,248)	100 (33,167)	138 (132,144)	141 (141,141)	141 (141,142)
5/20/2020	141	68 (-74,211)	141 (141,141)	181 (110,252)	95 (23,168)	138 (132,144)	141 (141,141)	142 (141,142)
5/21/2020	141	68 (-74,211)	141 (141,141)	182 (110,255)	90 (13,168)	138 (132,144)	141 (141,141)	142 (141,142)
5/22/2020	141	68 (-74,211)	141 (141,141)	184 (110,259)	85 (2,168)	138 (132,144)	141 (141,141)	142 (141,142)
5/23/2020	141	68 (-74,211)	141 (141,141)	186 (110,263)	79 (-10,168)	138 (132,144)	141 (141,141)	142 (141,142)
5/24/2020	141	68 (-74,211)	141 (141,141)	188 (109,266)	73 (-22,168)	138 (132,144)	141 (141,141)	142 (141,143)
5/25/2020	141	68 (-74,211)	141 (141,141)	190 (109,270)	66 (-35,168)	138 (132,144)	141 (141,141)	142 (141,143)
5/26/2020	141	68 (-74,211)	141 (141,141)	191 (109,273)	60 (-48,168)	141 (135,147)	141 (141,141)	142 (141,143)
5/27/2020	141	68 (-74,211)	141 (141,141)	193 (109,277)	53 (-62,167)	141 (136,146)	141 (141,141)	142 (141,143)
5/28/2020	141	68 (-74,211)	141 (141,141)	195 (109,281)	46 (-76,167)	141 (136,146)	141 (141,141)	142 (141,143)
5/29/2020	141	68 (-74,211)	141 (141,141)	197 (109,284)	38 (-91,167)	141 (136,146)	141 (141,141)	142 (142,143)
5/30/2020	141	68 (-74,211)	141 (141,141)	199 (109,288)	30 (-106,167)	141 (136,146)	141 (141,141)	142 (142,143)
5/31/2020	141	68 (-74,211)	141 (141,141)	200 (109,292)	22 (-122,167)	141 (136,146)	141 (141,141)	143 (142,144)
6/1/2020	141	68 (-74,211)	141 (141,141)	202 (109,295)	14 (-139,167)	141 (136,146)	141 (141,141)	143 (142,144)
6/2/2020	141	68 (-74,211)	141 (141,141)	204 (109,299)	5 (-156,166)	141 (137,145)	141 (141,141)	143 (142,144)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	141	141 (141,141)	141 (136,146)	140 (138,142)	141 (140,141)	141 (136,146)	71 (-68,209)	
5/17/2020	141	141 (141,141)	141 (133,149)	140 (137,142)	140 (140,141)	141 (133,149)	71 (-68,209)	
5/18/2020	141	141 (141,141)	141 (130,152)	140 (137,142)	140 (139,141)	141 (130,152)	71 (-68,209)	
5/19/2020	141	141 (141,142)	141 (126,156)	140 (137,142)	139 (138,140)	141 (126,156)	71 (-68,209)	
5/20/2020	141	141 (141,142)	141 (122,160)	139 (137,142)	140 (139,141)	141 (122,160)	71 (-68,209)	
5/21/2020	141	141 (141,142)	141 (118,164)	139 (136,142)	139 (138,140)	141 (118,164)	71 (-68,209)	
5/22/2020	141	141 (141,142)	141 (114,168)	139 (136,142)	140 (139,141)	141 (114,168)	71 (-68,209)	
5/23/2020	141	141 (141,142)	141 (109,173)	139 (136,142)	139 (138,140)	141 (109,173)	71 (-68,209)	
5/24/2020	141	142 (141,142)	141 (104,178)	139 (136,142)	139 (138,140)	141 (104,178)	71 (-68,209)	
5/25/2020	141	142 (141,142)	141 (99,183)	139 (135,142)	138 (137,139)	141 (99,183)	71 (-68,209)	
5/26/2020	141	142 (141,142)	141 (94,189)	139 (135,142)	138 (137,139)	141 (94,189)	71 (-68,209)	
5/27/2020	141	142 (141,142)	141 (88,194)	139 (135,142)	139 (138,140)	141 (88,194)	71 (-67,209)	
5/28/2020	141	142 (141,142)	141 (82,200)	139 (135,142)	138 (137,139)	141 (82,200)	71 (-67,209)	
5/29/2020	141	142 (141,142)	141 (76,206)	138 (135,142)	139 (138,140)	141 (76,206)	71 (-67,209)	
5/30/2020	141	142 (141,142)	141 (70,212)	138 (135,142)	138 (137,140)	141 (70,212)	71 (-67,209)	
5/31/2020	141	142 (141,142)	141 (64,219)	138 (134,142)	139 (137,140)	141 (64,218)	71 (-67,209)	
6/1/2020	141	142 (141,142)	141 (57,225)	138 (134,142)	138 (137,139)	141 (57,225)	71 (-67,209)	
6/2/2020	141	142 (141,143)	141 (51,232)	138 (134,142)	137 (136,139)	141 (51,232)	71 (-67,209)	

**Table A.28**

Actual and Predicted Cases with 95% Confidence Intervals for Bulgaria using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	2175	497 (-2791,3786)	2138 (2065,2211)	1529 (262,2795)	2409 (1950,2867)	2138 (2065,2211)	2138 (2138,2138)	2178 (2099,2257)	
5/17/2020	2211	497 (-2827,3821)	2138 (1995,2281)	1546 (262,2831)	2477 (1986,2968)	2138 (2025,2251)	2138 (2138,2138)	2218 (1650,2786)	
5/18/2020	2235	497 (-2854,3849)	2138 (1948,2328)	1564 (269,2859)	2547 (2013,3081)	2138 (1994,2282)	2138 (2138,2138)	2257 (1054,3461)	
5/19/2020	2259	497 (-2880,3874)	2138 (1901,2375)	1581 (278,2885)	2618 (2037,3199)	2138 (1966,2310)	2138 (2138,2138)	2297 (326,4267)	
5/20/2020	2292	497 (-2909,3903)	2138 (1836,2440)	1599 (284,2913)	2690 (2064,3316)	2138 (1933,2343)	2138 (2138,2138)	2336 (-514,5186)	
5/21/2020	2331	497 (-2941,3935)	2138 (1760,2516)	1616 (287,2946)	2763 (2095,3431)	2138 (1896,2380)	2138 (2138,2138)	2376 (-1454,6206)	
5/22/2020	2372	497 (-2976,3970)	2138 (1679,2597)	1634 (287,2981)	2838 (2130,3546)	2138 (1854,2422)	2138 (2138,2138)	2415 (-2486,7316)	
5/23/2020	2408	497 (-3011,4005)	2138 (1609,2667)	1651 (287,3016)	2913 (2164,3663)	2138 (1813,2463)	2138 (2138,2138)	2455 (-3600,8510)	
5/24/2020	2427	497 (-3042,4037)	2138 (1572,2704)	1669 (290,3047)	2990 (2194,3787)	2138 (1778,2498)	2138 (2138,2138)	2494 (-4794,9782)	
5/25/2020	2433	497 (-3069,4063)	2138 (1560,2716)	1686 (299,3074)	3069 (2217,3921)	2138 (1751,2525)	2138 (2138,2138)	2534 (-6060,11127)	
5/26/2020	2443	497 (-3092,4086)	2138 (1540,2736)	1704 (311,3097)	3148 (2235,4062)	2138 (1727,2549)	2138 (2138,2138)	2573 (-7396,12542)	
5/27/2020	2460	497 (-3114,4108)	2138 (1507,2769)	1721 (323,3119)	3229 (2253,4206)	2138 (1705,2571)	2138 (2138,2138)	2612 (-8799,14024)	
5/28/2020	2477	497 (-3136,4130)	2138 (1474,2802)	1739 (337,3140)	3312 (2269,4354)	2138 (1683,2593)	2138 (2138,2138)	2652 (-10265,15569)	
5/29/2020	2485	497 (-3155,4149)	2138 (1458,2818)	1756 (353,3160)	3395 (2283,4507)	2138 (1663,2613)	2138 (2138,2138)	2691 (-11791,17174)	
5/30/2020	2499	497 (-3174,4168)	2138 (1430,2846)	1774 (369,3178)	3480 (2297,4663)	2138 (1644,2632)	2138 (2138,2138)	2731 (-13376,18838)	
5/31/2020	2513	497 (-3192,4186)	2138 (1403,2873)	1791 (386,3197)	3566 (2310,4823)	2138 (1626,2650)	2138 (2138,2138)	2770 (-15018,20559)	
6/1/2020	2519	497 (-3209,4203)	2138 (1391,2885)	1809 (404,3213)	3654 (2321,4987)	2138 (1609,2667)	2138 (2138,2138)	2810 (-16714,22334)	
6/2/2020	2538	497 (-3225,4220)	2138 (1354,2922)	1826 (422,3230)	3743 (2333,5153)	2138 (1592,2684)	2138 (2138,2138)	2849 (-18463,24162)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3029	2175	2178 (2099,2257)	2180 (2154,2207)	1912 (1397,2427)	2169 (2109,2229)	2177 (2150,2204)	1110 (-979,3198)		
	2211	2218 (1650,2786)	2224 (2180,2267)	1904 (1344,2464)	2203 (1623,2784)	2217 (2172,2261)	1130 (-974,3234)		
	2235	2257 (1054,3461)	2267 (2209,2326)	1896 (1299,2493)	2240 (977,3503)	2256 (2196,2316)	1152 (-958,3262)		
	2259	2297 (326,4267)	2311 (2238,2385)	1885 (1251,2519)	2281 (138,4423)	2295 (2219,2372)	1172 (-943,3287)		
	2292	2336 (-514,5186)	2356 (2268,2444)	1873 (1197,2548)	2321 (-848,5489)	2335 (2241,2428)	1192 (-931,3315)		
	2313	2376 (-1454,6206)	2400 (2297,2504)	1860 (1137,2583)	2358 (-1930,6646)	2374 (2263,2485)	1214 (-921,3348)		
	2372	2415 (-2486,7316)	2446 (2327,2564)	1847 (1072,2621)	2398 (-3127,7923)	2413 (2284,2542)	1239 (-908,3386)		
	2408	2455 (-3600,8510)	2491 (2357,2626)	1833 (1007,2660)	2428 (-4358,9215)	2453 (2305,2600)	1265 (-894,3424)		
	2427	2494 (-4794,9782)	2537 (2386,2688)	1820 (946,2695)	2463 (-5658,10584)	2492 (2325,2659)	1288 (-879,3455)		
	2433	2534 (-6060,11127)	2584 (2416,2752)	1807 (892,2723)	2500 (-7039,12038)	2531 (2344,2718)	1308 (-863,3479)		
	2443	2573 (-7396,12542)	2630 (2445,2816)	1795 (842,2748)	2540 (-8527,13608)	2571 (2363,2778)	1325 (-848,3498)		
	2460	2612 (-8799,14024)	2677 (2474,2881)	1783 (793,2773)	2581 (-10113,15274)	2610 (2381,2839)	1345 (-829,3519)		
	2477	2652 (-10265,15569)	2725 (2504,2946)	1772 (746,2797)	2618 (-11768,17004)	2649 (2398,2900)	1368 (-806,3542)		
	2485	2691 (-11791,17174)	2773 (2533,3013)	1761 (702,2819)	2658 (-13504,18820)	2689 (2415,2962)	1394 (-778,3565)		
	2499	2731 (-13376,18838)	2821 (2562,3080)	1750 (659,2840)	2688 (-15267,20643)	2728 (2431,3025)	1418 (-750,3586)		
	2513	2770 (-15018,20559)	2870 (2591,3149)	1740 (618,2861)	2723 (-17075,22520)	2767 (2447,3088)	1442 (-722,3605)		
	2519	2810 (-16714,22334)	2919 (2621,3218)	1730 (578,2881)	2759 (-18940,24458)	2807 (2462,3152)	1466 (-693,3624)		
	2538	2849 (-18463,24162)	2969 (2650,3288)	1720 (539,2901)	2800 (-20884,26484)	2846 (2476,3216)	1490 (-663,3643)		

**Table A.29**

Actual and Predicted Cases with 95% Confidence Intervals for Burkina Faso using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	782	244 (-812,1299)	780 (776,784)	714 (580,847)	848 (719,977)	773 (755,791)	780 (780,780)	787 (773,800)
5/17/2020	796	244 (-825,1313)	780 (749,811)	722 (582,861)	858 (732,983)	773 (739,807)	780 (780,780)	793 (765,822)
5/18/2020	796	244 (-830,1317)	780 (749,811)	730 (594,866)	867 (737,997)	773 (735,811)	780 (780,780)	800 (752,848)
5/19/2020	796	244 (-832,1320)	780 (749,811)	738 (607,869)	876 (739,1014)	773 (733,813)	780 (780,780)	807 (735,878)
5/20/2020	809	244 (-839,1326)	780 (723,837)	746 (616,875)	885 (745,1025)	773 (725,821)	780 (780,780)	813 (715,912)
5/21/2020	812	244 (-844,1331)	780 (717,843)	754 (627,881)	894 (750,1038)	773 (719,827)	780 (780,780)	820 (692,948)
5/22/2020	814	244 (-849,1336)	780 (713,847)	762 (638,886)	903 (754,1051)	773 (715,831)	780 (780,780)	826 (667,986)
5/23/2020	814	244 (-852,1339)	780 (713,847)	770 (650,890)	911 (757,1065)	773 (712,834)	780 (780,780)	833 (639,1027)
5/24/2020	814	244 (-854,1342)	780 (713,847)	778 (662,893)	919 (758,1079)	773 (709,837)	780 (780,780)	839 (609,1069)
5/25/2020	832	244 (-860,1347)	780 (678,882)	786 (672,899)	926 (763,1090)	773 (702,844)	780 (780,780)	846 (578,1114)
5/26/2020	832	244 (-865,1352)	780 (678,882)	794 (683,904)	934 (767,1101)	773 (697,849)	780 (780,780)	853 (544,1161)
5/27/2020	845	244 (-871,1358)	780 (653,907)	802 (693,910)	941 (772,1110)	773 (690,856)	780 (780,780)	859 (509,1210)
5/28/2020	847	244 (-876,1363)	780 (649,911)	810 (703,916)	948 (777,1119)	773 (683,863)	780 (780,780)	866 (471,1260)
5/29/2020	847	244 (-881,1368)	780 (649,911)	818 (714,921)	954 (780,1129)	773 (678,868)	780 (780,780)	872 (432,1312)
5/30/2020	847	244 (-885,1372)	780 (649,911)	825 (725,926)	961 (783,1138)	773 (674,872)	780 (780,780)	879 (392,1366)
5/31/2020	847	244 (-888,1375)	780 (649,911)	833 (736,931)	966 (785,1148)	773 (671,875)	780 (780,780)	885 (350,1421)
6/1/2020	847	244 (-891,1378)	780 (649,911)	841 (747,936)	972 (786,1158)	773 (668,878)	780 (780,780)	892 (306,1478)
6/2/2020	881	244 (-898,1385)	780 (582,978)	849 (756,943)	977 (791,1164)	773 (659,887)	780 (780,780)	898 (261,1536)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	782	786 (774,798)	784 (770,798)	741 (661,821)	785 (775,795)	784 (770,798)	394 (-365,1154)	
5/17/2020	796	792 (768,817)	789 (768,810)	739 (642,836)	789 (763,815)	789 (768,809)	396 (-376,1168)	
5/18/2020	796	798 (757,839)	794 (764,823)	737 (634,841)	793 (744,841)	793 (764,823)	401 (-372,1174)	
5/19/2020	796	804 (744,863)	798 (759,838)	735 (628,843)	798 (719,877)	798 (758,837)	402 (-371,1175)	
5/20/2020	809	809 (728,890)	803 (752,854)	733 (616,850)	805 (681,929)	802 (752,853)	404 (-373,1181)	
5/21/2020	812	815 (711,919)	808 (745,871)	731 (606,856)	807 (646,968)	807 (744,870)	406 (-374,1186)	
5/22/2020	814	821 (691,950)	813 (737,889)	729 (597,860)	810 (612,1008)	811 (735,887)	409 (-373,1191)	
5/23/2020	814	826 (670,982)	818 (728,908)	727 (590,864)	815 (573,1056)	816 (726,906)	412 (-371,1195)	
5/24/2020	814	831 (648,1015)	822 (718,927)	725 (583,867)	818 (533,1102)	820 (715,925)	412 (-371,1196)	
5/25/2020	832	837 (624,1050)	827 (707,948)	723 (572,873)	820 (493,1148)	825 (704,945)	414 (-373,1201)	
5/26/2020	832	842 (599,1085)	832 (696,969)	721 (563,879)	824 (450,1198)	829 (693,966)	419 (-370,1208)	
5/27/2020	845	847 (572,1122)	837 (684,991)	719 (552,886)	831 (403,1259)	834 (680,988)	422 (-371,1214)	
5/28/2020	847	852 (545,1159)	843 (671,1014)	718 (543,893)	831 (354,1309)	838 (667,1010)	427 (-369,1222)	
5/29/2020	847	857 (516,1198)	848 (658,1037)	716 (534,898)	833 (308,1359)	843 (653,1033)	426 (-371,1224)	
5/30/2020	847	862 (487,1237)	853 (645,1061)	715 (527,903)	838 (260,1415)	847 (639,1056)	429 (-370,1228)	
5/31/2020	847	867 (457,1277)	858 (630,1086)	714 (520,907)	839 (212,1467)	852 (624,1080)	429 (-371,1229)	
6/1/2020	847	872 (426,1318)	863 (616,1111)	713 (514,911)	842 (164,1520)	857 (609,1105)	432 (-369,1232)	
6/2/2020	881	877 (393,1360)	869 (600,1137)	711 (503,919)	845 (115,1574)	861 (592,1130)	434 (-371,1239)	

**Table A.30**

Actual and Predicted Cases with 95% Confidence Intervals for Burma using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	182	44 (-228,315)	182 (182,182)	141 (60,222)	234 (132,336)	180 (176,184)	182 (182,182)	183 (181,186)
5/17/2020	184	44 (-230,317)	182 (178,186)	142 (61,224)	241 (134,347)	180 (174,186)	182 (182,182)	185 (181,189)
5/18/2020	191	44 (-235,322)	182 (164,200)	144 (59,229)	248 (140,356)	180 (167,193)	182 (182,182)	186 (181,191)
5/19/2020	193	44 (-238,326)	182 (160,204)	146 (58,233)	255 (143,367)	180 (163,197)	182 (182,182)	187 (181,194)
5/20/2020	199	44 (-243,330)	182 (149,215)	147 (57,237)	263 (148,377)	180 (157,203)	182 (182,182)	189 (180,197)
5/21/2020	199	44 (-246,333)	182 (149,215)	149 (57,240)	270 (151,389)	181 (156,206)	182 (182,182)	190 (180,199)
5/22/2020	199	44 (-248,336)	182 (149,215)	150 (58,243)	278 (153,402)	181 (154,208)	182 (182,182)	191 (180,202)
5/23/2020	201	44 (-250,338)	182 (145,219)	152 (60,245)	285 (155,416)	181 (152,210)	182 (182,182)	192 (180,205)
5/24/2020	201	44 (-252,339)	182 (145,219)	154 (61,246)	293 (156,430)	181 (151,211)	182 (182,182)	194 (179,208)
5/25/2020	203	44 (-254,341)	182 (141,223)	155 (63,248)	301 (158,445)	181 (149,213)	182 (182,182)	195 (179,211)
5/26/2020	206	44 (-256,343)	182 (135,229)	157 (64,250)	309 (160,459)	181 (147,215)	182 (182,182)	196 (178,215)
5/27/2020	206	44 (-257,345)	182 (135,229)	159 (66,252)	318 (161,475)	181 (146,216)	182 (182,182)	198 (177,218)
5/28/2020	206	44 (-259,346)	182 (135,229)	160 (68,253)	326 (162,490)	181 (145,217)	182 (182,182)	199 (177,221)
5/29/2020	207	44 (-260,347)	182 (133,231)	162 (70,254)	335 (163,506)	181 (143,219)	182 (182,182)	200 (176,225)
5/30/2020	224	44 (-264,351)	182 (100,264)	164 (69,258)	343 (167,520)	181 (139,223)	182 (182,182)	201 (175,228)
5/31/2020	224	44 (-267,354)	182 (100,264)	165 (70,261)	352 (170,534)	181 (135,227)	182 (182,182)	203 (174,232)
6/1/2020	228	44 (-270,357)	182 (92,272)	167 (70,264)	361 (173,549)	181 (131,231)	182 (182,182)	204 (173,235)
6/2/2020	232	44 (-273,361)	182 (84,280)	169 (70,268)	370 (177,564)	181 (127,235)	182 (182,182)	205 (172,239)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	182	183 (181,185)	182 (176,189)	177 (167,187)	182 (181,182)	182 (176,189)	91 (-86,269)	
5/17/2020	184	184 (181,187)	183 (174,192)	177 (165,189)	182 (181,183)	183 (174,192)	92 (-88,271)	
5/18/2020	191	185 (181,188)	183 (171,196)	177 (158,196)	183 (182,185)	183 (171,196)	92 (-92,276)	
5/19/2020	193	186 (181,190)	184 (167,200)	177 (154,200)	182 (180,183)	184 (167,200)	93 (-94,280)	
5/20/2020	199	187 (181,192)	184 (163,205)	176 (148,205)	181 (180,183)	184 (163,205)	94 (-97,285)	
5/21/2020	199	187 (181,193)	185 (158,211)	176 (145,208)	184 (182,186)	185 (158,211)	95 (-98,288)	
5/22/2020	199	188 (181,195)	185 (154,217)	176 (142,210)	183 (181,185)	185 (153,217)	94 (-101,289)	
5/23/2020	201	189 (181,197)	186 (148,223)	176 (140,212)	183 (181,185)	185 (148,223)	94 (-103,291)	
5/24/2020	201	190 (181,198)	186 (143,229)	176 (138,214)	183 (181,186)	186 (143,229)	93 (-105,292)	
5/25/2020	203	190 (181,200)	187 (137,236)	176 (136,215)	184 (182,187)	186 (137,236)	94 (-107,294)	
5/26/2020	206	191 (181,201)	187 (131,243)	176 (134,217)	183 (180,186)	187 (131,243)	94 (-108,296)	
5/27/2020	206	192 (180,203)	188 (125,251)	176 (132,219)	182 (179,185)	187 (124,250)	95 (-109,298)	
5/28/2020	206	192 (180,205)	188 (118,258)	176 (131,221)	185 (181,188)	188 (118,258)	95 (-110,299)	
5/29/2020	207	193 (180,206)	189 (111,266)	175 (129,222)	184 (180,187)	188 (111,266)	95 (-111,301)	
5/30/2020	224	193 (179,208)	189 (104,274)	175 (124,226)	184 (180,187)	189 (103,274)	95 (-114,304)	
5/31/2020	224	194 (179,209)	190 (97,283)	175 (120,230)	184 (180,188)	189 (96,282)	98 (-114,310)	
6/1/2020	228	195 (179,211)	190 (89,291)	175 (116,234)	185 (181,189)	190 (88,291)	98 (-116,313)	
6/2/2020	232	195 (178,212)	191 (81,300)	175 (112,238)	184 (179,188)	190 (81,299)	99 (-118,316)	

**Table A.31**

Actual and Predicted Cases with 95% Confidence Intervals for Burundi using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	15	4 (-19,26)	15 (15,15)	11 (4,18)	20 (11,29)	15 (15,15)	15 (15,15)	15 (15,15)
5/17/2020	23	4 (-28,35)	15 (-1,31)	12 (-5,28)	20 (13,28)	15 (4,26)	15 (15,15)	15 (15,15)
5/18/2020	42	4 (-47,54)	15 (-38,68)	12 (-25,49)	21 (-4,46)	15 (-17,47)	15 (15,15)	15 (15,15)
5/19/2020	42	4 (-54,61)	15 (-38,68)	12 (-32,55)	22 (-8,51)	15 (-23,53)	15 (15,15)	15 (15,15)
5/20/2020	42	4 (-58,65)	15 (-38,68)	12 (-35,59)	22 (-9,54)	15 (-27,57)	15 (15,15)	15 (15,15)
5/21/2020	42	4 (-61,68)	15 (-38,68)	12 (-37,61)	23 (-9,55)	15 (-29,59)	15 (15,15)	15 (15,16)
5/22/2020	42	4 (-62,69)	15 (-38,68)	12 (-38,63)	24 (-9,57)	15 (-30,60)	15 (15,15)	15 (15,16)
5/23/2020	42	4 (-64,71)	15 (-38,68)	12 (-39,64)	24 (-9,58)	15 (-31,61)	15 (15,15)	15 (15,16)
5/24/2020	42	4 (-65,72)	15 (-38,68)	12 (-40,65)	25 (-8,58)	15 (-32,62)	15 (15,15)	15 (15,16)
5/25/2020	42	4 (-65,72)	15 (-38,68)	13 (-40,65)	26 (-7,59)	15 (-33,63)	15 (15,15)	15 (15,16)
5/26/2020	42	4 (-66,73)	15 (-38,68)	13 (-41,66)	27 (-6,59)	15 (-33,63)	15 (15,15)	16 (15,16)
5/27/2020	42	4 (-66,74)	15 (-38,68)	13 (-41,66)	27 (-5,60)	15 (-34,64)	15 (15,15)	16 (15,16)
5/28/2020	42	4 (-67,74)	15 (-38,68)	13 (-41,67)	28 (-4,60)	15 (-34,64)	15 (15,15)	16 (15,16)
5/29/2020	42	4 (-67,74)	15 (-38,68)	13 (-41,67)	29 (-3,61)	15 (-34,64)	15 (15,15)	16 (15,16)
5/30/2020	63	4 (-71,78)	15 (-79,109)	13 (-45,71)	30 (-5,65)	15 (-38,68)	15 (15,15)	16 (15,16)
5/31/2020	63	4 (-74,82)	15 (-79,109)	13 (-48,75)	30 (-7,68)	15 (-42,72)	15 (15,15)	16 (15,16)
6/1/2020	63	4 (-77,84)	15 (-79,109)	14 (-50,77)	31 (-8,71)	15 (-45,75)	15 (15,15)	16 (15,16)
6/2/2020	63	4 (-80,87)	15 (-79,109)	14 (-52,80)	32 (-9,73)	15 (-47,77)	15 (15,15)	16 (15,16)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	15	15 (15,15)	15 (14,17)	15 (15,15)	15 (15,16)	15 (14,17)	8 (-7,22)	
5/17/2020	23	15 (15,15)	16 (14,18)	15 (4,26)	16 (14,17)	15 (13,17)	8 (-15,31)	
5/18/2020	42	15 (15,15)	16 (14,18)	15 (-17,47)	16 (14,17)	16 (13,18)	10 (-32,51)	
5/19/2020	42	15 (15,15)	16 (14,19)	15 (-23,53)	16 (14,17)	16 (13,19)	14 (-31,59)	
5/20/2020	42	15 (15,15)	17 (14,20)	15 (-26,57)	16 (14,18)	16 (13,19)	14 (-33,61)	
5/21/2020	42	15 (15,15)	17 (14,20)	15 (-28,59)	16 (14,18)	16 (13,20)	13 (-36,62)	
5/22/2020	42	15 (15,15)	18 (14,21)	15 (-30,60)	16 (14,19)	17 (13,21)	9 (-43,60)	
5/23/2020	42	15 (15,15)	18 (14,22)	15 (-31,61)	17 (14,19)	17 (12,21)	9 (-45,62)	
5/24/2020	42	15 (15,15)	18 (14,22)	15 (-32,62)	17 (14,19)	17 (12,22)	9 (-46,64)	
5/25/2020	42	15 (15,15)	19 (15,23)	15 (-32,63)	17 (14,20)	17 (12,22)	9 (-46,65)	
5/26/2020	42	15 (15,15)	19 (15,23)	15 (-33,63)	17 (14,20)	17 (12,23)	10 (-47,66)	
5/27/2020	42	15 (15,15)	19 (15,24)	15 (-33,63)	18 (15,21)	18 (12,23)	10 (-47,67)	
5/28/2020	42	15 (15,15)	20 (15,25)	15 (-34,64)	18 (15,21)	18 (12,24)	10 (-48,68)	
5/29/2020	42	15 (15,15)	20 (15,25)	15 (-34,64)	18 (15,21)	18 (12,24)	10 (-48,68)	
5/30/2020	63	15 (15,15)	21 (16,26)	15 (-38,68)	18 (15,22)	18 (12,25)	10 (-52,72)	
5/31/2020	63	15 (15,15)	21 (16,26)	15 (-41,72)	18 (15,22)	19 (12,25)	15 (-50,79)	
6/1/2020	63	15 (15,15)	21 (16,27)	15 (-44,75)	18 (15,22)	19 (12,26)	15 (-52,82)	
6/2/2020	63	15 (15,15)	22 (16,27)	15 (-47,77)	19 (15,22)	19 (12,27)	15 (-53,84)	

**Table A.32**

Actual and Predicted Cases with 95% Confidence Intervals for Cabo Verde using the Time Series Models.

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	328	42 (-518,602)	326 (322,330)	146 (-212,503)	336 (320,352)	326 (322,330)	326 (326,326)	341 (312,371)
5/17/2020	328	42 (-518,602)	326 (322,330)	147 (-208,503)	351 (317,385)	326 (322,330)	326 (326,326)	356 (257,455)
5/18/2020	328	42 (-518,602)	326 (322,330)	149 (-205,503)	366 (315,418)	326 (322,330)	326 (326,326)	371 (179,563)
5/19/2020	335	42 (-522,606)	326 (308,344)	151 (-205,507)	382 (318,446)	326 (317,335)	326 (326,326)	386 (82,689)
5/20/2020	349	42 (-529,614)	326 (281,371)	153 (-209,514)	398 (326,470)	326 (304,348)	326 (326,326)	401 (-30,831)
5/21/2020	356	42 (-537,621)	326 (267,385)	154 (-213,522)	415 (334,496)	326 (295,357)	326 (326,326)	416 (-156,988)
5/22/2020	362	42 (-544,628)	326 (255,397)	156 (-217,529)	432 (341,523)	326 (287,365)	326 (326,326)	430 (-295,1156)
5/23/2020	371	42 (-551,636)	326 (238,414)	158 (-221,537)	450 (348,551)	326 (278,374)	326 (326,326)	445 (-446,1336)
5/24/2020	380	42 (-559,644)	326 (220,432)	160 (-225,545)	468 (356,579)	326 (268,384)	326 (326,326)	460 (-607,1528)
5/25/2020	390	42 (-568,652)	326 (201,451)	161 (-230,553)	486 (365,607)	326 (259,393)	326 (326,326)	475 (-779,1729)
5/26/2020	390	42 (-575,659)	326 (201,451)	163 (-234,560)	505 (371,639)	326 (251,401)	326 (326,326)	490 (-960,1940)
5/27/2020	390	42 (-580,665)	326 (201,451)	165 (-236,566)	524 (375,673)	326 (246,406)	326 (326,326)	505 (-1151,2161)
5/28/2020	390	42 (-585,670)	326 (201,451)	167 (-237,570)	544 (378,710)	326 (242,410)	326 (326,326)	520 (-1351,2390)
5/29/2020	405	42 (-592,676)	326 (171,481)	168 (-240,577)	564 (384,745)	326 (235,417)	326 (326,326)	535 (-1559,2628)
5/30/2020	421	42 (-599,684)	326 (140,512)	170 (-244,585)	585 (392,778)	326 (226,426)	326 (326,326)	550 (-1775,2874)
5/31/2020	435	42 (-608,692)	326 (112,540)	172 (-249,593)	606 (401,811)	326 (215,437)	326 (326,326)	565 (-1999,3128)
6/1/2020	458	42 (-619,703)	326 (67,585)	174 (-257,604)	628 (413,842)	326 (201,451)	326 (326,326)	579 (-2231,3390)
6/2/2020	466	42 (-630,714)	326 (52,600)	175 (-264,615)	650 (425,875)	326 (189,463)	326 (326,326)	594 (-2470,3659)

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3033	328	341 (312,371)	341 (330,352)	328 (327,328)	340 (312,369)	340 (329,352)	181 (-109,470)	
5/17/2020	328	356 (257,455)	355 (339,371)	343 (322,364)	355 (266,443)	355 (338,371)	184 (-101,470)	
5/18/2020	328	371 (179,563)	370 (350,390)	359 (320,398)	368 (203,533)	369 (348,390)	187 (-95,469)	
5/19/2020	335	386 (82,689)	385 (360,409)	376 (323,428)	381 (128,634)	383 (357,409)	193 (-89,474)	
5/20/2020	349	401 (-30,831)	400 (371,429)	393 (332,454)	397 (36,757)	397 (366,428)	201 (-82,484)	
5/21/2020	356	416 (-156,988)	415 (382,448)	411 (340,481)	412 (-70,894)	411 (375,447)	211 (-72,494)	
5/22/2020	362	430 (-295,1156)	430 (392,468)	429 (347,511)	425 (-184,1034)	425 (384,467)	220 (-63,502)	
5/23/2020	371	445 (-446,1336)	445 (403,488)	448 (355,542)	439 (-307,1186)	440 (393,486)	227 (-55,510)	
5/24/2020	380	460 (-607,1528)	461 (414,508)	469 (363,574)	453 (-439,1346)	454 (402,506)	234 (-49,517)	
5/25/2020	390	475 (-779,1729)	477 (425,528)	490 (372,608)	467 (-579,1513)	468 (410,526)	242 (-41,526)	
5/26/2020	390	490 (-960,1940)	492 (436,549)	512 (379,646)	480 (-725,1685)	482 (418,546)	251 (-32,534)	
5/27/2020	390	505 (-1151,2161)	508 (447,570)	536 (383,688)	496 (-880,1871)	496 (427,566)	257 (-23,538)	
5/28/2020	390	520 (-1351,2390)	524 (458,591)	561 (387,734)	511 (-1044,2066)	510 (435,586)	264 (-14,542)	
5/29/2020	405	535 (-1559,2628)	541 (469,612)	587 (395,779)	524 (-1215,2263)	525 (442,607)	270 (-7,548)	
5/30/2020	421	550 (-1775,2874)	557 (480,634)	615 (405,825)	538 (-1392,2469)	539 (450,627)	281 (4,558)	
5/31/2020	435	565 (-1999,3128)	573 (491,656)	644 (417,872)	552 (-1576,2680)	553 (458,648)	292 (15,569)	
6/1/2020	458	579 (-2231,3390)	590 (502,678)	676 (432,920)	566 (-1765,2897)	567 (465,669)	303 (24,582)	
6/2/2020	466	594 (-2470,3659)	607 (513,700)	709 (447,972)	579 (-1959,3117)	581 (472,690)	312 (32,593)	

**Table A.33**

Actual and Predicted Cases with 95% Confidence Intervals for Cambodia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	122	58 (-67,183)	122 (122,122)	150 (95,204)	103 (64,141)	122 (122,122)	122 (122,122)	122 (122,122)
5/17/2020	122	58 (-67,183)	122 (122,122)	151 (95,207)	99 (58,141)	122 (122,122)	122 (122,122)	122 (122,122)
5/18/2020	122	58 (-67,183)	122 (122,122)	153 (95,210)	95 (50,141)	122 (122,122)	122 (122,122)	122 (122,122)
5/19/2020	122	58 (-67,183)	122 (122,122)	154 (95,213)	92 (42,141)	122 (122,122)	122 (122,122)	122 (122,122)
5/20/2020	122	58 (-67,183)	122 (122,122)	156 (95,216)	87 (34,141)	122 (122,122)	122 (122,122)	122 (122,122)
5/21/2020	123	58 (-68,184)	122 (120,124)	157 (96,219)	83 (25,141)	122 (121,123)	122 (122,122)	122 (122,122)
5/22/2020	123	58 (-68,184)	122 (120,124)	159 (96,222)	79 (15,142)	122 (121,123)	122 (122,122)	122 (122,122)
5/23/2020	124	58 (-68,184)	122 (118,126)	161 (96,225)	74 (5,142)	122 (120,124)	122 (122,122)	122 (122,122)
5/24/2020	124	58 (-69,185)	122 (118,126)	162 (97,228)	69 (-6,143)	122 (120,124)	122 (122,122)	122 (122,122)
5/25/2020	124	58 (-69,185)	122 (118,126)	164 (97,230)	63 (-16,143)	122 (120,124)	122 (122,122)	122 (122,122)
5/26/2020	124	58 (-69,185)	122 (118,126)	165 (97,233)	58 (-28,143)	122 (119,125)	122 (122,122)	122 (122,122)
5/27/2020	124	58 (-69,185)	122 (118,126)	167 (97,236)	52 (-40,143)	122 (119,125)	122 (122,122)	122 (122,122)
5/28/2020	124	58 (-70,186)	122 (118,126)	168 (97,239)	46 (-52,144)	122 (119,125)	122 (122,122)	122 (122,122)
5/29/2020	124	58 (-70,186)	122 (118,126)	170 (97,242)	40 (-64,144)	122 (119,125)	122 (122,122)	122 (122,122)
5/30/2020	125	58 (-70,186)	122 (116,128)	171 (97,245)	33 (-78,144)	122 (119,125)	122 (122,122)	122 (122,122)
5/31/2020	125	58 (-70,186)	122 (116,128)	173 (98,248)	26 (-92,144)	122 (119,125)	122 (122,122)	122 (122,122)
6/1/2020	125	58 (-70,186)	122 (116,128)	175 (98,251)	19 (-106,144)	122 (118,126)	122 (122,122)	122 (122,122)
6/2/2020	125	58 (-70,186)	122 (116,128)	176 (98,254)	12 (-121,144)	122 (118,126)	122 (122,122)	122 (122,122)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	122	122 (122,122)	122 (115,129)	124 (120,128)	122 (121,122)	122 (115,129)	61 (-59,181)	
5/17/2020	122	122 (122,122)	122 (112,132)	124 (120,129)	123 (122,124)	122 (112,132)	61 (-59,181)	
5/18/2020	122	122 (122,122)	122 (108,136)	125 (120,129)	123 (121,124)	122 (108,136)	61 (-59,181)	
5/19/2020	122	122 (122,122)	122 (104,140)	125 (120,130)	124 (122,125)	122 (104,140)	61 (-59,181)	
5/20/2020	122	122 (122,122)	122 (100,144)	125 (120,131)	123 (121,125)	122 (100,144)	61 (-59,181)	
5/21/2020	123	122 (122,122)	122 (95,149)	126 (120,131)	122 (120,125)	122 (95,149)	61 (-59,181)	
5/22/2020	123	122 (122,122)	122 (90,154)	126 (120,131)	123 (120,125)	122 (90,154)	61 (-59,181)	
5/23/2020	124	122 (122,122)	122 (84,160)	126 (121,131)	122 (120,125)	122 (84,160)	61 (-59,182)	
5/24/2020	124	122 (122,122)	122 (79,165)	126 (121,131)	123 (121,126)	122 (79,165)	61 (-59,182)	
5/25/2020	124	122 (122,122)	122 (73,171)	127 (121,132)	123 (120,126)	122 (73,171)	61 (-60,182)	
5/26/2020	124	122 (122,122)	122 (67,177)	127 (122,132)	124 (121,127)	122 (67,177)	61 (-60,182)	
5/27/2020	124	122 (122,122)	122 (61,183)	127 (122,132)	123 (120,127)	122 (61,183)	61 (-60,182)	
5/28/2020	124	122 (122,122)	122 (54,190)	127 (122,132)	123 (119,126)	122 (54,190)	61 (-61,183)	
5/29/2020	124	122 (122,122)	122 (47,197)	127 (122,133)	123 (120,127)	122 (47,197)	61 (-61,183)	
5/30/2020	125	122 (122,122)	122 (40,204)	127 (122,133)	123 (119,126)	122 (40,204)	61 (-61,183)	
5/31/2020	125	122 (122,122)	122 (33,211)	127 (122,133)	124 (120,128)	122 (33,211)	61 (-61,183)	
6/1/2020	125	122 (122,122)	122 (26,218)	128 (122,133)	123 (119,127)	122 (26,218)	61 (-61,183)	
6/2/2020	125	122 (122,122)	122 (18,226)	128 (122,133)	124 (120,128)	122 (18,226)	61 (-61,184)	

**Table A.34**

Actual and Predicted Cases with 95% Confidence Intervals for Cameroon using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	3105	588 (-4345,5521)	3105 (3105,3105)	1884 (-510,4277)	3287 (2930,3645)	2689 (1874,3504)	3105 (3105,3105)	3197 (3016,3378)
5/17/2020	3105	588 (-4345,5521)	3105 (3105,3105)	1906 (-466,4278)	3395 (2920,3871)	2689 (1874,3504)	3105 (3105,3105)	3304 (76,6531)
5/18/2020	3529	588 (-4636,5813)	3105 (2274,3936)	1928 (-725,4580)	3506 (3117,3895)	2689 (1529,3849)	3105 (3105,3105)	3410 (-3669,10489)
5/19/2020	3529	588 (-4776,5953)	3105 (2274,3936)	1950 (-820,4719)	3619 (3271,3967)	2689 (1390,3988)	3105 (3105,3105)	3516 (-8234,15266)
5/20/2020	3733	588 (-4945,6122)	3105 (1874,4336)	1972 (-947,4891)	3734 (3422,4045)	2689 (1210,4168)	3105 (3105,3105)	3623 (-13501,20746)
5/21/2020	4288	588 (-5267,6443)	3105 (786,5424)	1994 (-1242,5230)	3851 (3400,4302)	2689 (829,4549)	3105 (3105,3105)	3729 (-19391,26849)
5/22/2020	4400	588 (-5524,6700)	3105 (567,5643)	2016 (-1462,5493)	3971 (3446,4495)	2689 (551,4827)	3105 (3105,3105)	3836 (-25845,33516)
5/23/2020	4400	588 (-5710,6886)	3105 (567,5643)	2037 (-1604,5679)	4093 (3558,4628)	2689 (364,5014)	3105 (3105,3105)	3942 (-32819,40703)
5/24/2020	4890	588 (-5981,7158)	3105 (-394,6604)	2059 (-1841,5959)	4217 (3548,4886)	2689 (67,5311)	3105 (3105,3105)	4048 (-40278,48374)
5/25/2020	4890	588 (-6190,7367)	3105 (-394,6604)	2081 (-2008,6170)	4344 (3625,5063)	2689 (-148,5526)	3105 (3105,3105)	4155 (-48192,56501)
5/26/2020	5436	588 (-6481,7658)	3105 (-1464,7674)	2103 (-2265,6471)	4474 (3583,5364)	2689 (-466,5844)	3105 (3105,3105)	4261 (-56537,65059)
5/27/2020	5436	588 (-6715,7892)	3105 (-1464,7674)	2125 (-2457,6708)	4606 (3632,5579)	2689 (-708,6086)	3105 (3105,3105)	4367 (-65292,74027)
5/28/2020	5436	588 (-6907,8084)	3105 (-1464,7674)	2147 (-2604,6899)	4740 (3731,5749)	2689 (-900,6278)	3105 (3105,3105)	4474 (-74440,83387)
5/29/2020	5436	588 (-7068,8244)	3105 (-1464,7674)	2169 (-2719,7057)	4877 (3861,5892)	2689 (-1057,6435)	3105 (3105,3105)	4580 (-83963,93123)
5/30/2020	5904	588 (-7282,8459)	3105 (-2381,8591)	2191 (-2891,7274)	5016 (3937,6095)	2689 (-1279,6657)	3105 (3105,3105)	4687 (-93848,103222)
5/31/2020	5904	588 (-7465,8642)	3105 (-2381,8591)	2213 (-3030,7456)	5158 (4051,6265)	2689 (-1463,6841)	3105 (3105,3105)	4793 (-104083,113669)
6/1/2020	6397	588 (-7698,8875)	3105 (-3347,9557)	2235 (-3222,7693)	5303 (4109,6496)	2689 (-1708,7086)	3105 (3105,3105)	4899 (-114656,124454)
6/2/2020	6585	588 (-7928,9105)	3105 (-3716,9926)	2257 (-3411,7925)	5450 (4177,6723)	2689 (-1948,7326)	3105 (3105,3105)	5006 (-125556,135567)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3035	3105	3197 (3016,3378)	3180 (3085,3275)	2785 (2159,3412)	3189 (3025,3353)	3190 (3094,3286)	1661 (-1169,4491)	
	3105	3304 (76,6531)	3270 (3140,3400)	2817 (2221,3413)	3296 (1059,5533)	3293 (3158,3427)	1687 (-1117,4492)	
	3529	3410 (-3669,10489)	3373 (3219,3526)	2847 (1935,3760)	3392 (-1282,8066)	3410 (3247,3573)	1712 (-1365,4790)	
	3529	3516 (-8234,15266)	3472 (3293,3652)	2874 (1856,3892)	3468 (-3822,10758)	3522 (3322,3722)	1811 (-1341,4964)	
	3733	3623 (-13501,20746)	3571 (3365,3778)	2897 (1729,4066)	3570 (-6950,14089)	3631 (3390,3873)	1861 (-1401,5123)	
	4288	3729 (-19391,26849)	3672 (3438,3906)	2917 (1388,4447)	3672 (-10561,17906)	3742 (3457,4027)	1946 (-1572,5465)	
	4400	3836 (-25845,33516)	3774 (3513,4035)	2936 (1152,4720)	3775 (-14580,22130)	3853 (3522,4184)	2021 (-1683,5725)	
	4400	3942 (-32819,40703)	3877 (3588,4165)	2953 (1007,4900)	3873 (-18914,26660)	3964 (3585,4342)	2091 (-1725,5907)	
	4890	4048 (-40278,48374)	3980 (3663,4297)	2970 (747,5193)	3980 (-23637,31597)	4075 (3646,4503)	2108 (-1923,6139)	
	4890	4155 (-48192,56501)	4085 (3738,4431)	2986 (570,5403)	4076 (-28606,36757)	4185 (3704,4666)	2147 (-2038,6332)	
	5436	4261 (-56537,65059)	4190 (3814,4565)	3004 (288,5719)	4152 (-33634,41938)	4296 (3761,4832)	2181 (-2249,6611)	
	5436	4367 (-65292,74027)	4296 (3891,4702)	3021 (84,5958)	4254 (-38954,47461)	4407 (3815,4999)	2330 (-2261,6921)	
	5436	4474 (-74440,83387)	4403 (3967,4839)	3038 (-70,6147)	4356 (-44573,53285)	4518 (3868,5167)	2297 (-2432,7027)	
	5436	4580 (-83963,93123)	4511 (4044,4979)	3055 (-190,6300)	4458 (-50470,59386)	4628 (3919,5338)	2352 (-2484,7187)	
	5904	4687 (-93848,103222)	4620 (4121,5120)	3072 (-375,6519)	4556 (-56594,65706)	4739 (3968,5510)	2310 (-2703,7323)	
	5904	4793 (-104083,113669)	4730 (4199,5262)	3088 (-523,6700)	4664 (-63003,72330)	4850 (4015,5685)	2446 (-2694,7587)	
	6397	4899 (-114656,124454)	4841 (4277,5406)	3105 (-733,6942)	4759 (-69607,79125)	4961 (4061,5860)	2502 (-2818,7822)	
	6585	5006 (-125556,135567)	4953 (4355,5551)	3120 (-938,7179)	4836 (-76257,85928)	5071 (4105,6038)	2643 (-2838,8125)	

**Table A.35**

Actual and Predicted Cases with 95% Confidence Intervals for Canada using the Time Series Models.

Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SA	SMA	LT	QT	ST
5/16/2020	77206	17284 (-100163,134731)	75959 (73515,78403)	54594 (10274,98914)	89090 (65797,112384)	75959 (73515,78403)
5/17/2020	78332	17284 (-101272,135840)	75959 (71308,80610)	55226 (10420,100032)	91720 (66909,116531)	75959 (72244,79674)
5/18/2020	79411	17284 (-102352,136920)	75959 (69193,82725)	55859 (10596,101121)	94397 (67978,120816)	75959 (71013,80905)
5/19/2020	80493	17284 (-103430,137998)	75959 (67072,84846)	56491 (10777,102206)	97122 (69032,125212)	75959 (69787,82131)
5/20/2020	81575	17284 (-104507,139075)	75959 (64952,86966)	57123 (10958,103288)	99895 (70077,129712)	75959 (68563,83355)
5/21/2020	82742	17284 (-105616,140184)	75959 (62664,89254)	57756 (11111,104401)	102716 (71151,134281)	75959 (67296,84622)
5/22/2020	83947	17284 (-106754,141322)	75959 (60303,91615)	58388 (11235,105541)	105587 (72255,138918)	75959 (65992,85926)
5/23/2020	85151	17284 (-107912,142480)	75959 (57943,93975)	59021 (11341,106700)	108506 (73377,143636)	75959 (64668,87250)
5/24/2020	86106	17284 (-109026,143594)	75959 (56071,95847)	59653 (11492,107814)	111476 (74440,148512)	75959 (63418,88500)
5/25/2020	87119	17284 (-110122,144690)	75959 (54085,97833)	60285 (11663,108908)	114495 (75477,153514)	75959 (62197,89721)
5/26/2020	88090	17284 (-111198,145766)	75959 (52182,99736)	60918 (11856,109980)	117565 (76487,158644)	75959 (61007,90911)
5/27/2020	88989	17284 (-112245,146814)	75959 (50420,101498)	61550 (12078,111022)	120686 (77461,163912)	75959 (59856,92062)
5/28/2020	89976	17284 (-113287,147855)	75959 (48486,103432)	62182 (12307,112057)	123859 (78427,169290)	75959 (58713,93205)
5/29/2020	90909	17284 (-114315,148884)	75959 (46657,105261)	62815 (12551,113078)	127083 (79379,174786)	75959 (57588,94330)
5/30/2020	91681	17284 (-115311,149879)	75959 (45144,106774)	63447 (12830,114065)	130358 (80288,180429)	75959 (56509,95409)
5/31/2020	92479	17284 (-116283,150851)	75959 (43580,108338)	64080 (13132,115027)	133687 (81170,186204)	75959 (55461,96457)
6/1/2020	93288	17284 (-117238,151806)	75959 (41994,109924)	64712 (13453,115971)	137068 (82032,192104)	75959 (54434,97484)
6/2/2020	93959	17284 (-118162,152730)	75959 (40679,111239)	65344 (13805,116883)	140502 (82857,198148)	75959 (53448,98470)
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SES	HLT	DT	ARIMA	
5/16/2020	77206	75959 (75959,75959)	77245 (74724,79766)	77245 (74724,79766)	77162 (76589,77735)	
5/17/2020	78332	75959 (75959,75959)	78505 (-431752,588762)	78505 (-431752,588762)	78372 (77538,79205)	
5/18/2020	79411	75959 (75959,75959)	79765 (-1059390,1218920)	79765 (-1059390,1218920)	79592 (78437,80747)	
5/19/2020	80493	75959 (75959,75959)	81025 (-1823848,1985899)	81025 (-1823848,1985899)	80822 (79299,82346)	
5/20/2020	81575	75959 (75959,75959)	82285 (-2705111,2869681)	82285 (-2705111,2869681)	82064 (80132,83996)	
5/21/2020	82742	75959 (75959,75959)	83545 (-3689699,3856789)	83545 (-3689699,3856789)	83316 (80940,85692)	
5/22/2020	83947	75959 (75959,75959)	84805 (-4767879,4937489)	84805 (-4767879,4937489)	84579 (81727,87430)	
5/23/2020	85151	75959 (75959,75959)	86065 (-5932214,6104344)	86065 (-5932214,6104344)	85852 (82495,89208)	
5/24/2020	86106	75959 (75959,75959)	87325 (-7176792,7351442)	87325 (-7176792,7351442)	87136 (83246,91025)	
5/25/2020	87119	75959 (75959,75959)	88585 (-8496768,8673938)	88585 (-8496768,8673938)	88430 (83982,92879)	
5/26/2020	88090	75959 (75959,75959)	89845 (-9888079,10067769)	89845 (-9888079,10067769)	89735 (84703,94768)	
5/27/2020	88989	75959 (75959,75959)	91105 (-11347253,11529463)	91105 (-11347253,11529463)	91051 (85410,96692)	
5/28/2020	89976	75959 (75959,75959)	92365 (-12871280,13056010)	92365 (-12871280,13056010)	92378 (86105,98650)	
5/29/2020	90909	75959 (75959,75959)	93625 (-14457517,14644767)	93625 (-14457517,14644767)	93715 (86789,100640)	
5/30/2020	91681	75959 (75959,75959)	94885 (-16103621,16293390)	94885 (-16103621,16293390)	95062 (87462,102663)	
5/31/2020	92479	75959 (75959,75959)	96145 (-17807493,17999782)	96145 (-17807493,17999782)	96420 (88125,104716)	
6/1/2020	93288	75959 (75959,75959)	97405 (-19567241,19762050)	97405 (-19567241,19762050)	97789 (88778,106801)	
6/2/2020	93959	75959 (75959,75959)	98665 (-21381148,21578477)	98665 (-21381148,21578477)	99169 (89422,108915)	
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	LSTM	HWA	SSM	Surte-Arima	
5/16/2020	77206	72993 (64735,81251)	77014 (74946,79082)	77129 (76532,77726)	39176 (-35364,113715)	
5/17/2020	78332	73339 (64285,82393)	78218 (-813350,969785)	78306 (77435,79176)	39797 (-35239,114833)	
5/18/2020	79411	73688 (63859,83516)	79344 (-1862112,2020800)	79482 (78269,80694)	40392 (-35127,115911)	
5/19/2020	80493	74000 (63373,84627)	80452 (-3119854,3280759)	80658 (79052,82264)	40991 (-35009,116991)	
5/20/2020	81575	74286 (62833,85739)	81587 (-4575679,4738854)	81834 (79791,83877)	41584 (-34899,118066)	
5/21/2020	82742	74551 (62212,86891)	82825 (-6254892,6420541)	83011 (80492,85529)	42202 (-34784,111989)	
5/22/2020	83947	74795 (61510,88079)	83987 (-8087573,8255548)	84187 (81159,87215)	42848 (-34658,120354)	
5/23/2020	85151	75023 (60751,89294)	85041 (-10015662,10185743)	85363 (81793,88933)	43506 (-34527,121538)	
5/24/2020	86106	75240 (60027,90454)	86244 (-12105376,12277865)	86539 (82397,90682)	44168 (-34338,122675)	
5/25/2020	87119	75447 (59302,91591)	87371 (-14311107,1448589)	87716 (82973,92459)	44780 (-34186,123745)	

**Table A.35** (continued)

5/26/2020	88090	75642 (58581,92702)	88479 (-16621515,16798473)	88892 (83521,94263)	45400 (-34006,124805)
5/27/2020	88989	75826 (57874,93778)	89614 (-19043381,19222609)	90068 (84044,96093)	46018 (-33800,125836)
5/28/2020	89976	76000 (57153,94847)	90851 (-21607277,21788979)	91244 (84541,97948)	46672 (-33546,126890)
5/29/2020	90909	76162 (56425,95898)	92014 (-24277736,24461764)	92421 (85015,99827)	47336 (-33264,127936)
5/30/2020	91681	76314 (55722,96906)	93067 (-27015034,27201168)	93597 (85465,101729)	48003 (-32940,128947)
5/31/2020	92479	76457 (55029,97885)	94271 (-29868071,30056613)	94773 (85893,103653)	48661 (-32600,129922)
6/1/2020	93288	76590 (54337,98842)	95397 (-32807392,32998187)	95950 (86300,105599)	49314 (-32245,130873)
6/2/2020	93959	76711 (53665,99758)	96506 (-35825649,36018660)	97126 (86685,107567)	49983 (-31841,131806)

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**Table A.36**

Actual and Predicted Cases with 95% Confidence Intervals for Central African Republic using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	327	21 (-580,621)	301 (250,352)	72 (-426,571)	191 (-77,458)	143 (-218,504)	301 (301,301)	299 (294,303)
5/17/2020	327	21 (-580,621)	301 (250,352)	73 (-425,571)	200 (-58,458)	143 (-218,504)	301 (301,301)	327 (301,352)
5/18/2020	327	21 (-580,621)	301 (250,352)	74 (-423,571)	210 (-39,459)	143 (-218,504)	301 (301,301)	355 (302,408)
5/19/2020	366	21 (-600,641)	301 (174,428)	75 (-441,591)	220 (-39,479)	143 (-238,524)	301 (301,301)	383 (297,470)
5/20/2020	418	21 (-635,676)	301 (72,530)	76 (-475,627)	230 (-54,514)	143 (-275,561)	301 (301,301)	411 (287,536)
5/21/2020	436	21 (-664,705)	301 (36,566)	77 (-502,656)	241 (-62,544)	143 (-305,591)	301 (301,301)	439 (273,606)
5/22/2020	479	21 (-698,740)	301 (-48,650)	78 (-535,691)	252 (-75,579)	143 (-340,626)	301 (301,301)	468 (255,681)
5/23/2020	552	21 (-746,787)	301 (-191,793)	79 (-582,739)	263 (-103,629)	143 (-391,677)	301 (301,301)	496 (233,758)
5/24/2020	604	21 (-797,838)	301 (-293,895)	80 (-631,790)	274 (-132,681)	143 (-443,729)	301 (301,301)	524 (208,840)
5/25/2020	652	21 (-848,889)	301 (-387,989)	80 (-681,842)	286 (-161,734)	143 (-496,782)	301 (301,301)	552 (180,924)
5/26/2020	671	21 (-892,933)	301 (-424,1026)	81 (-724,887)	298 (-182,778)	143 (-542,828)	301 (301,301)	580 (149,1012)
5/27/2020	702	21 (-935,976)	301 (-485,1087)	82 (-765,929)	311 (-200,821)	143 (-585,871)	301 (301,301)	609 (115,1102)
5/28/2020	755	21 (-980,1021)	301 (-589,1191)	83 (-809,975)	323 (-220,867)	143 (-632,918)	301 (301,301)	637 (79,1195)
5/29/2020	874	21 (-1043,1084)	301 (-822,1424)	84 (-870,1038)	336 (-258,931)	143 (-696,982)	301 (301,301)	665 (40,1290)
5/30/2020	962	21 (-1112,1153)	301 (-995,1597)	85 (-938,1108)	350 (-303,1002)	143 (-767,1053)	301 (301,301)	693 (-2,1388)
5/31/2020	1011	21 (-1178,1219)	301 (-1091,1693)	86 (-1004,1175)	363 (-344,1071)	143 (-836,1122)	301 (301,301)	721 (-46,1489)
6/1/2020	1069	21 (-1245,1286)	301 (-1204,1806)	87 (-1069,1242)	377 (-383,1138)	143 (-904,1190)	301 (301,301)	750 (-93,1592)
6/2/2020	1069	21 (-1301,1342)	301 (-1204,1806)	87 (-1124,1299)	392 (-411,1195)	143 (-960,1246)	301 (301,301)	778 (-141,1697)

(continued on next page)

**Table A.36** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	327	299 (294,303)	210 (183,238)	301 (250,352)	226 (79,373)	232 (203,262)	141 (-224,506)
5/17/2020	327	327 (301,352)	225 (197,252)	345 (301,388)	226 (74,379)	247 (214,279)	152 (-201,506)
5/18/2020	327	355 (302,408)	239 (210,267)	399 (310,489)	230 (58,402)	261 (225,297)	160 (-186,505)
5/19/2020	366	383 (297,470)	253 (224,283)	470 (342,597)	236 (13,459)	275 (235,315)	131 (-246,509)
5/20/2020	418	411 (287,536)	268 (237,299)	556 (390,722)	246 (-83,575)	289 (244,333)	141 (-275,557)
5/21/2020	436	439 (273,606)	283 (250,316)	671 (429,912)	257 (-224,738)	303 (254,352)	158 (-283,598)
5/22/2020	479	468 (255,681)	298 (262,334)	829 (487,1171)	321 (-788,1429)	317 (263,371)	168 (-300,636)
5/23/2020	552	496 (233,758)	313 (274,352)	1053 (581,1525)	320 (-1184,1825)	331 (272,390)	176 (-333,686)
5/24/2020	604	524 (208,840)	328 (286,370)	1395 (713,2078)	321 (-1485,2126)	345 (281,410)	188 (-364,740)
5/25/2020	652	552 (180,924)	343 (297,389)	1956 (920,2991)	324 (-1758,2407)	359 (289,429)	201 (-392,795)
5/26/2020	671	580 (149,1012)	359 (309,409)	2978 (1295,4661)	331 (-2024,2685)	373 (297,449)	210 (-418,838)
5/27/2020	702	609 (115,1102)	374 (320,428)	4972 (2068,7876)	340 (-2302,2983)	387 (305,469)	208 (-456,871)
5/28/2020	755	637 (79,1195)	390 (331,449)	9316 (3890,14742)	351 (-2598,3300)	401 (313,490)	212 (-491,914)
5/29/2020	874	665 (40,1290)	406 (342,470)	18900 (8106,29693)	415 (-3124,3953)	415 (321,510)	220 (-538,979)
5/30/2020	962	693 (-2,1388)	421 (352,491)	39115 (17171,61059)	415 (-3638,4467)	430 (328,531)	246 (-571,1064)
5/31/2020	1011	721 (-46,1489)	437 (363,512)	80396 (36073,124719)	415 (-4084,4914)	444 (335,552)	265 (-607,1136)
6/1/2020	1069	750 (-93,1592)	454 (373,534)	163947 (75381,252513)	419 (-4503,5340)	458 (342,573)	272 (-655,1199)
6/2/2020	1069	778 (-141,1697)	470 (384,556)	328888 (154694,503083)	425 (-4909,5758)	472 (349,594)	269 (-705,1242)

**Table A.37**

Actual and Predicted Cases with 95% Confidence Intervals for Chad using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	
5/16/2020	474	40 (-810,890)	428 (338,518)	144 (-502,790)	394 (236,551)	322 (24,620)	428 (428,428)	450 (407,493)
5/17/2020	503	40 (-839,919)	428 (281,575)	146 (-527,819)	414 (247,580)	322 (-6,650)	428 (428,428)	474 (271,676)
5/18/2020	519	40 (-859,939)	428 (250,606)	148 (-544,840)	434 (268,601)	322 (-26,670)	428 (428,428)	497 (83,911)
5/19/2020	545	40 (-882,963)	428 (199,657)	150 (-564,863)	455 (287,624)	322 (-50,694)	428 (428,428)	521 (-147,1188)
5/20/2020	565	40 (-904,985)	428 (159,697)	151 (-583,885)	477 (308,647)	322 (-73,717)	428 (428,428)	544 (-414,1502)
5/21/2020	588	40 (-927,1008)	428 (114,742)	153 (-602,908)	500 (330,670)	322 (-97,741)	428 (428,428)	568 (-713,1849)
5/22/2020	611	40 (-950,1031)	428 (69,787)	155 (-621,931)	523 (352,693)	322 (-121,765)	428 (428,428)	591 (-1042,2225)
5/23/2020	648	40 (-977,1058)	428 (-3,859)	157 (-645,959)	546 (372,721)	322 (-150,794)	428 (428,428)	615 (-1398,2628)
5/24/2020	675	40 (-1005,1085)	428 (-56,912)	158 (-670,987)	571 (393,749)	322 (-179,823)	428 (428,428)	639 (-1779,3056)
5/25/2020	687	40 (-1029,1110)	428 (-80,936)	160 (-691,1011)	596 (417,774)	322 (-205,849)	428 (428,428)	662 (-2185,3509)
5/26/2020	700	40 (-1051,1132)	428 (-105,961)	162 (-709,1033)	621 (445,797)	322 (-228,872)	428 (428,428)	686 (-2613,3984)
5/27/2020	715	40 (-1073,1153)	428 (-135,991)	164 (-727,1054)	647 (475,820)	322 (-249,893)	428 (428,428)	709 (-3062,4481)
5/28/2020	726	40 (-1092,1173)	428 (-156,1012)	166 (-743,1074)	674 (506,843)	322 (-269,913)	428 (428,428)	733 (-3532,4998)
5/29/2020	759	40 (-1114,1194)	428 (-221,1077)	167 (-761,1096)	702 (537,867)	322 (-292,936)	428 (428,428)	756 (-4022,5535)
5/30/2020	759	40 (-1133,1213)	428 (-221,1077)	169 (-776,1114)	730 (570,891)	322 (-311,955)	428 (428,428)	780 (-4531,6091)
5/31/2020	778	40 (-1152,1232)	428 (-258,1114)	171 (-792,1133)	759 (604,915)	322 (-330,974)	428 (428,428)	803 (-5059,6666)
6/1/2020	790	40 (-1170,1250)	428 (-282,1138)	173 (-806,1151)	789 (639,940)	322 (-349,993)	428 (428,428)	827 (-5604,7258)
6/2/2020	803	40 (-1187,1268)	428 (-307,1163)	174 (-820,1169)	820 (673,966)	322 (-367,1011)	428 (428,428)	851 (-6167,7868)

**Table A.37** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	474	450 (407,493)	450 (432,467)	414 (296,532)	453 (404,503)	449 (431,466)	237 (-227,701)
5/17/2020	503	474 (271,676)	482 (458,507)	430 (299,561)	448 (385,512)	481 (456,506)	259 (-213,730)
5/18/2020	519	497 (83,911)	504 (464,545)	445 (308,581)	456 (367,545)	502 (461,543)	270 (-207,747)
5/19/2020	545	521 (-147,1188)	535 (480,591)	458 (313,604)	500 (-167,1166)	532 (476,588)	283 (-203,769)
5/20/2020	565	544 (-414,1502)	561 (489,634)	471 (317,625)	515 (-582,1611)	557 (484,630)	293 (-203,789)
5/21/2020	588	568 (-713,1849)	589 (497,681)	483 (318,647)	557 (-1262,2377)	583 (490,676)	305 (-201,811)
5/22/2020	611	591 (-1042,2225)	619 (508,730)	493 (318,669)	562 (-1806,2930)	611 (498,723)	321 (-194,837)
5/23/2020	648	615 (-1398,2628)	645 (511,778)	504 (312,696)	602 (-2542,3746)	635 (500,770)	334 (-196,863)
5/24/2020	675	639 (-1779,3056)	676 (520,831)	513 (304,723)	597 (-3128,4321)	663 (506,821)	352 (-190,894)
5/25/2020	687	662 (-2185,3509)	703 (523,883)	522 (299,746)	604 (-3671,4880)	688 (506,870)	366 (-185,917)
5/26/2020	700	686 (-2613,3984)	733 (528,938)	531 (296,766)	648 (-4407,5703)	715 (508,923)	379 (-179,938)
5/27/2020	715	709 (-3062,4481)	762 (531,993)	539 (293,785)	663 (-5168,6495)	741 (508,975)	390 (-176,955)
5/28/2020	726	733 (-3532,4998)	791 (532,1049)	547 (291,803)	706 (-6090,7501)	767 (505,1028)	402 (-169,973)
5/29/2020	759	756 (-4022,5535)	821 (535,1107)	554 (286,823)	710 (-6957,8378)	794 (504,1084)	417 (-162,996)
5/30/2020	759	780 (-4531,6091)	850 (535,1166)	561 (283,839)	750 (-7947,9447)	819 (500,1139)	435 (-147,1018)
5/31/2020	778	803 (-5059,6666)	881 (536,1227)	567 (279,856)	745 (-8841,10331)	847 (497,1196)	448 (-139,1035)
6/1/2020	790	827 (-5604,7258)	911 (535,1288)	573 (275,872)	753 (-9687,11192)	872 (491,1253)	464 (-125,1054)
6/2/2020	803	851 (-6167,7868)	942 (534,1350)	579 (271,887)	796 (-10666,12259)	899 (485,1312)	476 (-117,1069)

**Table A.38**

Actual and Predicted Cases with 95% Confidence Intervals for Chile using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		SA	SMA	LT	QT	ST	
5/16/2020	41428	5934 (-63635,75503)	39542 (35845,43239)	19343 (-23944,62630)	37833 (30786,44880)	39542 (35845,43239)	
5/17/2020	43781	5934 (-65978,77845)	39542 (31234,47850)	19570 (-25848,64988)	39285 (31306,47264)	39542 (33112,45972)	
5/18/2020	46059	5934 (-68291,80158)	39542 (26769,52315)	19797 (-27725,67319)	40773 (31928,49617)	39542 (30489,48595)	
5/19/2020	49579	5934 (-71276,83144)	39542 (19869,59215)	20025 (-30301,70350)	42297 (31828,52766)	39542 (26964,52120)	
5/20/2020	53617	5934 (-74788,86656)	39542 (11955,67129)	20252 (-33427,73931)	43858 (31175,56541)	39542 (22845,56239)	
5/21/2020	57581	5934 (-78553,90420)	39542 (4186,74898)	20479 (-36814,77773)	45456 (30351,60561)	39542 (18550,60534)	
5/22/2020	61857	5934 (-82579,94447)	39542 (-4195,83279)	20706 (-40473,81886)	47092 (29338,64846)	39542 (14027,65057)	
5/23/2020	65393	5934 (-86548,98416)	39542 (-11126,90210)	20934 (-44060,85928)	48766 (28553,68979)	39542 (9700,69384)	
5/24/2020	69102	5934 (-90533,102400)	39542 (-18396,97480)	21161 (-47657,89979)	50478 (27867,73088)	39542 (5416,73668)	
5/25/2020	73997	5934 (-94838,106705)	39542 (-27990,107074)	21388 (-51588,94365)	52229 (26888,77569)	39542 (759,78325)	
5/26/2020	77961	5934 (-99155,111022)	39542 (-35759,114843)	21616 (-55522,98753)	54019 (26020,82018)	39542 (-3850,82934)	
5/27/2020	82289	5934 (-103564,115431)	39542 (-44242,123326)	21843 (-59545,103231)	55849 (25150,86548)	39542 (-8530,87614)	
5/28/2020	86943	5934 (-108113,119980)	39542 (-53364,132448)	22070 (-63709,107850)	57719 (24218,91220)	39542 (-13346,92430)	
5/29/2020	90638	5934 (-112584,124451)	39542 (-60606,139690)	22297 (-67781,112376)	59630 (23492,95768)	39542 (-18023,97107)	
5/30/2020	94858	5934 (-117091,128959)	39542 (-68877,147961)	22525 (-71885,116934)	61582 (22819,100344)	39542 (-22720,101804)	
5/31/2020	99688	5934 (-121736,133604)	39542 (-78344,157428)	22752 (-76128,121632)	63575 (22081,105068)	39542 (-27561,106645)	
6/1/2020	105158	5934 (-126602,138469)	39542 (-89065,168149)	22979 (-80598,126556)	65609 (21181,110038)	39542 (-32644,111728)	
6/2/2020	108686	5934 (-131337,143204)	39542 (-95980,175064)	23206 (-84921,131334)	67687 (20538,114835)	39542 (-37540,116624)	

(continued on next page)

Table A.38 (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		SES	HLT	DT	ARIMA
5/16/2020	41428	39542 (39542,39542)	41286 (37868,44703)	41286 (37868,44703)	42002 (41710,42294)
5/17/2020	43781	39542 (39542,39542)	43228 (-1021712,1108168)	43228 (-1021712,1108168)	44509 (43890,45127)
5/18/2020	46059	39542 (39542,39542)	45171 (-2333653,2423994)	45171 (-2333653,2423994)	47054 (46051,48056)
5/19/2020	49579	39542 (39542,39542)	47113 (-3931663,4025889)	47113 (-3931663,4025889)	49575 (48101,51048)
5/20/2020	53617	39542 (39542,39542)	49055 (-5773849,5871960)	49055 (-5773849,5871960)	52172 (50202,54142)
5/21/2020	57581	39542 (39542,39542)	50998 (-7832023,7934018)	50998 (-7832023,7934018)	54748 (52216,57279)
5/22/2020	61857	39542 (39542,39542)	52940 (-10085826,10191707)	52940 (-10085826,10191707)	57365 (54234,60497)
5/23/2020	65393	39542 (39542,39542)	54883 (-12519713,12629479)	54883 (-12519713,12629479)	60011 (56243,63779)
5/24/2020	69102	39542 (39542,39542)	56825 (-15121324,15234974)	56825 (-15121324,15234974)	62652 (58198,67105)
5/25/2020	73997	39542 (39542,39542)	58768 (-17880528,17998064)	58768 (-17880528,17998064)	65349 (60186,70512)
5/26/2020	77961	39542 (39542,39542)	60710 (-20788832,20910252)	60710 (-20788832,20910252)	68038 (62122,73955)
5/27/2020	82289	39542 (39542,39542)	62653 (-23838978,23964283)	62653 (-23838978,23964283)	70765 (64066,77465)
5/28/2020	86943	39542 (39542,39542)	64595 (-27024674,27153864)	64595 (-27024674,27153864)	73515 (66003,81027)
5/29/2020	90638	39542 (39542,39542)	66537 (-30340396,30473471)	66537 (-30340396,30473471)	76272 (67911,84633)
5/30/2020	94858	39542 (39542,39542)	68480 (-33781244,33918204)	68480 (-33781244,33918204)	79072 (69839,88305)
5/31/2020	99688	39542 (39542,39542)	70422 (-37342832,37483677)	70422 (-37342832,37483677)	81874 (71736,92012)
6/1/2020	105158	39542 (39542,39542)	72365 (-41021207,41165936)	72365 (-41021207,41165936)	84709 (73641,95778)
6/2/2020	108686	39542 (39542,39542)	74307 (-44812777,44961391)	74307 (-44812777,44961391)	87566 (75540,99592)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	41428	31276 (11379,51174)	42128 (37059,47197)	41951 (41655,42247)	22353 (-15035,59740)
5/17/2020	43781	31514 (9445,53582)	44687 (-10543307,10632681)	44415 (43780,45050)	23466 (-15155,62088)
5/18/2020	46059	31616 (7289,55943)	47219 (-23523822,23618260)	46874 (45841,47907)	24682 (-15062,64426)
5/19/2020	49579	31557 (4066,59049)	49764 (-39361138,39460666)	49293 (47774,50812)	25901 (-15609,67412)
5/20/2020	53617	31383 (8,62759)	52328 (-57681044,57785700)	51778 (49744,53812)	27487 (-16138,71111)
5/21/2020	57581	31129 (-4484,66743)	54906 (-78216854,78326666)	54196 (51581,56811)	29071 (-16824,74966)
5/22/2020	61857	30818 (-9380,71016)	57465 (-100691895,100806825)	56660 (53424,59897)	30674 (-17689,79038)
5/23/2020	65393	30467 (-14250,75185)	60035 (-124982370,125102439)	59111 (55216,63007)	32127 (-18648,82902)
5/24/2020	69102	30089 (-19177,79355)	62594 (-150935543,151060731)	61543 (56937,66148)	33354 (-19910,86618)
5/25/2020	73997	29690 (-24518,83899)	65125 (-178393802,178524053)	64016 (58675,69357)	34654 (-21454,90761)
5/26/2020	77961	29281 (-29872,88433)	67671 (-207315884,207451225)	66441 (60320,72563)	36104 (-22835,95042)
5/27/2020	82289	28870 (-35325,93065)	70235 (-237671609,237812078)	68904 (61972,75837)	37539 (-24310,99389)
5/28/2020	86943	28464 (-40923,79851)	72813 (-269421434,269567060)	71351 (63576,79126)	39020 (-25862,103902)
5/29/2020	90638	28066 (-46398,102531)	75372 (-302465902,302616645)	73790 (65136,82445)	40352 (-27493,108196)
5/30/2020	94858	27675 (-51895,107244)	77941 (-336775950,336931832)	76255 (66697,85812)	41702 (-29147,112552)
5/31/2020	99688	27288 (-57530,112106)	80500 (-372286375,372447375)	78687 (68191,89183)	43082 (-30913,117077)
6/1/2020	105158	26912 (-63390,117214)	83032 (-408911940,409078004)	81147 (69687,92608)	44528 (-32828,121884)
6/2/2020	108686	26547 (-69064,122157)	85577 (-446645823,446816978)	83592 (71139,96044)	46263 (-34255,126781)

**Table A.39**

Actual and Predicted Cases with 95% Confidence Intervals for China using the Time Series Models.

Predicted Cases (95% Confidence Interval)									
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	84044	69103 (39817,98388)	84038 (84026,84050)	103515 (65352,141679)	91141 (77231,105052)	83959 (83792,84126)	84038 (84038,84038)	84045 (84031,84058)	
5/17/2020	84054	69103 (39808,98398)	84038 (84007,84069)	104099 (65369,142828)	92185 (77227,107142)	83959 (83782,84136)	84038 (84038,84038)	84052 (84023,84081)	
5/18/2020	84063	69103 (39798,98407)	84038 (83989,84087)	104682 (65383,143980)	93291 (77222,109359)	83959 (83773,84145)	84038 (84038,84038)	84059 (84009,84109)	
5/19/2020	84063	69103 (39794,98411)	84038 (83989,84087)	105265 (65390,145140)	94461 (77213,111709)	83959 (83768,84150)	84038 (84038,84038)	84066 (83991,84142)	
5/20/2020	84063	69103 (39791,98414)	84038 (83989,84087)	105848 (65393,146304)	95697 (77204,114190)	83959 (83766,84152)	84038 (84038,84038)	84073 (83969,84177)	
5/21/2020	84063	69103 (39789,98416)	84038 (83989,84087)	106432 (65392,147471)	97001 (77198,116803)	83959 (83764,84154)	84038 (84038,84038)	84080 (83945,84216)	
5/22/2020	84081	69103 (39783,98422)	84038 (83954,84122)	107015 (65394,148636)	98373 (77201,119544)	83959 (83757,84161)	84038 (84038,84038)	84088 (83918,84257)	
5/23/2020	84084	69103 (39777,98428)	84038 (83948,84128)	107598 (65393,149803)	99815 (77209,122421)	83959 (83751,84167)	84038 (84038,84038)	84095 (83889,84301)	
5/24/2020	84095	69103 (39771,98434)	84038 (83926,84150)	108181 (65391,150971)	101330 (77225,125435)	83959 (83744,84174)	84038 (84038,84038)	84102 (83857,84346)	
5/25/2020	84102	69103 (39764,98441)	84038 (83913,84163)	108765 (65388,152141)	102918 (77248,128588)	83959 (83736,84182)	84038 (84038,84038)	84109 (83823,84395)	
5/26/2020	84103	69103 (39758,98447)	84038 (83911,84165)	109348 (65381,153315)	104581 (77277,131884)	83959 (83730,84188)	84038 (84038,84038)	84116 (83787,84445)	
5/27/2020	84106	69103 (39753,98452)	84038 (83905,84171)	109931 (65372,154490)	106320 (77314,135326)	83959 (83725,84193)	84038 (84038,84038)	84123 (83749,84497)	
5/28/2020	84106	69103 (39749,98456)	84038 (83905,84171)	110514 (65361,155668)	108138 (77360,138916)	83959 (83720,84198)	84038 (84038,84038)	84130 (83710,84551)	
5/29/2020	84123	69103 (39743,98463)	84038 (83871,84205)	111098 (65350,156846)	110035 (77418,142652)	83959 (83713,84205)	84038 (84038,84038)	84137 (83668,84607)	
5/30/2020	84128	69103 (39737,98469)	84038 (83862,84214)	111681 (65337,158025)	112013 (77487,146540)	83959 (83707,84211)	84038 (84038,84038)	84145 (83625,84664)	
5/31/2020	84146	69103 (39729,98476)	84038 (83826,84250)	112264 (65324,159204)	114074 (77569,150579)	83959 (83698,84220)	84038 (84038,84038)	84152 (83580,84724)	
6/1/2020	84154	69103 (39722,98484)	84038 (83811,84265)	112848 (65310,160385)	116219 (77663,154775)	83959 (83690,84228)	84038 (84038,84038)	84159 (83533,84785)	
6/2/2020	84161	69103 (39714,98491)	84038 (83797,84279)	113431 (65294,161567)	118450 (77769,159130)	83959 (83681,84237)	84038 (84038,84038)	84166 (83485,84847)	
Predicted Cases (95% Confidence Interval)									
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3041	84044	84043 (84033,84054)	83878 (81077,86679)	83810 (83352,84269)	84334 (83754,84913)	84046 (81111,86981)	41942 (-40577,124462)		
	84054	84049 (84028,84070)	83660 (79033,88287)	83792 (83306,84279)	84467 (74333,94601)	84053 (79086,89019)	41833 (-40803,124469)		
	84063	84055 (84020,84089)	83400 (77105,89695)	83776 (83263,84289)	84429 (71897,96961)	84060 (77303,90817)	41704 (-41061,124470)		
	84063	84060 (84010,84110)	83102 (75204,91000)	83761 (83227,84295)	84321 (71781,96860)	84067 (75457,92677)	41555 (-41348,124458)		
	84063	84065 (83998,84132)	82768 (73299,92237)	83745 (83193,84298)	84072 (61833,106310)	84074 (73489,94660)	41387 (-41665,124439)		
	84063	84070 (83985,84156)	82399 (71382,93416)	83731 (83161,84301)	83961 (49465,118457)	84081 (71411,96752)	41201 (-42011,124413)		
	84081	84075 (83970,84180)	81997 (69452,94543)	83717 (83125,84310)	84189 (48298,120080)	84089 (69230,98947)	40999 (-42390,124388)		
	84084	84080 (83954,84205)	81564 (67508,95620)	83705 (83091,84318)	84439 (47649,121228)	84096 (66948,101243)	40785 (-42790,124360)		
	84095	84084 (83937,84231)	81100 (65554,96646)	83693 (83057,84328)	84567 (43903,125232)	84103 (64568,103638)	40553 (-43220,124327)		
	84102	84088 (83919,84258)	80606 (63590,97621)	83682 (83025,84338)	84524 (41443,127605)	84110 (62091,106129)	40308 (-43673,124290)		
	84103	84093 (83900,84285)	80084 (61620,98547)	83671 (82995,84347)	84411 (40904,127919)	84117 (59523,108712)	40045 (-44155,124245)		
	84106	84097 (83881,84312)	79533 (59645,99422)	83661 (82967,84356)	84158 (38980,129336)	84125 (56864,111385)	39770 (-44658,124198)		
	84106	84100 (83861,84340)	78956 (57666,100247)	83652 (82941,84364)	84043 (34439,133646)	84132 (54119,114145)	39480 (-45186,124146)		
	84123	84104 (83841,84367)	78353 (55684,101022)	83644 (82914,84374)	84267 (34476,134058)	84139 (51288,116990)	39177 (-45738,124093)		
	84128	84108 (83820,84396)	77724 (53701,101748)	83636 (82888,84384)	84513 (32949,136076)	84146 (48376,119917)	38865 (-46308,124039)		
	84146	84111 (83799,84424)	77070 (51717,102424)	83629 (82861,84396)	84637 (28424,140851)	84153 (45383,122924)	38559 (-46905,123982)		
	84154	84115 (83777,84452)	76392 (49732,103052)	83622 (82836,84408)	84591 (25241,143941)	84161 (42312,126010)	38203 (-47520,123925)		
	84161	84118 (83755,84481)	75690 (47747,103632)	83615 (82811,84420)	84475 (24176,144773)	84168 (39164,129172)	37850 (-48160,123860)		

**Table A.40**

Actual and Predicted Cases with 95% Confidence Intervals for Colombia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	14939	2268 (-22566,27103)	14216 (12799,15633)	7414 (-7335,22163)	14462 (13528,15396)	14216 (12799,15633)	14216 (14216,14216)	14784 (13670,15898)	
5/17/2020	15574	2268 (-23196,27733)	14216 (11554,16878)	7501 (-7794,22796)	15014 (13996,16033)	14216 (12084,16348)	14216 (14216,14216)	15367 (-89320,120053)	
5/18/2020	16295	2268 (-23889,28426)	14216 (10141,18291)	7588 (-8318,23495)	15580 (14419,16740)	14216 (11289,17143)	14216 (14216,14216)	15949 (-217330,249228)	
5/19/2020	16935	2268 (-24560,29097)	14216 (8887,19545)	7676 (-8820,24172)	16159 (14898,17419)	14216 (10538,17894)	14216 (14216,14216)	16531 (-373245,406308)	
5/20/2020	17687	2268 (-25272,29809)	14216 (7413,21019)	7763 (-9365,24891)	16752 (15358,18146)	14216 (9735,18697)	14216 (14216,14216)	17114 (-552995,587222)	
5/21/2020	18330	2268 (-25967,30504)	14216 (6153,22279)	7850 (-9892,25592)	17358 (15867,18850)	14216 (8966,19466)	14216 (14216,14216)	17696 (-753833,789224)	
5/22/2020	19131	2268 (-26704,31241)	14216 (4583,23849)	7937 (-10463,26338)	17980 (16357,19602)	14216 (8143,20289)	14216 (14216,14216)	18278 (-973775,1010331)	
5/23/2020	20177	2268 (-27539,32076)	14216 (2532,25900)	8025 (-11137,27186)	18615 (16750,20479)	14216 (7192,21240)	14216 (14216,14216)	18860 (-1211305,1249026)	
5/24/2020	21175	2268 (-28429,32966)	14216 (576,27856)	8112 (-11869,28092)	19265 (17109,21421)	14216 (6183,22249)	14216 (14216,14216)	19443 (-1465217,1504103)	
5/25/2020	21981	2268 (-29313,33850)	14216 (-1003,29435)	8199 (-12592,28990)	19929 (17521,22338)	14216 (5203,23229)	14216 (14216,14216)	20025 (-1734523,1774572)	
5/26/2020	23003	2268 (-30241,34778)	14216 (-3007,31439)	8286 (-13361,29934)	20608 (17911,23306)	14216 (4175,24257)	14216 (14216,14216)	20607 (-2018392,2059606)	
5/27/2020	24104	2268 (-31219,35756)	14216 (-5164,33596)	8373 (-14183,30929)	21303 (18272,24333)	14216 (3093,25339)	14216 (14216,14216)	21190 (-2316117,2358496)	
5/28/2020	24141	2268 (-32032,36569)	14216 (-5237,33669)	8461 (-14827,31748)	22012 (18879,25145)	14216 (2245,26187)	14216 (14216,14216)	21772 (-2627083,2670627)	
5/29/2020	25406	2268 (-32937,37473)	14216 (-7716,36148)	8548 (-15567,32663)	22736 (19409,26064)	14216 (1276,27156)	14216 (14216,14216)	22354 (-2950751,2995459)	
5/30/2020	26734	2268 (-33926,38463)	14216 (-10319,38751)	8635 (-16398,33668)	23477 (19864,27089)	14216 (202,28230)	14216 (14216,14216)	22936 (-3286643,3332516)	
5/31/2020	27219	2268 (-34848,39385)	14216 (-11270,39702)	8722 (-17155,34600)	24232 (20441,28024)	14216 (-775,29207)	14216 (14216,14216)	23519 (-3634330,3681367)	
6/1/2020	29384	2268 (-35978,40515)	14216 (-15513,43945)	8810 (-18133,35752)	25003 (20777,29230)	14216 (-2016,30448)	14216 (14216,14216)	24101 (-3993426,4041628)	
6/2/2020	30593	2268 (-37136,41673)	14216 (-17883,46315)	8897 (-19140,36933)	25791 (21122,30459)	14216 (-3280,31712)	14216 (14216,14216)	24683 (-4363581,4412948)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3042	14939	14784 (13670,15898)	14895 (14782,15009)	13087 (9458,16717)	14844 (13613,16076)	14925 (14814,15036)	7780 (-6253,21812)		
	15574	15367 (-89320,120053)	15560 (15391,15730)	13443 (9531,17356)	15479 (-366259,397218)	15635 (15475,15794)	8123 (-6198,22444)		
	16295	15949 (-217330,249228)	16227 (15985,16470)	13789 (9517,18060)	16096 (-826982,859174)	16371 (16152,16591)	8448 (-6234,23131)		
	16935	16531 (-373245,406308)	16904 (16573,17236)	14120 (9506,18735)	16764 (-1411232,1444760)	17128 (16842,17415)	8807 (-6198,23811)		
	17687	17114 (-552995,587222)	17587 (17159,18015)	14443 (9432,19455)	17398 (-2077510,2112306)	17906 (17544,18269)	9133 (-6240,24506)		
	18330	17696 (-753833,789224)	18274 (17741,18807)	14764 (9371,20156)	18034 (-2819816,2855885)	18705 (18257,19154)	9497 (-6216,25210)		
	19131	18278 (-973775,1010331)	18968 (18322,19614)	15084 (9261,20907)	18695 (-3640701,3678091)	19525 (18981,20069)	9830 (-6267,25926)		
	20177	18860 (-1211305,1249026)	19667 (18901,20434)	15407 (9036,21779)	19301 (-4512856,4551457)	20365 (19714,21016)	10207 (-6359,26773)		
	21175	19443 (-1465217,1504103)	20372 (19479,21266)	15736 (8756,22715)	19936 (-5445546,5485417)	21224 (20456,21993)	10611 (-6465,27687)		
	21981	20025 (-1734523,1774572)	21083 (20056,22110)	16070 (8503,23637)	20552 (-6429227,6470322)	22104 (21206,23002)	11027 (-6538,28592)		
	23003	20607 (-2018392,2059606)	21800 (20634,22967)	16414 (8215,24613)	21221 (-7477719,7520161)	23003 (21964,24043)	11386 (-6714,29486)		
	24104	21190 (-2316117,2358496)	22523 (21211,23835)	16768 (7888,25648)	21855 (-8575955,8619664)	23922 (22728,25115)	11743 (-6945,30430)		
	24141	21772 (-2627083,2670627)	23251 (21788,24714)	17134 (7791,26477)	22491 (-9722539,9767520)	24859 (23500,26218)	12124 (-6981,31230)		
	25406	22354 (-2950751,2995459)	23986 (22366,25605)	17509 (7601,27417)	23151 (-10922118,10968420)	25815 (24277,27353)	12361 (-7277,31999)		
	26734	22936 (-3286643,3332516)	24726 (22944,26507)	17895 (7329,28461)	23757 (-12157649,12205163)	26790 (25060,28520)	12773 (-7472,33018)		
	27219	23519 (-3634330,3681367)	25472 (23523,27420)	18292 (7166,29418)	24392 (-13436375,13485159)	27783 (25849,29718)	13185 (-7588,33958)		
	29384	24101 (-3993426,4041628)	26223 (24103,28343)	18702 (6773,30631)	25009 (-14752432,14802449)	28794 (26642,30947)	13636 (-7862,35135)		
	30593	24683 (-4363581,4412948)	26981 (24684,29277)	19125 (6379,31871)	25677 (-16117509,16168863)	29823 (27439,32208)	14174 (-8054,36401)		

**Table A.41**

Actual and Predicted Cases with 95% Confidence Intervals for Comoros using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	11	1 (-19,21)	11 (11,11)	4 (-10,18)	12 (10,14)	11 (11,11)	11 (11,11)	11 (11,12)
5/17/2020	11	1 (-19,21)	11 (11,11)	4 (-10,18)	12 (10,15)	11 (11,11)	11 (11,11)	12 (11,13)
5/18/2020	11	1 (-19,21)	11 (11,11)	4 (-10,18)	13 (10,16)	11 (11,11)	11 (11,11)	12 (11,13)
5/19/2020	11	1 (-19,21)	11 (11,11)	4 (-10,18)	14 (10,18)	11 (11,11)	11 (11,11)	12 (11,14)
5/20/2020	34	1 (-33,35)	11 (-34,56)	4 (-25,33)	15 (-3,32)	11 (-9,31)	11 (11,11)	13 (11,15)
5/21/2020	34	1 (-40,42)	11 (-34,56)	4 (-32,40)	15 (-7,37)	11 (-15,37)	11 (11,11)	13 (11,15)
5/22/2020	78	1 (-67,69)	11 (-120,142)	4 (-60,68)	16 (-34,66)	11 (-44,66)	11 (11,11)	13 (11,16)
5/23/2020	78	1 (-82,84)	11 (-120,142)	4 (-75,83)	17 (-46,80)	11 (-58,80)	11 (11,11)	14 (11,16)
5/24/2020	87	1 (-96,98)	11 (-138,160)	4 (-88,96)	18 (-57,93)	11 (-71,93)	11 (11,11)	14 (11,17)
5/25/2020	87	1 (-105,107)	11 (-138,160)	4 (-97,105)	18 (-64,101)	11 (-80,102)	11 (11,11)	14 (11,17)
5/26/2020	87	1 (-112,114)	11 (-138,160)	4 (-104,112)	19 (-69,108)	11 (-87,109)	11 (11,11)	15 (12,18)
5/27/2020	87	1 (-118,120)	11 (-138,160)	4 (-109,118)	20 (-73,113)	11 (-92,114)	11 (11,11)	15 (12,18)
5/28/2020	87	1 (-122,124)	11 (-138,160)	4 (-114,122)	21 (-75,117)	11 (-96,118)	11 (11,11)	15 (12,19)
5/29/2020	87	1 (-126,128)	11 (-138,160)	4 (-117,126)	22 (-77,121)	11 (-100,122)	11 (11,11)	16 (12,19)
5/30/2020	106	1 (-133,135)	11 (-175,197)	4 (-124,133)	23 (-81,127)	11 (-106,128)	11 (11,11)	16 (12,20)
5/31/2020	106	1 (-138,140)	11 (-175,197)	4 (-129,138)	24 (-85,132)	11 (-112,134)	11 (11,11)	16 (12,21)
6/1/2020	106	1 (-143,145)	11 (-175,197)	5 (-134,143)	25 (-87,137)	11 (-116,138)	11 (11,11)	17 (12,21)
6/2/2020	132	1 (-152,154)	11 (-226,248)	5 (-142,152)	26 (-94,145)	11 (-125,147)	11 (11,11)	17 (12,22)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	11	11 (11,12)	11 (10,12)	11 (10,11)	11 (11,11)	11 (10,12)	5 (-6,16)	
5/17/2020	11	11 (11,12)	11 (9,12)	10 (9,11)	11 (11,11)	11 (9,12)	5 (-6,16)	
5/18/2020	11	11 (11,12)	10 (9,12)	10 (8,11)	11 (10,11)	10 (9,12)	5 (-6,16)	
5/19/2020	11	12 (11,12)	10 (8,13)	9 (7,11)	11 (10,11)	10 (8,13)	5 (-6,16)	
5/20/2020	34	12 (11,12)	10 (7,13)	9 (-13,31)	11 (11,11)	10 (7,13)	5 (-22,32)	
5/21/2020	34	12 (11,13)	10 (6,14)	8 (-21,37)	11 (11,11)	10 (6,14)	11 (-20,42)	
5/22/2020	78	12 (11,13)	10 (5,14)	8 (-51,66)	11 (10,11)	10 (5,15)	11 (-47,68)	
5/23/2020	78	12 (11,13)	10 (4,15)	7 (-67,81)	11 (11,11)	10 (4,15)	21 (-46,88)	
5/24/2020	87	12 (11,13)	9 (3,16)	6 (-81,93)	11 (10,11)	9 (3,16)	15 (-64,94)	
5/25/2020	87	12 (11,13)	9 (2,17)	5 (-92,102)	11 (10,11)	9 (2,17)	16 (-70,103)	
5/26/2020	87	12 (11,13)	9 (1,17)	5 (-100,109)	11 (10,11)	9 (1,18)	6 (-89,101)	
5/27/2020	87	12 (11,13)	9 (-1,18)	4 (-106,115)	11 (10,11)	9 (-1,18)	6 (-96,108)	
5/28/2020	87	12 (11,13)	9 (-2,19)	4 (-112,119)	11 (10,11)	9 (-2,19)	4 (-104,112)	
5/29/2020	87	12 (11,13)	8 (-3,20)	3 (-117,123)	11 (10,11)	9 (-3,20)	4 (-109,117)	
5/30/2020	106	12 (11,14)	8 (-5,21)	2 (-125,129)	11 (10,11)	8 (-4,21)	4 (-116,125)	
5/31/2020	106	12 (11,14)	8 (-6,22)	2 (-131,135)	11 (10,11)	8 (-6,22)	7 (-119,134)	
6/1/2020	106	12 (11,14)	8 (-7,23)	1 (-137,140)	11 (10,11)	8 (-7,23)	7 (-124,139)	
6/2/2020	132	12 (11,14)	8 (-9,24)	1 (-146,149)	11 (10,11)	8 (-9,24)	7 (-133,147)	

**Table A.42**

Actual and Predicted Cases with 95% Confidence Intervals for Congo Brazzaville using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	391	68 (-565,701)	391 (391,391)	222 (-110,554)	408 (375,440)	333 (219,447)	391 (391,391)	409 (373,445)
5/17/2020	391	68 (-565,701)	391 (391,391)	224 (-105,554)	422 (373,471)	333 (219,447)	391 (391,391)	426 (297,554)
5/18/2020	412	68 (-579,715)	391 (350,432)	227 (-114,568)	437 (388,485)	333 (204,462)	391 (391,391)	442 (189,696)
5/19/2020	420	68 (-590,726)	391 (334,448)	230 (-120,579)	452 (399,504)	333 (193,473)	391 (391,391)	459 (56,862)
5/20/2020	420	68 (-597,733)	391 (334,448)	232 (-121,585)	467 (405,529)	333 (186,480)	391 (391,391)	475 (-98,1049)
5/21/2020	469	68 (-619,754)	391 (238,544)	235 (-138,608)	482 (425,540)	333 (160,506)	391 (391,391)	492 (-271,1254)
5/22/2020	469	68 (-634,770)	391 (238,544)	237 (-148,623)	498 (441,556)	333 (144,522)	391 (391,391)	508 (-460,1477)
5/23/2020	487	68 (-650,786)	391 (203,579)	240 (-159,639)	515 (457,572)	333 (126,540)	391 (391,391)	525 (-666,1716)
5/24/2020	487	68 (-662,798)	391 (203,579)	243 (-166,651)	531 (470,592)	333 (114,552)	391 (391,391)	541 (-886,1969)
5/25/2020	487	68 (-672,808)	391 (203,579)	245 (-171,661)	548 (479,618)	333 (104,562)	391 (391,391)	558 (-1120,2236)
5/26/2020	487	68 (-680,815)	391 (203,579)	248 (-173,669)	565 (485,646)	333 (97,569)	391 (391,391)	574 (-1367,2516)
5/27/2020	571	68 (-702,838)	391 (38,744)	250 (-192,692)	583 (505,661)	333 (70,596)	391 (391,391)	591 (-1627,2809)
5/28/2020	571	68 (-721,857)	391 (38,744)	253 (-206,711)	601 (525,677)	333 (49,617)	391 (391,391)	607 (-1898,3113)
5/29/2020	571	68 (-737,872)	391 (38,744)	256 (-216,727)	619 (542,697)	333 (32,634)	391 (391,391)	624 (-2181,3429)
5/30/2020	571	68 (-750,886)	391 (38,744)	258 (-224,741)	638 (556,721)	333 (18,648)	391 (391,391)	640 (-2475,3756)
5/31/2020	611	68 (-768,903)	391 (-40,822)	261 (-237,758)	657 (574,740)	333 (-1,667)	391 (391,391)	657 (-2780,4094)
6/1/2020	611	68 (-783,919)	391 (-40,822)	263 (-247,774)	677 (590,763)	333 (-17,683)	391 (391,391)	673 (-3095,4442)
6/2/2020	611	68 (-796,932)	391 (-40,822)	266 (-255,787)	697 (604,789)	333 (-30,696)	391 (391,391)	690 (-3420,4800)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3044	391	409 (373,445)	409 (390,428)	334 (221,446)	407 (376,437)	410 (391,429)	215 (-130,560)	
	391	426 (297,554)	426 (403,450)	336 (227,446)	423 (323,523)	428 (404,452)	224 (-113,560)	
	412	442 (189,696)	444 (415,472)	339 (217,461)	443 (233,652)	446 (416,475)	222 (-128,571)	
	420	459 (56,862)	461 (427,495)	341 (210,472)	458 (131,785)	464 (428,499)	234 (-119,587)	
	420	475 (-98,1049)	479 (438,519)	342 (207,478)	478 (3,953)	481 (439,524)	244 (-107,596)	
	469	492 (-271,1254)	497 (450,543)	343 (184,503)	497 (-145,1140)	499 (450,549)	253 (-111,617)	
	469	508 (-460,1477)	515 (461,568)	344 (170,518)	515 (-307,1336)	517 (460,575)	267 (-102,636)	
	487	525 (-666,1716)	533 (473,593)	345 (155,535)	529 (-475,1533)	535 (470,600)	275 (-100,650)	
	487	541 (-886,1969)	551 (484,618)	346 (144,547)	546 (-652,1744)	553 (479,627)	287 (-90,664)	
	487	558 (-1120,2236)	569 (495,644)	346 (136,557)	565 (-844,1975)	571 (488,653)	288 (-90,666)	
	487	574 (-1367,2516)	588 (506,670)	347 (130,564)	580 (-1046,2206)	589 (497,680)	297 (-81,675)	
	571	591 (-1627,2809)	607 (517,697)	347 (104,591)	601 (-1260,2461)	607 (505,708)	303 (-89,696)	
	571	607 (-1898,3113)	626 (527,724)	348 (85,611)	620 (-1488,2728)	624 (513,735)	328 (-71,727)	
	571	624 (-2181,3429)	645 (538,752)	348 (69,628)	637 (-1727,3001)	642 (521,763)	338 (-66,741)	
	571	640 (-2475,3756)	664 (549,779)	349 (57,641)	652 (-1971,3275)	660 (529,792)	347 (-59,753)	
	611	657 (-2780,4094)	684 (559,808)	349 (39,660)	668 (-2221,3558)	678 (536,820)	342 (-73,756)	
	611	673 (-3095,4442)	703 (570,836)	350 (24,676)	688 (-2482,3857)	696 (543,849)	358 (-61,778)	
	611	690 (-3420,4800)	723 (580,865)	350 (12,689)	703 (-2750,4155)	714 (550,878)	368 (-55,791)	

**Table A.43**

Actual and Predicted Cases with 95% Confidence Intervals for Congo Kinshasa using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1455	200 (-2260,2660)	1298 (990,1606)	652 (-921,2225)	1291 (969,1612)	1298 (990,1606)	1298 (1298,1298)	1354 (1245,1462)	
5/17/2020	1455	200 (-2260,2660)	1298 (990,1606)	660 (-905,2226)	1341 (1064,1618)	1298 (990,1606)	1298 (1298,1298)	1410 (331,2489)	
5/18/2020	1538	200 (-2316,2715)	1298 (828,1768)	668 (-946,2281)	1393 (1113,1672)	1298 (928,1668)	1298 (1298,1298)	1467 (-859,3792)	
5/19/2020	1629	200 (-2390,2790)	1298 (649,1947)	675 (-1006,2357)	1445 (1144,1747)	1298 (842,1754)	1298 (1298,1298)	1523 (-2309,5356)	
5/20/2020	1731	200 (-2477,2877)	1298 (449,2147)	683 (-1079,2445)	1499 (1162,1837)	1298 (741,1855)	1298 (1298,1298)	1580 (-3984,7144)	
5/21/2020	1835	200 (-2572,2972)	1298 (245,2351)	691 (-1160,2542)	1555 (1174,1936)	1298 (632,1964)	1298 (1298,1298)	1637 (-5857,9130)	
5/22/2020	1945	200 (-2674,3074)	1298 (30,2566)	698 (-1248,2645)	1611 (1181,2042)	1298 (517,2079)	1298 (1298,1298)	1693 (-7910,11297)	
5/23/2020	2025	200 (-2771,3171)	1298 (-127,2723)	706 (-1331,2743)	1669 (1197,2142)	1298 (411,2185)	1298 (1298,1298)	1750 (-10129,13629)	
5/24/2020	2141	200 (-2875,3274)	1298 (-354,2950)	714 (-1421,2849)	1729 (1208,2249)	1298 (296,2300)	1298 (1298,1298)	1807 (-12503,16117)	
5/25/2020	2297	200 (-2994,3393)	1298 (-660,3256)	721 (-1527,2970)	1790 (1204,2375)	1298 (164,2432)	1298 (1298,1298)	1863 (-15023,18750)	
5/26/2020	2403	200 (-3112,3511)	1298 (-868,3464)	729 (-1632,3090)	1852 (1205,2498)	1298 (35,2561)	1298 (1298,1298)	1920 (-17681,21521)	
5/27/2020	2546	200 (-3237,3637)	1298 (-1148,3744)	737 (-1745,3218)	1915 (1201,2629)	1298 (-102,2698)	1298 (1298,1298)	1977 (-20470,24423)	
5/28/2020	2660	200 (-3363,3763)	1298 (-1372,3968)	744 (-1857,3346)	1980 (1200,2759)	1298 (-238,2834)	1298 (1298,1298)	2033 (-23384,27451)	
5/29/2020	2833	200 (-3500,3900)	1298 (-1711,4307)	752 (-1982,3486)	2046 (1189,2903)	1298 (-386,2982)	1298 (1298,1298)	2090 (-26419,30599)	
5/30/2020	2966	200 (-3639,4039)	1298 (-1971,4567)	760 (-2108,3627)	2114 (1181,3047)	1298 (-535,3131)	1298 (1298,1298)	2147 (-29569,33863)	
5/31/2020	3070	200 (-3774,4174)	1298 (-2175,4771)	767 (-2229,3764)	2183 (1180,3186)	1298 (-678,3274)	1298 (1298,1298)	2203 (-32832,37238)	
6/1/2020	3195	200 (-3910,4310)	1298 (-2420,5016)	775 (-2352,3902)	2254 (1183,3325)	1298 (-820,3416)	1298 (1298,1298)	2260 (-36202,40722)	
6/2/2020	3326	200 (-4047,4447)	1298 (-2677,5273)	783 (-2475,4041)	2326 (1187,3465)	1298 (-964,3560)	1298 (1298,1298)	2317 (-39678,44311)	

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
3045	1455	1354 (1245,1462)	1354 (1327,1381)	1074 (327,1821)	1335 (1263,1406)	1358 (1331,1386)	711 (-749,2170)
	1455	1410 (331,2489)	1410 (1367,1452)	1079 (337,1821)	1388 (532,2245)	1401 (1349,1452)	755 (-662,2171)
	1538	1467 (-859,3792)	1465 (1408,1522)	1082 (286,1878)	1430 (-283,3143)	1447 (1364,1530)	770 (-677,2217)
	1629	1523 (-2309,5356)	1520 (1449,1592)	1081 (208,1955)	1496 (-1517,4509)	1479 (1366,1592)	802 (-690,2294)
	1731	1580 (-3984,7144)	1576 (1488,1663)	1078 (110,2047)	1567 (-3085,6219)	1514 (1368,1660)	818 (-739,2374)
	1835	1637 (-5857,9130)	1630 (1527,1733)	1073 (0,2147)	1637 (-4904,8179)	1538 (1360,1716)	863 (-757,2482)
	1945	1693 (-7910,11297)	1685 (1566,1804)	1068 (-120,2255)	1690 (-6787,10167)	1566 (1354,1777)	894 (-796,2584)
	2025	1750 (-10129,13629)	1740 (1603,1876)	1061 (-235,2358)	1728 (-8639,12095)	1584 (1340,1827)	924 (-831,2679)
	2141	1807 (-12503,16117)	1794 (1640,1947)	1054 (-359,2468)	1782 (-10601,14164)	1604 (1328,1881)	947 (-882,2777)
	2297	1863 (-15023,18750)	1848 (1676,2019)	1048 (-501,2596)	1823 (-12601,16248)	1618 (1310,1926)	976 (-943,2895)
	2403	1920 (-17681,21521)	1902 (1712,2091)	1041 (-641,2722)	1890 (-14800,18580)	1634 (1294,1974)	1011 (-995,3017)
	2546	1977 (-20470,24423)	1955 (1746,2164)	1034 (-790,2857)	1961 (-17225,21146)	1644 (1274,2014)	1042 (-1058,3143)
	2660	2033 (-23384,27451)	2009 (1780,2237)	1027 (-937,2991)	2031 (-19848,23909)	1656 (1256,2057)	1074 (-1121,3269)
	2833	2090 (-26419,30599)	2062 (1814,2310)	1020 (-1098,3137)	2083 (-22544,26711)	1664 (1235,2093)	1093 (-1210,3396)
	2966	2147 (-29569,33863)	2115 (1846,2383)	1013 (-1259,3285)	2121 (-25224,29467)	1674 (1216,2132)	1131 (-1280,3542)
	3070	2203 (-32832,37238)	2168 (1879,2457)	1007 (-1414,3428)	2175 (-27970,32321)	1679 (1194,2165)	1156 (-1360,3671)
	3195	2260 (-36202,40722)	2220 (1910,2531)	1001 (-1569,3571)	2217 (-30739,35173)	1687 (1174,2199)	1180 (-1442,3802)
	3326	2317 (-39678,44311)	2273 (1941,2605)	995 (-1725,3715)	2283 (-33646,38213)	1691 (1152,2230)	1198 (-1533,3929)

**Table A.44**

Actual and Predicted Cases with 95% Confidence Intervals for Costa Rica using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	853	283 (-835,1400)	843 (823,863)	805 (711,899)	857 (849,865)	843 (823,863)	843 (843,843)	852 (835,869)
5/17/2020	863	283 (-845,1410)	843 (804,882)	814 (719,909)	861 (854,867)	843 (812,874)	843 (843,843)	862 (817,906)
5/18/2020	866	283 (-850,1416)	843 (798,888)	823 (731,914)	864 (858,870)	843 (807,879)	843 (843,843)	871 (790,953)
5/19/2020	882	283 (-861,1426)	843 (767,919)	832 (738,925)	866 (850,883)	843 (794,892)	843 (843,843)	881 (757,1006)
5/20/2020	897	283 (-873,1439)	843 (737,949)	841 (743,938)	868 (839,897)	843 (778,908)	843 (843,843)	891 (717,1066)
5/21/2020	903	283 (-883,1449)	843 (725,961)	849 (751,948)	870 (832,907)	843 (767,919)	843 (843,843)	901 (672,1131)
5/22/2020	911	283 (-893,1458)	843 (710,976)	858 (759,957)	871 (825,917)	843 (756,930)	843 (843,843)	911 (622,1200)
5/23/2020	918	283 (-902,1467)	843 (696,990)	867 (768,966)	871 (818,925)	843 (747,939)	843 (843,843)	921 (567,1274)
5/24/2020	930	283 (-911,1477)	843 (672,1014)	876 (776,976)	871 (808,935)	843 (736,950)	843 (843,843)	931 (509,1353)
5/25/2020	951	283 (-924,1489)	843 (631,1055)	885 (781,988)	871 (792,949)	843 (721,965)	843 (843,843)	941 (446,1435)
5/26/2020	956	283 (-934,1500)	843 (622,1064)	894 (788,999)	869 (779,960)	843 (709,977)	843 (843,843)	950 (380,1521)
5/27/2020	984	283 (-948,1514)	843 (567,1119)	902 (792,1013)	868 (759,976)	843 (692,994)	843 (843,843)	960 (310,1610)
5/28/2020	1000	283 (-963,1528)	843 (535,1151)	911 (794,1028)	865 (737,993)	843 (675,1011)	843 (843,843)	970 (237,1703)
5/29/2020	1022	283 (-978,1544)	843 (492,1194)	920 (796,1045)	862 (713,1011)	843 (656,1030)	843 (843,843)	980 (161,1799)
5/30/2020	1047	283 (-995,1561)	843 (443,1243)	929 (795,1063)	858 (686,1031)	843 (635,1051)	843 (843,843)	990 (82,1898)
5/31/2020	1056	283 (-1011,1577)	843 (426,1260)	938 (796,1080)	854 (660,1048)	843 (616,1070)	843 (843,843)	1000 (-1,2001)
6/1/2020	1084	283 (-1029,1595)	843 (371,1315)	947 (794,1100)	849 (630,1068)	843 (595,1091)	843 (843,843)	1010 (-86,2106)
6/2/2020	1105	283 (-1048,1613)	843 (329,1357)	956 (792,1119)	844 (599,1088)	843 (573,1113)	843 (843,843)	1020 (-175,2214)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3046	853	851 (835,867)	855 (847,864)	807 (716,897)	856 (831,880)	855 (847,864)	434 (-387,1255)	
5/17/2020	863	861 (820,901)	868 (852,884)	807 (706,908)	868 (680,1056)	867 (851,883)	440 (-385,1265)	
5/18/2020	866	870 (797,943)	880 (856,904)	808 (702,913)	881 (485,1276)	879 (855,903)	446 (-379,1270)	
5/19/2020	882	879 (767,991)	893 (860,925)	808 (692,925)	893 (249,1538)	891 (858,924)	450 (-380,1280)	
5/20/2020	897	888 (733,1043)	905 (863,947)	808 (678,938)	906 (-25,1836)	903 (861,945)	458 (-379,1294)	
5/21/2020	903	897 (694,1100)	918 (866,970)	808 (667,949)	918 (-330,2166)	915 (863,967)	465 (-375,1305)	
5/22/2020	911	906 (651,1160)	931 (869,993)	808 (657,959)	931 (-665,2526)	927 (865,990)	472 (-372,1315)	
5/23/2020	918	915 (605,1224)	944 (871,1017)	808 (648,969)	943 (-1027,2913)	939 (865,1013)	477 (-369,1323)	
5/24/2020	930	923 (555,1291)	957 (872,1042)	808 (637,979)	956 (-1414,3325)	951 (866,1037)	482 (-368,1332)	
5/25/2020	951	932 (503,1361)	970 (873,1068)	808 (623,993)	968 (-1825,3761)	963 (865,1061)	490 (-366,1345)	
5/26/2020	956	940 (447,1433)	984 (873,1094)	808 (611,1005)	981 (-2258,4219)	975 (864,1086)	499 (-361,1358)	
5/27/2020	984	949 (389,1508)	997 (874,1120)	808 (594,1021)	993 (-2713,4699)	987 (863,1111)	505 (-361,1371)	
5/28/2020	1000	957 (329,1585)	1011 (873,1148)	808 (578,1038)	1006 (-3188,5199)	999 (861,1137)	514 (-358,1387)	
5/29/2020	1022	965 (266,1664)	1024 (873,1176)	807 (559,1056)	1018 (-3682,5719)	1011 (859,1164)	520 (-361,1402)	
5/30/2020	1047	973 (201,1745)	1038 (872,1204)	807 (538,1076)	1031 (-4196,6257)	1023 (856,1190)	530 (-361,1421)	
5/31/2020	1056	981 (134,1828)	1052 (871,1233)	807 (520,1095)	1043 (-4728,6814)	1035 (853,1218)	537 (-363,1436)	
6/1/2020	1084	989 (66,1913)	1066 (869,1263)	807 (499,1116)	1056 (-5277,7389)	1047 (849,1245)	542 (-367,1452)	
6/2/2020	1105	997 (-5,1999)	1080 (867,1293)	807 (477,1137)	1068 (-5844,7980)	1059 (845,1274)	550 (-370,1471)	

**Table A.45**

Actual and Predicted Cases with 95% Confidence Intervals for Cote d'Ivoire using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	2061	404 (-2842,3651)	2017 (1931,2103)	1296 (-205,2796)	2237 (1892,2582)	2017 (1931,2103)	2017 (2017,2017)	2075 (1961,2190)
5/17/2020	2109	404 (-2890,3699)	2017 (1837,2197)	1311 (-222,2844)	2309 (1940,2678)	2017 (1876,2158)	2017 (2017,2017)	2132 (1004,3259)
5/18/2020	2119	404 (-2912,3721)	2017 (1817,2217)	1326 (-215,2866)	2383 (1959,2807)	2017 (1854,2180)	2017 (2017,2017)	2188 (-241,4616)
5/19/2020	2153	404 (-2940,3749)	2017 (1750,2284)	1341 (-213,2894)	2458 (1984,2932)	2017 (1823,2211)	2017 (2017,2017)	2244 (-1758,6246)
5/20/2020	2231	404 (-2988,3797)	2017 (1598,2436)	1356 (-231,2943)	2535 (2034,3035)	2017 (1761,2273)	2017 (2017,2017)	2300 (-3509,8110)
5/21/2020	2301	404 (-3044,3853)	2017 (1460,2574)	1371 (-258,3000)	2613 (2092,3133)	2017 (1691,2343)	2017 (2017,2017)	2357 (-5467,10180)
5/22/2020	2341	404 (-3096,3905)	2017 (1382,2652)	1386 (-279,3052)	2693 (2145,3240)	2017 (1632,2402)	2017 (2017,2017)	2413 (-7614,12439)
5/23/2020	2366	404 (-3141,3950)	2017 (1333,2701)	1401 (-294,3097)	2774 (2189,3359)	2017 (1583,2451)	2017 (2017,2017)	2469 (-9933,14871)
5/24/2020	2376	404 (-3178,3987)	2017 (1313,2721)	1416 (-301,3133)	2857 (2222,3492)	2017 (1545,2489)	2017 (2017,2017)	2525 (-12415,17465)
5/25/2020	2423	404 (-3217,4026)	2017 (1221,2813)	1431 (-310,3172)	2941 (2259,3624)	2017 (1504,2530)	2017 (2017,2017)	2581 (-15048,20211)
5/26/2020	2477	404 (-3259,4068)	2017 (1115,2919)	1447 (-322,3215)	3027 (2300,3755)	2017 (1457,2577)	2017 (2017,2017)	2638 (-17826,23101)
5/27/2020	2556	404 (-3308,4117)	2017 (961,3073)	1462 (-341,3264)	3115 (2350,3880)	2017 (1400,2634)	2017 (2017,2017)	2694 (-20740,26128)
5/28/2020	2641	404 (-3364,4173)	2017 (794,3240)	1477 (-367,3321)	3204 (2408,4000)	2017 (1334,2700)	2017 (2017,2017)	2750 (-23785,29286)
5/29/2020	2750	404 (-3429,4238)	2017 (580,3454)	1492 (-403,3387)	3295 (2476,4113)	2017 (1255,2779)	2017 (2017,2017)	2806 (-26956,32569)
5/30/2020	2799	404 (-3493,4302)	2017 (484,3550)	1507 (-437,3451)	3387 (2542,4232)	2017 (1181,2853)	2017 (2017,2017)	2863 (-30248,35973)
5/31/2020	2833	404 (-3552,4361)	2017 (418,3616)	1522 (-467,3511)	3482 (2604,4359)	2017 (1114,2920)	2017 (2017,2017)	2919 (-33657,39494)
6/1/2020	2951	404 (-3620,4429)	2017 (186,3848)	1537 (-506,3580)	3577 (2675,4479)	2017 (1035,2999)	2017 (2017,2017)	2975 (-37178,43128)
6/2/2020	3024	404 (-3690,4499)	2017 (43,3991)	1552 (-547,3651)	3675 (2748,4602)	2017 (956,3078)	2017 (2017,2017)	3031 (-40809,46871)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3047	2061	2075 (1961,2190)	2061 (2027,2094)	1887 (1545,2228)	2079 (1957,2202)	2060 (2025,2094)	1058 (-909,3024)	
	2109	2132 (1004,3259)	2134 (2085,2183)	1908 (1539,2277)	2138 (930,3347)	2131 (2079,2182)	1092 (-888,3072)	
	2119	2188 (-241,4616)	2178 (2119,2236)	1928 (1557,2299)	2190 (-300,4681)	2172 (2110,2234)	1112 (-866,3090)	
	2153	2244 (-1758,6246)	2244 (2170,2318)	1946 (1567,2326)	2251 (-1892,6393)	2235 (2155,2316)	1139 (-841,3119)	
	2231	2300 (-3509,8110)	2297 (2213,2382)	1963 (1551,2376)	2304 (-3682,8291)	2285 (2191,2380)	1164 (-839,3167)	
	2301	2357 (-5467,10180)	2358 (2260,2457)	1979 (1523,2436)	2361 (-5689,10411)	2342 (2230,2454)	1200 (-830,3229)	
	2341	2413 (-7614,12439)	2417 (2305,2528)	1994 (1500,2489)	2415 (-7867,12698)	2396 (2268,2524)	1239 (-810,3288)	
	2366	2469 (-9933,14871)	2476 (2351,2602)	2009 (1485,2533)	2476 (-10273,15225)	2451 (2305,2596)	1270 (-791,3331)	
	2376	2525 (-12415,17465)	2537 (2398,2676)	2023 (1478,2569)	2535 (-12868,17937)	2506 (2342,2670)	1291 (-777,3360)	
	2423	2581 (-15048,20211)	2597 (2444,2751)	2037 (1466,2607)	2587 (-15572,20746)	2560 (2377,2743)	1311 (-769,3391)	
	2477	2638 (-17826,23101)	2659 (2490,2827)	2050 (1450,2649)	2647 (-18456,23750)	2615 (2413,2817)	1343 (-750,3437)	
	2556	2694 (-20740,26128)	2721 (2537,2904)	2063 (1425,2701)	2701 (-21459,26860)	2669 (2447,2892)	1379 (-733,3491)	
	2641	2750 (-23785,29286)	2783 (2584,2982)	2075 (1389,2761)	2757 (-24594,30108)	2724 (2481,2967)	1422 (-713,3556)	
	2750	2806 (-26956,32569)	2846 (2630,3061)	2088 (1341,2834)	2811 (-27841,33464)	2779 (2515,3043)	1460 (-705,3625)	
	2799	2863 (-30248,35973)	2909 (2678,3141)	2100 (1296,2903)	2872 (-31244,36988)	2833 (2547,3119)	1501 (-692,3693)	
	2833	2919 (-33657,39494)	2973 (2725,3221)	2111 (1257,2966)	2931 (-34786,40648)	2888 (2580,3196)	1528 (-689,3745)	
	2951	2975 (-37178,43128)	3037 (2772,3302)	2123 (1205,3040)	2983 (-38413,44379)	2943 (2612,3274)	1551 (-700,3803)	
	3024	3031 (-40809,46871)	3102 (2820,3385)	2134 (1152,3116)	3043 (-42173,48260)	2997 (2643,3352)	1585 (-702,3872)	

**Table A.46**

Actual and Predicted Cases with 95% Confidence Intervals for Croatia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	2224	768 (-2084,3621)	2222 (2218,2226)	2220 (2212,2228)	2424 (2032,2816)	2221 (2215,2227)	2222 (2222,2222)	2233 (2211,2255)
5/17/2020	2226	768 (-2086,3623)	2222 (2214,2230)	2245 (2218,2271)	2437 (2034,2840)	2221 (2213,2229)	2222 (2222,2222)	2242 (2189,2295)
5/18/2020	2228	768 (-2088,3625)	2222 (2210,2234)	2269 (2218,2320)	2449 (2036,2862)	2221 (2211,2231)	2222 (2222,2222)	2251 (2155,2347)
5/19/2020	2232	768 (-2091,3628)	2222 (2202,2242)	2294 (2219,2369)	2460 (2038,2882)	2221 (2207,2235)	2222 (2222,2222)	2260 (2113,2407)
5/20/2020	2234	768 (-2094,3631)	2222 (2198,2246)	2318 (2218,2418)	2469 (2039,2899)	2221 (2204,2238)	2222 (2222,2222)	2269 (2064,2474)
5/21/2020	2237	768 (-2096,3633)	2222 (2193,2251)	2343 (2218,2467)	2477 (2040,2914)	2221 (2201,2241)	2222 (2222,2222)	2278 (2009,2547)
5/22/2020	2243	768 (-2100,3637)	2222 (2181,2263)	2368 (2220,2515)	2483 (2041,2925)	2221 (2196,2246)	2222 (2222,2222)	2287 (1949,2625)
5/23/2020	2243	768 (-2103,3640)	2222 (2181,2263)	2392 (2220,2565)	2488 (2041,2935)	2221 (2193,2249)	2222 (2222,2222)	2296 (1883,2709)
5/24/2020	2244	768 (-2105,3642)	2222 (2179,2265)	2417 (2219,2615)	2492 (2040,2943)	2221 (2191,2251)	2222 (2222,2222)	2305 (1813,2797)
5/25/2020	2244	768 (-2107,3644)	2222 (2179,2265)	2441 (2217,2665)	2494 (2039,2949)	2221 (2189,2253)	2222 (2222,2222)	2314 (1738,2890)
5/26/2020	2244	768 (-2108,3645)	2222 (2179,2265)	2466 (2215,2717)	2494 (2036,2953)	2221 (2188,2254)	2222 (2222,2222)	2323 (1659,2987)
5/27/2020	2244	768 (-2110,3647)	2222 (2179,2265)	2491 (2213,2768)	2493 (2032,2955)	2221 (2187,2255)	2222 (2222,2222)	2332 (1576,3088)
5/28/2020	2245	768 (-2111,3648)	2222 (2177,2267)	2515 (2211,2820)	2491 (2028,2954)	2221 (2185,2257)	2222 (2222,2222)	2341 (1489,3193)
5/29/2020	2245	768 (-2112,3649)	2222 (2177,2267)	2540 (2208,2871)	2486 (2023,2950)	2221 (2184,2258)	2222 (2222,2222)	2350 (1398,3302)
5/30/2020	2246	768 (-2113,3650)	2222 (2175,2269)	2564 (2206,2923)	2481 (2017,2944)	2221 (2184,2258)	2222 (2222,2222)	2359 (1303,3414)
5/31/2020	2246	768 (-2114,3651)	2222 (2175,2269)	2589 (2203,2975)	2473 (2011,2935)	2221 (2183,2259)	2222 (2222,2222)	2368 (1205,3530)
6/1/2020	2246	768 (-2115,3652)	2222 (2175,2269)	2614 (2201,3027)	2464 (2003,2924)	2221 (2182,2260)	2222 (2222,2222)	2377 (1104,3650)
6/2/2020	2246	768 (-2115,3652)	2222 (2175,2269)	2638 (2198,3079)	2452 (1995,2910)	2221 (2181,2261)	2222 (2222,2222)	2386 (999,3772)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	2224	2232 (2212,2252)	2227 (2205,2249)	2193 (2133,2254)	2224 (2220,2229)	2227 (2205,2249)	1116 (-1056,3288)	
5/17/2020	2226	2240 (2194,2286)	2230 (2194,2267)	2194 (2133,2256)	2227 (2216,2237)	2230 (2194,2267)	1117 (-1055,3290)	
5/18/2020	2228	2248 (2167,2329)	2234 (2177,2291)	2195 (2133,2257)	2226 (2212,2240)	2234 (2177,2291)	1118 (-1056,3292)	
5/19/2020	2232	2256 (2133,2379)	2238 (2157,2318)	2196 (2131,2260)	2229 (2208,2250)	2237 (2157,2318)	1120 (-1055,3295)	
5/20/2020	2234	2264 (2095,2433)	2241 (2135,2348)	2196 (2130,2263)	2232 (2199,2265)	2241 (2134,2347)	1122 (-1054,3298)	
5/21/2020	2237	2271 (2052,2491)	2245 (2110,2380)	2197 (2128,2265)	2232 (2191,2272)	2244 (2109,2379)	1124 (-1053,3301)	
5/22/2020	2243	2279 (2004,2554)	2249 (2083,2415)	2197 (2125,2269)	2237 (2182,2291)	2248 (2082,2414)	1126 (-1053,3305)	
5/23/2020	2243	2286 (1953,2619)	2253 (2054,2451)	2197 (2122,2272)	2237 (2171,2303)	2251 (2053,2450)	1128 (-1051,3308)	
5/24/2020	2244	2294 (1899,2688)	2256 (2023,2490)	2197 (2120,2274)	2239 (2160,2317)	2255 (2021,2488)	1130 (-1050,3310)	
5/25/2020	2244	2301 (1842,2760)	2260 (1990,2530)	2197 (2119,2276)	2238 (2149,2327)	2258 (1988,2528)	1131 (-1049,3311)	
5/26/2020	2244	2308 (1782,2834)	2264 (1956,2572)	2197 (2118,2277)	2240 (2140,2341)	2262 (1953,2570)	1132 (-1048,3312)	
5/27/2020	2244	2315 (1720,2910)	2268 (1920,2616)	2197 (2117,2278)	2243 (2129,2358)	2265 (1917,2614)	1134 (-1045,3314)	
5/28/2020	2245	2322 (1655,2989)	2272 (1882,2662)	2197 (2115,2279)	2243 (2116,2369)	2269 (1879,2659)	1136 (-1043,3315)	
5/29/2020	2245	2329 (1588,3070)	2276 (1843,2709)	2197 (2115,2280)	2247 (2105,2390)	2272 (1839,2706)	1138 (-1040,3317)	
5/30/2020	2246	2335 (1519,3152)	2280 (1802,2758)	2197 (2114,2281)	2247 (2090,2404)	2276 (1798,2754)	1140 (-1038,3318)	
5/31/2020	2246	2342 (1447,3237)	2284 (1760,2808)	2197 (2113,2282)	2249 (2077,2421)	2279 (1755,2804)	1142 (-1035,3319)	
6/1/2020	2246	2349 (1374,3323)	2288 (1716,2859)	2197 (2112,2282)	2248 (2063,2433)	2283 (1711,2855)	1144 (-1032,3320)	
6/2/2020	2246	2355 (1299,3411)	2292 (1671,2912)	2197 (2111,2283)	2250 (2051,2450)	2286 (1666,2907)	1146 (-1029,3321)	

Table A.47

Actual and Predicted Cases with 95% Confidence Intervals for Cuba using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1862	455 (-2302,3212)	1840 (1797,1883)	1441 (616,2266)	2283 (1458,3109)	1840 (1797,1883)	1840 (1840,1840)	1858 (1823,1894)
5/17/2020	1872	455 (-2311,3222)	1840 (1777,1903)	1458 (639,2276)	2346 (1467,3226)	1840 (1786,1894)	1840 (1840,1840)	1875 (1748,2002)
5/18/2020	1881	455 (-2321,3231)	1840 (1760,1920)	1474 (663,2286)	2411 (1475,3346)	1840 (1776,1904)	1840 (1840,1840)	1891 (1641,2141)
5/19/2020	1887	455 (-2328,3239)	1840 (1748,1932)	1491 (688,2294)	2476 (1481,3470)	1840 (1768,1912)	1840 (1840,1840)	1908 (1510,2305)
5/20/2020	1900	455 (-2338,3249)	1840 (1722,1958)	1508 (712,2304)	2542 (1489,3595)	1840 (1757,1923)	1840 (1840,1840)	1924 (1358,2490)
5/21/2020	1908	455 (-2347,3258)	1840 (1707,1973)	1524 (736,2313)	2609 (1497,3722)	1840 (1747,1933)	1840 (1840,1840)	1941 (1188,2693)
5/22/2020	1916	455 (-2356,3266)	1840 (1691,1989)	1541 (760,2323)	2678 (1503,3852)	1840 (1737,1943)	1840 (1840,1840)	1957 (1001,2913)
5/23/2020	1931	455 (-2366,3277)	1840 (1662,2018)	1558 (783,2333)	2747 (1511,3983)	1840 (1725,1955)	1840 (1840,1840)	1974 (798,3149)
5/24/2020	1941	455 (-2376,3287)	1840 (1642,2038)	1575 (805,2344)	2817 (1519,4115)	1840 (1713,1967)	1840 (1840,1840)	1990 (581,3399)
5/25/2020	1947	455 (-2385,3296)	1840 (1630,2050)	1591 (829,2354)	2889 (1526,4252)	1840 (1702,1978)	1840 (1840,1840)	2007 (351,3663)
5/26/2020	1963	455 (-2396,3307)	1840 (1599,2081)	1608 (851,2364)	2961 (1534,4388)	1840 (1690,1990)	1840 (1840,1840)	2023 (107,3939)
5/27/2020	1974	455 (-2407,3317)	1840 (1577,2103)	1625 (874,2375)	3035 (1542,4527)	1840 (1678,2002)	1840 (1840,1840)	2040 (-149,4228)
5/28/2020	1983	455 (-2417,3328)	1840 (1560,2120)	1641 (897,2386)	3109 (1550,4668)	1840 (1666,2014)	1840 (1840,1840)	2056 (-417,4529)
5/29/2020	2005	455 (-2429,3340)	1840 (1517,2163)	1658 (918,2398)	3185 (1560,4810)	1840 (1651,2029)	1840 (1840,1840)	2073 (-696,4841)
5/30/2020	2025	455 (-2442,3353)	1840 (1477,2203)	1675 (938,2412)	3262 (1572,4951)	1840 (1635,2045)	1840 (1840,1840)	2089 (-986,5164)
5/31/2020	2045	455 (-2456,3367)	1840 (1438,2242)	1692 (957,2426)	3340 (1585,5094)	1840 (1617,2063)	1840 (1840,1840)	2106 (-1287,5498)
6/1/2020	2083	455 (-2474,3384)	1840 (1364,2316)	1708 (974,2442)	3418 (1602,5235)	1840 (1595,2085)	1840 (1840,1840)	2122 (-1597,5841)
6/2/2020	2092	455 (-2490,3400)	1840 (1346,2334)	1725 (991,2458)	3499 (1617,5380)	1840 (1575,2105)	1840 (1840,1840)	2139 (-1918,6195)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3049	1862	1857 (1824,1891)	1855 (1839,1871)	1725 (1456,1994)	1853 (1827,1879)	1854 (1839,1870)	933 (-887,2753)	
	1872	1873 (1758,1988)	1867 (1839,1896)	1716 (1428,2004)	1866 (1679,2054)	1867 (1838,1895)	942 (-879,2763)	
	1881	1888 (1664,2113)	1882 (1839,1925)	1709 (1404,2014)	1879 (1486,2273)	1881 (1838,1924)	948 (-876,2772)	
	1887	1903 (1549,2258)	1895 (1836,1954)	1701 (1381,2022)	1893 (1251,2534)	1893 (1834,1953)	954 (-870,2779)	
	1900	1919 (1416,2422)	1910 (1833,1987)	1694 (1355,2033)	1906 (980,2831)	1907 (1830,1985)	959 (-870,2788)	
	1908	1934 (1267,2600)	1923 (1827,2019)	1687 (1331,2043)	1919 (678,3160)	1920 (1824,2016)	966 (-865,2798)	
	1916	1949 (1105,2792)	1938 (1822,2055)	1681 (1307,2054)	1932 (346,3518)	1934 (1817,2051)	974 (-860,2807)	
	1931	1964 (930,2997)	1952 (1814,2090)	1674 (1283,2066)	1945 (-13,3903)	1947 (1808,2085)	981 (-857,2818)	
	1941	1978 (744,3213)	1967 (1806,2128)	1669 (1259,2079)	1958 (-396,4313)	1961 (1799,2122)	989 (-852,2829)	
	1947	1993 (546,3440)	1981 (1796,2166)	1663 (1236,2090)	1971 (-803,4746)	1973 (1788,2158)	996 (-847,2839)	
	1963	2008 (339,3676)	1996 (1786,2206)	1658 (1213,2103)	1984 (-1233,5202)	1987 (1777,2197)	1003 (-843,2850)	
	1974	2022 (122,3922)	2010 (1775,2246)	1654 (1191,2117)	1998 (-1683,5678)	2000 (1763,2236)	1011 (-839,2861)	
	1983	2036 (-105,4177)	2026 (1763,2289)	1650 (1169,2130)	2011 (-2154,6176)	2014 (1750,2277)	1018 (-835,2872)	
	2005	2050 (-339,4440)	2041 (1750,2331)	1646 (1146,2145)	2024 (-2644,6692)	2026 (1735,2318)	1026 (-832,2884)	
	2025	2065 (-582,4711)	2056 (1736,2376)	1642 (1122,2162)	2037 (-3154,7227)	2040 (1719,2361)	1035 (-828,2899)	
	2045	2079 (-832,4989)	2071 (1721,2421)	1639 (1098,2181)	2050 (-3681,7781)	2053 (1702,2404)	1044 (-826,2914)	
	2083	2092 (-1090,5274)	2087 (1707,2467)	1636 (1070,2203)	2063 (-4225,8352)	2067 (1685,2448)	1054 (-825,2933)	
	2092	2106 (-1354,5567)	2102 (1690,2514)	1634 (1044,2223)	2076 (-4787,8939)	2080 (1667,2493)	1064 (-823,2951)	

**Table A.48**

Actual and Predicted Cases with 95% Confidence Intervals for Cyprus using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	914	307 (-884,1497)	910 (902,918)	896 (862,931)	1021 (811,1232)	910 (902,918)	910 (910,910)	913 (907,920)
5/17/2020	916	307 (-886,1499)	910 (898,922)	906 (878,934)	1030 (813,1247)	910 (900,920)	910 (910,910)	916 (906,927)
5/18/2020	917	307 (-887,1500)	910 (896,924)	916 (893,939)	1038 (814,1262)	910 (899,921)	910 (910,910)	919 (904,935)
5/19/2020	918	307 (-888,1502)	910 (894,926)	926 (905,948)	1046 (815,1276)	910 (897,923)	910 (910,910)	922 (902,943)
5/20/2020	922	307 (-891,1504)	910 (886,934)	936 (913,959)	1053 (817,1289)	910 (895,925)	910 (910,910)	926 (898,953)
5/21/2020	923	307 (-892,1506)	910 (885,935)	946 (918,974)	1059 (818,1301)	910 (893,927)	910 (910,910)	929 (894,963)
5/22/2020	927	307 (-895,1508)	910 (877,943)	956 (922,990)	1066 (820,1312)	910 (889,931)	910 (910,910)	932 (890,973)
5/23/2020	927	307 (-897,1510)	910 (877,943)	966 (925,1008)	1071 (820,1322)	910 (887,933)	910 (910,910)	935 (885,984)
5/24/2020	935	307 (-900,1513)	910 (861,959)	976 (929,1024)	1077 (823,1331)	910 (883,937)	910 (910,910)	938 (880,996)
5/25/2020	937	307 (-903,1516)	910 (857,963)	986 (932,1041)	1081 (824,1338)	910 (880,940)	910 (910,910)	941 (874,1008)
5/26/2020	939	307 (-906,1519)	910 (853,967)	996 (934,1058)	1086 (826,1346)	910 (876,944)	910 (910,910)	944 (868,1020)
5/27/2020	939	307 (-908,1521)	910 (853,967)	1006 (936,1077)	1089 (826,1352)	910 (874,946)	910 (910,910)	947 (862,1033)
5/28/2020	941	307 (-910,1523)	910 (849,971)	1016 (937,1095)	1092 (827,1358)	910 (871,949)	910 (910,910)	950 (855,1046)
5/29/2020	942	307 (-912,1525)	910 (847,973)	1026 (938,1114)	1095 (827,1363)	910 (869,951)	910 (910,910)	953 (848,1059)
5/30/2020	944	307 (-914,1527)	910 (843,977)	1036 (939,1133)	1097 (827,1368)	910 (867,953)	910 (910,910)	957 (840,1073)
5/31/2020	944	307 (-916,1529)	910 (843,977)	1046 (940,1153)	1099 (826,1371)	910 (865,955)	910 (910,910)	960 (832,1087)
6/1/2020	949	307 (-918,1531)	910 (834,986)	1056 (941,1171)	1100 (825,1374)	910 (863,957)	910 (910,910)	963 (824,1101)
6/2/2020	952	307 (-920,1534)	910 (828,992)	1066 (942,1190)	1100 (825,1375)	910 (860,960)	910 (910,910)	966 (815,1116)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3050	914	913 (907,918)	913 (901,924)	903 (882,924)	913 (907,918)	913 (901,924)	458 (-437,1352)	
	916	916 (907,924)	915 (895,936)	904 (882,926)	915 (903,927)	915 (894,936)	459 (-436,1354)	
	917	918 (906,931)	918 (887,949)	905 (882,928)	916 (898,934)	918 (887,949)	461 (-434,1355)	
	918	921 (904,938)	921 (879,963)	905 (882,929)	920 (890,949)	920 (878,963)	462 (-433,1356)	
	922	923 (901,946)	924 (869,978)	906 (880,931)	922 (881,962)	923 (869,977)	462 (-434,1358)	
	923	926 (899,953)	926 (859,993)	906 (879,933)	924 (871,977)	926 (859,993)	464 (-432,1361)	
	927	929 (896,961)	929 (848,1010)	907 (877,936)	926 (860,992)	928 (847,1009)	466 (-432,1363)	
	927	931 (892,970)	932 (837,1027)	907 (876,937)	928 (849,1008)	931 (836,1026)	467 (-431,1366)	
	935	933 (889,978)	935 (824,1045)	907 (873,941)	930 (836,1024)	934 (823,1044)	468 (-432,1368)	
	937	936 (885,987)	938 (811,1064)	907 (870,945)	931 (824,1038)	936 (809,1063)	471 (-430,1372)	
	939	938 (880,996)	941 (797,1084)	908 (868,948)	934 (811,1057)	939 (795,1082)	472 (-431,1375)	
	939	941 (876,1005)	944 (783,1104)	908 (866,950)	936 (797,1074)	941 (780,1102)	474 (-430,1377)	
	941	943 (871,1014)	946 (768,1125)	908 (864,952)	938 (783,1093)	944 (765,1123)	474 (-430,1378)	
	942	945 (866,1024)	949 (752,1147)	908 (862,954)	940 (768,1111)	947 (749,1144)	475 (-430,1380)	
	944	947 (861,1033)	952 (736,1169)	908 (860,956)	942 (753,1130)	949 (732,1166)	477 (-429,1382)	
	944	949 (856,1043)	955 (719,1192)	908 (859,958)	943 (737,1149)	952 (715,1189)	479 (-428,1385)	
	949	952 (850,1053)	958 (701,1216)	909 (856,961)	944 (722,1166)	954 (697,1212)	480 (-427,1387)	
	952	954 (845,1063)	962 (683,1240)	909 (854,963)	946 (706,1186)	957 (679,1235)	482 (-426,1390)	

**Table A.49**

Actual and Predicted Cases with 95% Confidence Intervals for Czechia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	8455	307 (-884,1497)	910 (902,918)	896 (862,931)	1021 (811,1232)	910 (902,918)	910 (910,910)	913 (907,920)	
5/17/2020	8475	307 (-886,1499)	910 (898,922)	906 (878,934)	1030 (813,1247)	910 (900,920)	910 (910,910)	916 (906,927)	
5/18/2020	8586	307 (-887,1500)	910 (896,924)	916 (893,939)	1038 (814,1262)	910 (899,921)	910 (910,910)	919 (904,935)	
5/19/2020	8647	307 (-888,1502)	910 (894,926)	926 (905,948)	1046 (815,1276)	910 (897,923)	910 (910,910)	922 (902,943)	
5/20/2020	8721	307 (-891,1504)	910 (886,934)	936 (913,959)	1053 (817,1289)	910 (895,925)	910 (910,910)	926 (898,953)	
5/21/2020	8754	307 (-892,1506)	910 (885,935)	946 (918,974)	1059 (818,1301)	910 (893,927)	910 (910,910)	929 (894,963)	
5/22/2020	8813	307 (-895,1508)	910 (877,943)	956 (922,990)	1066 (820,1312)	910 (889,931)	910 (910,910)	932 (890,973)	
5/23/2020	8890	307 (-897,1510)	910 (877,943)	966 (925,1008)	1071 (820,1322)	910 (887,933)	910 (910,910)	935 (885,984)	
5/24/2020	8955	307 (-900,1513)	910 (861,959)	976 (929,1024)	1077 (823,1331)	910 (883,937)	910 (910,910)	938 (880,996)	
5/25/2020	9002	307 (-903,1516)	910 (857,963)	986 (932,1041)	1081 (824,1338)	910 (880,940)	910 (910,910)	941 (874,1008)	
5/26/2020	9050	307 (-906,1519)	910 (853,967)	996 (934,1058)	1086 (826,1346)	910 (876,944)	910 (910,910)	944 (868,1020)	
5/27/2020	9086	307 (-908,1521)	910 (853,967)	1006 (936,1077)	1089 (826,1352)	910 (874,946)	910 (910,910)	947 (862,1033)	
5/28/2020	9140	307 (-910,1523)	910 (849,971)	1016 (937,1095)	1092 (827,1358)	910 (871,949)	910 (910,910)	950 (855,1046)	
5/29/2020	9196	307 (-912,1525)	910 (847,973)	1026 (938,1114)	1095 (827,1363)	910 (869,951)	910 (910,910)	953 (848,1059)	
5/30/2020	9230	307 (-914,1527)	910 (843,977)	1036 (939,1133)	1097 (827,1368)	910 (867,953)	910 (910,910)	957 (840,1073)	
5/31/2020	9268	307 (-916,1529)	910 (843,977)	1046 (940,1153)	1099 (826,1371)	910 (865,955)	910 (910,910)	960 (832,1087)	
6/1/2020	9302	307 (-918,1531)	910 (834,986)	1056 (941,1171)	1100 (825,1374)	910 (863,957)	910 (910,910)	963 (824,1101)	
6/2/2020	9364	307 (-920,1534)	910 (828,992)	1066 (942,1190)	1100 (825,1375)	910 (860,960)	910 (910,910)	966 (815,1116)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3051	8455	913 (907,918)	8468 (8377,8559)	888 (836,939)	913 (907,918)	8467 (8376,8558)	4235 (-2274,10744)		
	8475	916 (907,924)	8525 (8362,8687)	886 (832,941)	915 (903,927)	8522 (8359,8685)	4264 (-2272,10799)		
	8586	918 (906,931)	8587 (8342,8833)	885 (828,943)	916 (898,934)	8582 (8336,8828)	4295 (-2269,10859)		
	8647	921 (904,938)	8646 (8316,8975)	884 (825,944)	920 (890,949)	8638 (8308,8967)	4324 (-2268,10916)		
	8721	923 (901,946)	8709 (8286,9132)	883 (820,946)	922 (881,962)	8697 (8274,9121)	4355 (-2265,10975)		
	8754	926 (899,953)	8769 (8250,9287)	882 (816,948)	924 (871,977)	8753 (8234,9273)	4385 (-2263,11033)		
	8813	929 (896,961)	8833 (8210,9456)	881 (811,951)	926 (860,992)	8813 (8189,9437)	4417 (-2258,11093)		
	8890	931 (892,970)	8894 (8163,9624)	880 (806,953)	928 (849,1008)	8869 (8137,9601)	4448 (-2256,11153)		
	8955	933 (889,978)	8959 (8113,9804)	879 (800,957)	930 (836,1024)	8928 (8081,9775)	4480 (-2252,11212)		
	9002	936 (885,987)	9021 (8057,9985)	878 (795,961)	931 (824,1038)	8985 (8019,9950)	4513 (-2248,11273)		
	9050	938 (880,996)	9087 (7998,10175)	877 (790,964)	934 (811,1057)	9044 (7953,10134)	4545 (-2244,11334)		
	9086	941 (876,1005)	9150 (7934,10367)	876 (786,967)	936 (797,1074)	9100 (7882,10319)	4577 (-2241,11395)		
	9140	943 (871,1014)	9217 (7867,10567)	875 (781,970)	938 (783,1093)	9159 (7806,10512)	4609 (-2238,11456)		
	9196	945 (866,1024)	9282 (7794,10769)	875 (778,972)	940 (768,1111)	9216 (7726,10706)	4642 (-2235,11518)		
	9230	947 (861,1033)	9349 (7719,10980)	874 (774,975)	942 (753,1130)	9275 (7641,10908)	4675 (-2232,11582)		
	9268	949 (856,1043)	9415 (7639,11191)	874 (770,977)	943 (737,1149)	9332 (7552,11111)	4708 (-2229,11646)		
	9302	952 (850,1053)	9484 (7557,11411)	873 (767,979)	944 (722,1166)	9390 (7460,11321)	4742 (-2225,11710)		
	9364	954 (845,1063)	9551 (7470,11632)	873 (763,982)	946 (706,1186)	9447 (7362,11532)	4777 (-2221,11774)		

**Table A.50**

Actual and Predicted Cases with 95% Confidence Intervals for Denmark using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	11056	3402 (-11600,18404)	10989 (10858,11120)	9907 (7656,12159)	12203 (9955,14452)	10989 (10858,11120)	10989 (10989,10989)	11083 (10898,11268)	
5/17/2020	11125	3402 (-11667,18472)	10989 (10722,11256)	10017 (7806,12229)	12378 (10023,14733)	10989 (10779,11199)	10989 (10989,10989)	11172 (8398,13946)	
5/18/2020	11166	3402 (-11717,18521)	10989 (10642,11336)	10128 (7973,12282)	12551 (10071,15032)	10989 (10725,11253)	10989 (10989,10989)	11261 (5200,17321)	
5/19/2020	11242	3402 (-11779,18583)	10989 (10493,11485)	10238 (8129,12347)	12723 (10130,15316)	10989 (10652,11326)	10989 (10989,10989)	11349 (1306,21392)	
5/20/2020	11315	3402 (-11845,18649)	10989 (10350,11628)	10348 (8280,12416)	12893 (10193,15593)	10989 (10574,11404)	10989 (10989,10989)	11438 (-3186,26061)	
5/21/2020	11380	3402 (-11911,18715)	10989 (10223,11755)	10458 (8432,12485)	13061 (10253,15870)	10989 (10497,11481)	10989 (10989,10989)	11526 (-8206,31259)	
5/22/2020	11428	3402 (-11971,18775)	10989 (10129,11849)	10569 (8587,12550)	13228 (10306,16150)	10989 (10430,11548)	10989 (10989,10989)	11615 (-13707,36937)	
5/23/2020	11487	3402 (-12031,18835)	10989 (10013,11965)	10679 (8743,12615)	13393 (10357,16428)	10989 (10362,11616)	10989 (10989,10989)	11703 (-19651,43058)	
5/24/2020	11559	3402 (-12094,18898)	10989 (9872,12106)	10789 (8896,12683)	13556 (10410,16701)	10989 (10290,11688)	10989 (10989,10989)	11792 (-26006,49590)	
5/25/2020	11586	3402 (-12149,18953)	10989 (9819,12159)	10900 (9053,12746)	13716 (10454,16979)	10989 (10230,11748)	10989 (10989,10989)	11881 (-32749,56511)	
5/26/2020	11627	3402 (-12202,19006)	10989 (9739,12239)	11010 (9212,12807)	13875 (10492,17258)	10989 (10173,11805)	10989 (10989,10989)	11969 (-39859,63798)	
5/27/2020	11680	3402 (-12254,19059)	10989 (9635,12343)	11120 (9370,12870)	14032 (10530,17534)	10989 (10115,11863)	10989 (10989,10989)	12058 (-47318,71434)	
5/28/2020	11712	3402 (-12304,19108)	10989 (9572,12406)	11230 (9529,12932)	14186 (10563,17810)	10989 (10062,11916)	10989 (10989,10989)	12146 (-55110,79403)	
5/29/2020	11793	3402 (-12358,19162)	10989 (9413,12565)	11341 (9684,12997)	14339 (10601,18076)	10989 (10002,11976)	10989 (10989,10989)	12235 (-63223,87693)	
5/30/2020	11833	3402 (-12410,19214)	10989 (9335,12643)	11451 (9839,13063)	14488 (10636,18341)	10989 (9944,12034)	10989 (10989,10989)	12324 (-71643,96291)	
5/31/2020	11869	3402 (-12460,19264)	10989 (9264,12714)	11561 (9993,13129)	14636 (10667,18605)	10989 (9889,12089)	10989 (10989,10989)	12412 (-80361,105185)	
6/1/2020	11899	3402 (-12508,19312)	10989 (9205,12773)	11671 (10146,13197)	14781 (10694,18868)	10989 (9837,12141)	10989 (10989,10989)	12501 (-89366,114368)	
6/2/2020	11934	3402 (-12554,19358)	10989 (9137,12841)	11782 (10298,13266)	14923 (10718,19128)	10989 (9788,12190)	10989 (10989,10989)	12589 (-98650,123829)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Surtte-Arima		
3052	11056	11078 (10903,11253)	11082 (11015,11150)	10234 (8623,11845)	11063 (10918,11207)	11076 (11008,11143)	5575 (-5169,16318)		
	11125	11162 (8668,13656)	11155 (11009,11300)	10187 (8459,11915)	11136 (2032,20241)	11147 (11001,11293)	5609 (-5168,16387)		
	11166	11245 (5820,16671)	11246 (11014,11478)	10143 (8318,11968)	11210 (-9015,31435)	11231 (10999,11463)	5659 (-5124,16442)		
	11242	11328 (2367,20289)	11323 (10988,11657)	10096 (8157,12035)	11284 (-22469,45036)	11305 (10971,11638)	5691 (-5116,16498)		
	11315	11410 (-1597,24418)	11414 (10968,11859)	10047 (7986,12107)	11357 (-37968,60683)	11386 (10943,11830)	5738 (-5094,16570)		
	11380	11492 (-6008,28991)	11494 (10925,12062)	9997 (7815,12179)	11431 (-55285,78147)	11462 (10897,12027)	5779 (-5078,16635)		
	11428	11573 (-10818,33964)	11584 (10885,12283)	9948 (7650,12247)	11505 (-74248,97258)	11542 (10847,12237)	5828 (-5046,16702)		
	11487	11653 (-15992,39298)	11667 (10827,12507)	9900 (7485,12315)	11578 (-94725,117882)	11619 (10785,12453)	5865 (-5028,16757)		
	11559	11732 (-21499,44964)	11758 (10770,12745)	9853 (7319,12388)	11652 (-116614,139918)	11699 (10718,12680)	5908 (-5005,16821)		
	11586	11811 (-27315,50938)	11843 (10699,12987)	9809 (7163,12454)	11726 (-139829,163281)	11776 (10640,12912)	5952 (-4974,16877)		
	11627	11890 (-33419,57199)	11935 (10627,13242)	9766 (7014,12517)	11799 (-164302,187901)	11855 (10557,13153)	5994 (-4943,16930)		
	11680	11968 (-39794,63729)	12022 (10544,13500)	9724 (6867,12582)	11873 (-189965,213710)	11932 (10465,13399)	6034 (-4913,16982)		
	11712	12045 (-46423,70513)	12114 (10459,13770)	9685 (6727,12643)	11946 (-216766,240659)	12011 (10368,13654)	6077 (-4877,17032)		
	11793	12122 (-53292,77536)	12204 (10364,14044)	9647 (6583,12711)	12020 (-244662,268702)	12089 (10264,13914)	6123 (-4843,17089)		
	11833	12198 (-60391,84787)	12297 (10267,14327)	9611 (6444,12777)	12094 (-273608,297796)	12168 (10154,14181)	6176 (-4798,17151)		
	11869	12274 (-67706,92253)	12388 (10162,14615)	9576 (6310,12842)	12167 (-303570,327905)	12245 (10037,14454)	6220 (-4761,17200)		
	11899	12349 (-75228,99925)	12483 (10054,14912)	9543 (6183,12903)	12241 (-334515,358996)	12324 (9915,14733)	6268 (-4716,17251)		
	11934	12423 (-82947,107793)	12576 (9938,15213)	9511 (6059,12963)	12314 (-366412,391041)	12402 (9787,15017)	6306 (-4681,17292)		

**Table A.51**

Actual and Predicted Cases with 95% Confidence Intervals for Djibouti using the Time Series Models.

Predicted Cases (95% Confidence Interval)									
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1331	297 (-1731,2324)	1309 (1266,1352)	967 (255,1680)	1651 (1024,2278)	1309 (1266,1352)	1309 (1309,1309)	1327 (1292,1362)	
5/17/2020	1401	297 (-1801,2394)	1309 (1129,1489)	979 (207,1751)	1702 (1093,2311)	1309 (1178,1440)	1309 (1309,1309)	1346 (1206,1486)	
5/18/2020	1518	297 (-1904,2497)	1309 (899,1719)	990 (122,1859)	1754 (1190,2319)	1309 (1049,1569)	1309 (1309,1309)	1365 (1084,1646)	
5/19/2020	1618	297 (-2008,2601)	1309 (703,1915)	1002 (37,1966)	1807 (1284,2330)	1309 (932,1686)	1309 (1309,1309)	1384 (934,1834)	
5/20/2020	1828	297 (-2163,2756)	1309 (292,2326)	1013 (-107,2133)	1861 (1393,2330)	1309 (743,1875)	1309 (1309,1309)	1404 (761,2046)	
5/21/2020	2047	297 (-2350,2943)	1309 (-137,2755)	1024 (-286,2334)	1916 (1476,2356)	1309 (524,2094)	1309 (1309,1309)	1423 (566,2280)	
5/22/2020	2270	297 (-2557,3150)	1309 (-575,3193)	1036 (-483,2554)	1972 (1508,2436)	1309 (292,2326)	1309 (1309,1309)	1442 (351,2532)	
5/23/2020	2270	297 (-2702,3295)	1309 (-575,3193)	1047 (-607,2701)	2029 (1564,2494)	1309 (148,2470)	1309 (1309,1309)	1461 (119,2803)	
5/24/2020	2270	297 (-2811,3404)	1309 (-575,3193)	1058 (-691,2807)	2087 (1633,2541)	1309 (47,2571)	1309 (1309,1309)	1480 (-130,3090)	
5/25/2020	2468	297 (-2944,3537)	1309 (-963,3581)	1070 (-802,2942)	2146 (1671,2621)	1309 (-87,2705)	1309 (1309,1309)	1499 (-395,3393)	
5/26/2020	2468	297 (-3049,3642)	1309 (-963,3581)	1081 (-883,3045)	2206 (1727,2684)	1309 (-188,2806)	1309 (1309,1309)	1518 (-675,3711)	
5/27/2020	2697	297 (-3183,3776)	1309 (-1411,4029)	1092 (-996,3181)	2267 (1748,2786)	1309 (-326,2944)	1309 (1309,1309)	1538 (-969,4044)	
5/28/2020	2914	297 (-3337,3930)	1309 (-1837,4455)	1104 (-1131,3338)	2329 (1737,2920)	1309 (-488,3106)	1309 (1309,1309)	1557 (-1276,4390)	
5/29/2020	2914	297 (-3463,4056)	1309 (-1837,4455)	1115 (-1235,3466)	2392 (1759,3024)	1309 (-616,3234)	1309 (1309,1309)	1576 (-1597,4749)	
5/30/2020	3194	297 (-3621,4214)	1309 (-2386,5004)	1127 (-1374,3627)	2456 (1739,3172)	1309 (-781,3399)	1309 (1309,1309)	1595 (-1930,5120)	
5/31/2020	3354	297 (-3781,4374)	1309 (-2699,5317)	1138 (-1515,3791)	2521 (1716,3325)	1309 (-949,3567)	1309 (1309,1309)	1614 (-2275,5504)	
6/1/2020	3569	297 (-3955,4548)	1309 (-3121,5739)	1149 (-1670,3969)	2587 (1677,3496)	1309 (-1131,3749)	1309 (1309,1309)	1633 (-2632,5899)	
6/2/2020	3779	297 (-4137,4730)	1309 (-3532,6150)	1161 (-1834,4156)	2654 (1629,3679)	1309 (-1322,3940)	1309 (1309,1309)	1652 (-3001,6306)	
Predicted Cases (95% Confidence Interval)									
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	1331	1323 (1296,1350)	1329 (1289,1368)	1244 (1074,1414)	1323 (1295,1351)	1326 (1286,1365)	673 (-616,1962)		
5/17/2020	1401	1338 (1245,1431)	1349 (1287,1411)	1246 (999,1492)	1339 (1082,1596)	1347 (1285,1409)	685 (-662,2032)		
5/18/2020	1518	1353 (1174,1531)	1372 (1278,1465)	1246 (878,1614)	1353 (821,1884)	1366 (1273,1460)	706 (-728,2139)		
5/19/2020	1618	1367 (1088,1645)	1392 (1264,1520)	1244 (759,1730)	1365 (522,2208)	1386 (1256,1516)	732 (-783,2247)		
5/20/2020	1828	1380 (991,1770)	1415 (1249,1581)	1242 (570,1915)	1376 (199,2553)	1406 (1238,1575)	757 (-892,2405)		
5/21/2020	2047	1393 (884,1902)	1435 (1228,1643)	1240 (349,2131)	1386 (-141,2913)	1426 (1214,1638)	792 (-1017,2601)		
5/22/2020	2270	1405 (768,2042)	1459 (1208,1710)	1237 (112,2362)	1395 (-491,3281)	1446 (1189,1703)	822 (-1167,2811)		
5/23/2020	2270	1417 (647,2187)	1480 (1181,1778)	1234 (-40,2508)	1403 (-847,3653)	1466 (1160,1772)	855 (-1248,2958)		
5/24/2020	2270	1428 (519,2337)	1503 (1156,1851)	1231 (-148,2611)	1410 (-1206,4026)	1486 (1128,1843)	829 (-1366,3024)		
5/25/2020	2468	1439 (387,2491)	1525 (1125,1925)	1229 (-289,2746)	1416 (-1566,4398)	1506 (1094,1917)	801 (-1523,3126)		
5/26/2020	2468	1449 (250,2648)	1548 (1094,2002)	1226 (-396,2849)	1422 (-1924,4768)	1525 (1057,1994)	808 (-1615,3232)		
5/27/2020	2697	1459 (110,2808)	1570 (1060,2081)	1224 (-539,2987)	1427 (-2280,5134)	1545 (1018,2073)	820 (-1732,3372)		
5/28/2020	2914	1469 (-33,2970)	1594 (1025,2164)	1222 (-705,3149)	1432 (-2632,5495)	1565 (976,2154)	871 (-1820,3563)		
5/29/2020	2914	1478 (-179,3134)	1617 (986,2247)	1220 (-838,3278)	1436 (-2979,5850)	1585 (933,2237)	886 (-1917,3689)		
5/30/2020	3194	1486 (-327,3299)	1641 (947,2334)	1218 (-1007,3444)	1439 (-3321,6200)	1605 (887,2323)	898 (-2049,3844)		
5/31/2020	3354	1495 (-476,3466)	1664 (906,2422)	1217 (-1179,3613)	1443 (-3658,6543)	1625 (839,2410)	918 (-2174,4011)		
6/1/2020	3569	1503 (-628,3633)	1688 (863,2513)	1216 (-1364,3795)	1446 (-3988,6880)	1645 (789,2500)	920 (-2333,4174)		
6/2/2020	3779	1510 (-780,3801)	1712 (818,2606)	1215 (-1558,3987)	1448 (-4313,7210)	1664 (738,2591)	969 (-2449,4387)		

**Table A.52**

Actual and Predicted Cases with 95% Confidence Intervals for Dominica using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	16	7 (-11,25)	16 (16,16)	19 (13,24)	15 (13,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/17/2020	16	7 (-11,25)	16 (16,16)	19 (13,24)	15 (13,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/18/2020	16	7 (-11,25)	16 (16,16)	19 (13,25)	15 (12,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/19/2020	16	7 (-11,25)	16 (16,16)	19 (13,25)	14 (12,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/20/2020	16	7 (-11,25)	16 (16,16)	19 (13,26)	14 (11,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/21/2020	16	7 (-11,25)	16 (16,16)	20 (13,26)	13 (10,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/22/2020	16	7 (-11,25)	16 (16,16)	20 (13,26)	13 (9,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/23/2020	16	7 (-11,25)	16 (16,16)	20 (13,27)	13 (8,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/24/2020	16	7 (-11,25)	16 (16,16)	20 (13,27)	12 (7,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/25/2020	16	7 (-11,25)	16 (16,16)	21 (13,28)	12 (6,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/26/2020	16	7 (-11,25)	16 (16,16)	21 (13,28)	11 (5,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/27/2020	16	7 (-11,25)	16 (16,16)	21 (13,28)	11 (4,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/28/2020	16	7 (-11,25)	16 (16,16)	21 (13,29)	10 (3,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/29/2020	16	7 (-11,25)	16 (16,16)	21 (13,29)	9 (2,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/30/2020	16	7 (-11,25)	16 (16,16)	22 (13,30)	9 (0,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/31/2020	16	7 (-11,25)	16 (16,16)	22 (13,30)	8 (-1,17)	16 (16,16)	16 (16,16)	16 (16,16)
6/1/2020	16	7 (-11,25)	16 (16,16)	22 (13,31)	7 (-2,17)	16 (16,16)	16 (16,16)	16 (16,16)
6/2/2020	18	7 (-12,25)	16 (12,20)	22 (13,31)	7 (-4,17)	16 (15,17)	16 (16,16)	16 (16,16)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	16	16 (16,16)	16 (15,17)	16 (16,16)	16 (16,16)	16 (15,17)	8 (-7,24)	
5/17/2020	16	16 (16,16)	16 (14,18)	16 (16,16)	16 (16,16)	16 (14,18)	8 (-7,24)	
5/18/2020	16	16 (16,16)	17 (14,19)	16 (16,16)	16 (16,16)	16 (13,19)	8 (-7,24)	
5/19/2020	16	16 (16,16)	17 (14,20)	16 (16,16)	16 (16,16)	16 (13,20)	8 (-7,24)	
5/20/2020	16	16 (16,16)	17 (13,20)	16 (16,16)	16 (16,16)	16 (12,20)	8 (-7,24)	
5/21/2020	16	16 (16,16)	17 (13,21)	16 (16,16)	16 (16,16)	16 (12,21)	9 (-6,24)	
5/22/2020	16	16 (16,16)	17 (13,22)	16 (16,16)	16 (16,16)	16 (11,21)	9 (-6,24)	
5/23/2020	16	16 (16,16)	18 (13,22)	16 (16,17)	16 (16,16)	16 (11,22)	9 (-6,24)	
5/24/2020	16	16 (16,16)	18 (13,23)	16 (16,17)	16 (16,16)	16 (10,23)	9 (-6,24)	
5/25/2020	16	16 (16,16)	18 (13,23)	16 (16,17)	16 (16,16)	16 (10,23)	9 (-6,24)	
5/26/2020	16	16 (16,16)	18 (13,24)	16 (16,17)	16 (16,16)	16 (9,24)	9 (-5,24)	
5/27/2020	16	16 (16,16)	18 (13,24)	16 (16,17)	16 (16,16)	16 (8,24)	9 (-5,24)	
5/28/2020	16	16 (16,16)	19 (13,25)	16 (16,17)	16 (16,16)	16 (8,25)	9 (-5,24)	
5/29/2020	16	16 (16,16)	19 (13,25)	16 (16,17)	16 (16,16)	16 (7,25)	9 (-5,24)	
5/30/2020	16	16 (16,16)	19 (13,25)	16 (16,17)	16 (16,16)	16 (7,26)	10 (-5,24)	
5/31/2020	16	16 (16,16)	19 (13,26)	16 (16,17)	16 (16,16)	16 (6,27)	10 (-4,24)	
6/1/2020	16	16 (16,16)	20 (13,26)	16 (16,17)	16 (16,16)	17 (6,27)	10 (-4,24)	
6/2/2020	18	16 (16,16)	20 (13,27)	16 (15,17)	16 (16,16)	17 (5,28)	10 (-4,24)	

**Table A.53**

Actual and Predicted Cases with 95% Confidence Intervals for Dominican Republic using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	12110	2304 (-16917,21524)	11739 (11012,12466)	7396 (-1844,16636)	13054 (11204,14905)	11739 (11012,12466)	11739 (11739,11739)	12026 (11464,12587)	
5/17/2020	12314	2304 (-17118,21725)	11739 (10612,12866)	7482 (-1874,16838)	13491 (11400,15582)	11739 (10791,12687)	11739 (11739,11739)	12330 (-15454,40113)	
5/18/2020	12725	2304 (-17459,22066)	11739 (9806,13672)	7568 (-2044,17181)	13936 (11747,16126)	11739 (10381,13097)	11739 (11739,11739)	12634 (-49081,74348)	
5/19/2020	13223	2304 (-17881,22488)	11739 (8830,14648)	7655 (-2299,17609)	14392 (12176,16607)	11739 (9869,13609)	11739 (11739,11739)	12938 (-90039,115914)	
5/20/2020	13477	2304 (-18236,22843)	11739 (8333,15145)	7741 (-2483,17966)	14856 (12535,17178)	11739 (9476,14002)	11739 (11739,11739)	13242 (-137265,163748)	
5/21/2020	13657	2304 (-18531,23138)	11739 (7980,15498)	7827 (-2607,18262)	15331 (12824,17837)	11739 (9166,14312)	11739 (11739,11739)	13546 (-190038,217130)	
5/22/2020	13989	2304 (-18839,23446)	11739 (7329,16149)	7914 (-2744,18571)	15815 (13129,18501)	11739 (8831,14647)	11739 (11739,11739)	13850 (-247838,275538)	
5/23/2020	14422	2304 (-19183,23790)	11739 (6480,16998)	8000 (-2917,18917)	16308 (13476,19141)	11739 (8444,15034)	11739 (11739,11739)	14154 (-310266,338574)	
5/24/2020	14801	2304 (-19537,24144)	11739 (5737,17741)	8086 (-3102,19275)	16812 (13836,19788)	11739 (8044,15434)	11739 (11739,11739)	14458 (-377005,405921)	
5/25/2020	15073	2304 (-19877,24484)	11739 (5204,18274)	8173 (-3271,19616)	17326 (14176,20476)	11739 (7670,15808)	11739 (11739,11739)	14762 (-447796,477319)	
5/26/2020	15264	2304 (-20189,24796)	11739 (4830,18648)	8259 (-3411,19929)	17849 (14480,21219)	11739 (7336,16142)	11739 (11739,11739)	15066 (-522419,552551)	
5/27/2020	15723	2304 (-20531,25138)	11739 (3930,19548)	8345 (-3582,20273)	18383 (14823,21943)	11739 (6958,16520)	11739 (11739,11739)	15370 (-600690,631429)	
5/28/2020	16068	2304 (-20876,25483)	11739 (3254,20224)	8432 (-3757,20620)	18927 (15171,22684)	11739 (6578,16900)	11739 (11739,11739)	15674 (-682445,713793)	
5/29/2020	16531	2304 (-21243,25850)	11739 (2347,21131)	8518 (-3955,20990)	19482 (15545,23418)	11739 (6168,17310)	11739 (11739,11739)	15978 (-767544,799500)	
5/30/2020	16908	2304 (-21615,26222)	11739 (1608,21870)	8604 (-4157,21366)	20047 (15925,24168)	11739 (5755,17723)	11739 (11739,11739)	16282 (-855861,888425)	
5/31/2020	17285	2304 (-21991,26598)	11739 (869,22609)	8691 (-4364,21745)	20622 (16310,24935)	11739 (5339,18139)	11739 (11739,11739)	16586 (-947283,980454)	
6/1/2020	17572	2304 (-22358,26965)	11739 (306,23172)	8777 (-4560,22113)	21209 (16682,25735)	11739 (4939,18539)	11739 (11739,11739)	16890 (-1041708,1075488)	
6/2/2020	17752	2304 (-22703,27310)	11739 (-46,23524)	8863 (-4733,22459)	21805 (17024,26587)	11739 (4571,18907)	11739 (11739,11739)	17194 (-1139044,1173432)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	12110	12026 (11464,12587)	12045 (11927,12164)	11545 (10438,12652)	12027 (11463,12591)	12039 (11919,12160)	6165 (-5489,17818)		
5/17/2020	12314	12330 (-15454,40113)	12372 (12193,12551)	11779 (10700,12857)	12348 (-33346,58042)	12354 (12161,12547)	6341 (-5340,18021)		
5/18/2020	12725	12634 (-49081,74348)	12695 (12454,12937)	12015 (10824,13207)	12619 (-82820,108058)	12654 (12388,12921)	6516 (-5330,18362)		
5/19/2020	13223	12938 (-90039,115914)	13024 (12719,13328)	12250 (10844,13655)	12908 (-143943,169759)	12969 (12627,13311)	6679 (-5420,18777)		
5/20/2020	13477	13242 (-137265,163748)	13354 (12984,13724)	12483 (10953,14012)	13241 (-219114,245597)	13270 (12848,13691)	6866 (-5410,19141)		
5/21/2020	13657	13546 (-190038,217130)	13688 (13250,14127)	12715 (11128,14302)	13533 (-301347,328414)	13584 (13080,14088)	7041 (-5352,19434)		
5/22/2020	13989	13850 (-247838,275538)	14025 (13515,14534)	12947 (11287,14606)	13853 (-392869,420574)	13885 (13293,14476)	7170 (-5367,19707)		
5/23/2020	14422	14154 (-310266,338574)	14364 (13780,14948)	13180 (11405,14955)	14147 (-490601,518896)	14199 (13517,14881)	7311 (-5409,20031)		
5/24/2020	14801	14458 (-377005,405921)	14706 (14046,15367)	13414 (11512,15317)	14468 (-596378,625314)	14500 (13723,15277)	7513 (-5391,20416)		
5/25/2020	15073	14762 (-447796,477319)	15052 (14312,15792)	13649 (11640,15659)	14739 (-705774,735251)	14814 (13939,15689)	7719 (-5343,20782)		
5/26/2020	15264	15066 (-522419,552551)	15400 (14578,16222)	13885 (11803,15967)	15027 (-820355,850410)	15115 (14138,16092)	7883 (-5314,21079)		
5/27/2020	15723	15370 (-600690,631429)	15751 (14844,16658)	14121 (11932,16311)	15361 (-943006,973728)	15429 (14347,16512)	8017 (-5349,21383)		
5/28/2020	16068	15674 (-682445,713793)	16105 (15110,17099)	14357 (12056,16657)	15653 (-1070312,1101617)	15730 (14538,16922)	8208 (-5326,21741)		
5/29/2020	16531	15978 (-767544,799500)	16461 (15377,17546)	14591 (12152,17029)	15972 (-1203883,1235827)	16044 (14741,17348)	8399 (-5321,22118)		
5/30/2020	16908	16282 (-855861,888425)	16821 (15645,17998)	14825 (12244,17406)	16266 (-1341876,1374409)	16345 (14926,17765)	8625 (-5277,22526)		
5/31/2020	17285	16586 (-947283,980454)	17184 (15912,18455)	15061 (12335,17787)	16587 (-1485725,1518898)	16659 (15122,18197)	8792 (-5297,22880)		
6/1/2020	17572	16890 (-1041708,1075488)	17549 (16181,18917)	15297 (12440,18155)	16857 (-1632273,1665987)	16960 (15301,18620)	8980 (-5285,23245)		
6/2/2020	17752	17194 (-1139044,1173432)	17917 (16450,19385)	15535 (12575,18495)	17146 (-1782643,1816934)	17274 (15491,19058)	9134 (-5290,23558)		

**Table A.54**

Actual and Predicted Cases with 95% Confidence Intervals for Ecuador using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	32763	6841 (-43965,57648)	31467 (28927,34007)	22310 (1822,42798)	40669 (25173,56166)	31881 (30152,33610)	31467 (31467,31467)	31634 (31307,31961)	
5/17/2020	33182	6841 (-44378,58060)	31467 (28106,34828)	22572 (1929,43215)	42077 (25583,58571)	31881 (29703,34059)	31467 (31467,31467)	31946 (15326,48567)	
5/18/2020	33582	6841 (-44778,58461)	31467 (27322,35612)	22834 (2050,43619)	43516 (25973,61058)	31881 (29260,34502)	31467 (31467,31467)	32258 (-4666,69183)	
5/19/2020	34151	6841 (-45262,58944)	31467 (26206,36728)	23096 (2088,44105)	44986 (26451,63521)	31881 (28703,35059)	31467 (31467,31467)	32571 (-29047,94188)	
5/20/2020	34854	6841 (-45834,59517)	31467 (24828,38106)	23359 (2037,44680)	46487 (27024,65950)	31881 (28025,35737)	31467 (31467,31467)	32883 (-57178,122944)	
5/21/2020	35306	6841 (-46366,60049)	31467 (23943,38991)	23621 (2027,45214)	48020 (27546,68494)	31881 (27420,36342)	31467 (31467,31467)	33195 (-88630,155020)	
5/22/2020	35828	6841 (-46896,60579)	31467 (22919,40015)	23883 (2020,45745)	49586 (28064,71107)	31881 (26820,36942)	31467 (31467,31467)	33507 (-123090,190105)	
5/23/2020	36258	6841 (-47402,61084)	31467 (22077,40857)	24145 (2039,46251)	51183 (28550,73816)	31881 (26259,37503)	31467 (31467,31467)	33819 (-160320,227959)	
5/24/2020	36756	6841 (-47907,61589)	31467 (21101,41833)	24407 (2058,46756)	52814 (29036,76592)	31881 (25697,38065)	31467 (31467,31467)	34132 (-200131,268394)	
5/25/2020	37355	6841 (-48434,62116)	31467 (19927,43007)	24669 (2056,47282)	54477 (29548,79407)	31881 (25104,38658)	31467 (31467,31467)	34444 (-242365,311253)	
5/26/2020	37355	6841 (-48861,62543)	31467 (19927,43007)	24932 (2155,47708)	56174 (29932,82417)	31881 (24655,39107)	31467 (31467,31467)	34756 (-286894,356406)	
5/27/2020	38103	6841 (-49346,63029)	31467 (18460,44474)	25194 (2196,48191)	57905 (30395,85415)	31881 (24118,39644)	31467 (31467,31467)	35068 (-333606,403742)	
5/28/2020	38471	6841 (-49814,63496)	31467 (17739,45195)	25456 (2256,48656)	59670 (30836,88504)	31881 (23607,40155)	31467 (31467,31467)	35380 (-382403,453164)	
5/29/2020	38571	6841 (-50227,63910)	31467 (17543,45391)	25718 (2370,49066)	61469 (31206,91733)	31881 (23172,40590)	31467 (31467,31467)	35692 (-433202,504587)	
5/30/2020	38571	6841 (-50583,64265)	31467 (17543,45391)	25980 (2541,49420)	63303 (31499,95107)	31881 (22812,40950)	31467 (31467,31467)	36005 (-485926,557935)	
5/31/2020	39098	6841 (-50962,64645)	31467 (16510,46424)	26242 (2690,49795)	65172 (31833,98511)	31881 (22414,41348)	31467 (31467,31467)	36317 (-540508,613142)	
6/1/2020	39098	6841 (-51295,64978)	31467 (16510,46424)	26505 (2884,50126)	67076 (32105,102048)	31881 (22077,41685)	31467 (31467,31467)	36629 (-596888,670146)	
6/2/2020	40414	6841 (-51747,65430)	31467 (13931,49003)	26767 (2961,50572)	69016 (32552,105481)	31881 (21570,42192)	31467 (31467,31467)	36941 (-655010,728893)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3056	32763	31507 (31428,31586)	32302 (30081,34523)	31036 (27652,34420)	32004 (30952,33056)	31973 (29505,34442)	16328 (-15884,48540)		
	33182	31693 (29280,34107)	32986 (29861,36111)	31146 (27447,34846)	32542 (1661,63424)	32480 (28888,36071)	16880 (-15203,48962)		
	33582	31859 (26755,36962)	33835 (30001,37668)	31255 (27248,35262)	33080 (-34993,101153)	32986 (28463,37509)	17371 (-14608,49351)		
	34151	32006 (23860,40151)	34539 (30120,38958)	31357 (26937,35777)	33618 (-79591,146827)	33492 (28126,38858)	17627 (-14455,49709)		
	34854	32136 (20724,43547)	35401 (30455,40346)	31449 (26495,36403)	34156 (-131000,199312)	33998 (27838,40159)	17933 (-14368,50235)		
	35306	32252 (17434,47069)	36125 (30712,41537)	31532 (26094,36970)	34694 (-188435,257823)	34504 (27580,41429)	18343 (-14117,50804)		
	35828	32354 (14050,50658)	37000 (31150,42850)	31603 (25675,37531)	35233 (-251387,321854)	35011 (27342,42680)	18790 (-13806,51386)		
	36258	32445 (10615,54276)	37744 (31494,43993)	31663 (25269,38058)	35770 (-319323,390863)	35517 (27115,43918)	19154 (-13560,51867)		
	36756	32526 (7160,57892)	38632 (32000,45264)	31719 (24850,38587)	36308 (-391954,464570)	36023 (26897,45150)	19552 (-13275,52379)		
	37355	32598 (3710,61487)	39396 (32408,46383)	31770 (24391,39148)	36846 (-468992,542683)	36529 (26682,46377)	19941 (-13019,52901)		
	37355	32662 (281,65043)	40298 (32966,47629)	31821 (24063,39579)	37383 (-550196,624962)	37036 (26470,47601)	20405 (-12578,53389)		
	38471	32719 (-3114,68551)	41081 (33426,48735)	31874 (23652,40095)	37921 (-635366,711207)	37542 (26258,48825)	20725 (-12350,53799)		
	38471	32769 (-6464,72002)	41997 (34027,49966)	31922 (23257,40586)	38458 (-724322,801238)	38048 (26045,50051)	21225 (-11906,54356)		
	38571	32814 (-9764,75391)	42799 (34531,51067)	31965 (22928,41003)	38997 (-816949,894944)	38554 (25831,51277)	21587 (-11556,54730)		
	38571	32853 (-13008,78714)	43729 (35169,52289)	32006 (22664,41348)	39533 (-913043,992110)	39060 (25614,52507)	22069 (-11021,55159)		
	39098	32888 (-16193,81970)	44550 (35712,53389)	32042 (22358,41726)	40071 (-1012514,1092656)	39566 (25393,53739)	22354 (-10720,55427)		
	39098	32920 (-19317,85156)	45495 (36382,54607)	32075 (22105,42045)	40608 (-1115249,1196466)	40073 (25169,54976)	22852 (-10150,55854)		
	40414	32947 (-22378,88273)	46335 (36960,55710)	32106 (21685,42528)	41145 (-1221146,1303436)	40579 (24941,56216)	23256 (-9781,56293)		

Table A.55

Actual and Predicted Cases with 95% Confidence Intervals for Egypt using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	11719	1894 (-17362,21151)	11228 (10266,12190)	6162 (-4731,17054)	11957 (11491,12422)	11228 (10266,12190)	11228 (11228,11228)	11605 (10866,12344)	
5/17/2020	12229	1894 (-17868,21657)	11228 (9266,13190)	6234 (-5096,17563)	12411 (11996,12825)	11228 (9683,12773)	11228 (11228,11228)	11987 (-33762,57736)	
5/18/2020	12764	1894 (-18395,22184)	11228 (8217,14239)	6306 (-5483,18095)	12876 (12515,13238)	11228 (9080,13376)	11228 (11228,11228)	12369 (-89391,114128)	
5/19/2020	13484	1894 (-19028,22817)	11228 (6806,15650)	6379 (-5979,18737)	13353 (13014,13691)	11228 (8339,14117)	11228 (11228,11228)	12750 (-157143,182644)	
5/20/2020	14229	1894 (-19718,23507)	11228 (5346,17110)	6451 (-6536,19438)	13841 (13385,14296)	11228 (7540,14916)	11228 (11228,11228)	13132 (-235257,261521)	
5/21/2020	15003	1894 (-20450,24239)	11228 (3829,18627)	6523 (-7136,20183)	14340 (13666,15014)	11228 (6705,15751)	11228 (11228,11228)	13514 (-322540,349568)	
5/22/2020	15786	1894 (-21211,25000)	11228 (2294,20162)	6596 (-7767,20958)	14851 (13919,15783)	11228 (5849,16607)	11228 (11228,11228)	13896 (-418130,445921)	
5/23/2020	16513	1894 (-21975,25764)	11228 (869,21587)	6668 (-8400,21736)	15374 (14198,16550)	11228 (5005,17451)	11228 (11228,11228)	14277 (-521369,549924)	
5/24/2020	17265	1894 (-22749,26537)	11228 (-605,23061)	6740 (-9043,22523)	15909 (14490,17328)	11228 (4158,18298)	11228 (11228,11228)	14659 (-631732,661050)	
5/25/2020	17967	1894 (-23518,27307)	11228 (-1980,24436)	6813 (-9680,23305)	16456 (14815,18096)	11228 (3327,19129)	11228 (11228,11228)	15041 (-748790,778872)	
5/26/2020	18756	1894 (-24305,28093)	11228 (-3527,25983)	6885 (-10334,24103)	17015 (15142,18887)	11228 (2479,19977)	11228 (11228,11228)	15423 (-872183,903028)	
5/27/2020	19666	1894 (-25130,28918)	11228 (-5310,27766)	6957 (-11028,24943)	17586 (15441,19730)	11228 (1586,20870)	11228 (11228,11228)	15804 (-1001601,1033210)	
5/28/2020	20793	1894 (-26028,29817)	11228 (-7519,29975)	7030 (-11801,25860)	18169 (15664,20675)	11228 (605,21851)	11228 (11228,11228)	16186 (-1136779,1169151)	
5/29/2020	22082	1894 (-27016,30804)	11228 (-10046,32502)	7102 (-12667,26871)	18766 (15791,21740)	11228 (-482,22938)	11228 (11228,11228)	16568 (-1277482,1310617)	
5/30/2020	23449	1894 (-28090,31879)	11228 (-12725,35181)	7174 (-13625,27973)	19374 (15837,22911)	11228 (-1665,24121)	11228 (11228,11228)	16949 (-1423501,1457400)	
5/31/2020	24985	1894 (-29265,33053)	11228 (-15736,38192)	7246 (-14688,29181)	19996 (15788,24204)	11228 (-2959,25415)	11228 (11228,11228)	17331 (-1574651,1609314)	
6/1/2020	26384	1894 (-30499,34287)	11228 (-18478,40934)	7319 (-15810,30448)	20631 (15717,25544)	11228 (-4307,26763)	11228 (11228,11228)	17713 (-1730764,1766190)	
6/2/2020	27536	1894 (-31741,35530)	11228 (-20736,43192)	7391 (-16937,31719)	21278 (15696,26860)	11228 (-5645,28101)	11228 (11228,11228)	18095 (-1891687,1927876)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	11719	11605 (10866,12344)	11611 (11560,11663)	10906 (9312,12500)	11621 (10851,12392)	11636 (11584,11689)	5998 (-5215,17211)		
5/17/2020	12229	11987 (-33762,57736)	12014 (11911,12116)	11185 (9350,13019)	12014 (-196075,220104)	12074 (11968,12181)	6226 (-5267,17719)		
5/18/2020	12764	12369 (-89391,114128)	12406 (12251,12560)	11463 (9363,13563)	12408 (-452205,477020)	12514 (12344,12685)	6441 (-5360,18242)		
5/19/2020	13484	12750 (-157143,182644)	12813 (12598,13028)	11736 (9237,14234)	12801 (-764121,789723)	12932 (12680,13184)	6668 (-5541,18877)		
5/20/2020	14229	13132 (-235257,261521)	13214 (12936,13492)	12005 (9039,14970)	13194 (-1123653,1150041)	13341 (12993,13689)	6908 (-5758,19574)		
5/21/2020	15003	13514 (-322540,349568)	13627 (13279,13976)	12271 (8792,15751)	13587 (-1525316,1552490)	13764 (13313,14214)	7155 (-6002,20313)		
5/22/2020	15786	13896 (-418130,445921)	14036 (13614,14458)	12537 (8515,16558)	13980 (-1965117,1993076)	14199 (13641,14757)	7401 (-6273,21075)		
5/23/2020	16513	14277 (-521369,549924)	14455 (13954,14956)	12802 (8245,17359)	14373 (-2440016,2468762)	14627 (13955,15299)	7621 (-6576,21819)		
5/24/2020	17265	14659 (-631732,661050)	14872 (14288,15455)	13066 (7969,18164)	14766 (-2947602,2977133)	15043 (14246,15839)	7826 (-6912,22564)		
5/25/2020	17967	15041 (-748790,778872)	15297 (14626,15967)	13331 (7706,18956)	15159 (-3485907,3516224)	15460 (14532,16389)	8034 (-7243,23311)		
5/26/2020	18756	15423 (-872183,903028)	15721 (14960,16482)	13596 (7427,19766)	15551 (-4053260,4084363)	15888 (14822,16953)	8232 (-7606,24070)		
5/27/2020	19666	15804 (-1001601,1033210)	16153 (15297,17008)	13862 (7103,20620)	15944 (-4648240,4680129)	16317 (15110,17525)	8458 (-7978,24894)		
5/28/2020	20793	16186 (-1136779,1169151)	16584 (15631,17538)	14128 (6692,21563)	16337 (-5269630,5302304)	16740 (15384,18095)	8701 (-8404,25806)		
5/29/2020	22082	16568 (-1277482,1310617)	17022 (15967,18077)	14394 (6175,22614)	16730 (-5916337,5949796)	17158 (15648,18669)	8994 (-8858,26846)		
5/30/2020	23449	16949 (-1423501,1457400)	17462 (16302,18621)	14662 (5561,23763)	17122 (-6587400,6621645)	17581 (15910,19252)	9300 (-9373,27974)		
5/31/2020	24985	17331 (-1574651,1609314)	17906 (16638,19174)	14931 (4835,25026)	17515 (-7281964,7316994)	18008 (16172,19844)	9602 (-9987,29191)		
6/1/2020	26384	17713 (-1730764,1766190)	18352 (16974,19731)	15200 (4056,26344)	17908 (-7999262,8035078)	18434 (16428,20439)	9896 (-10661,30453)		
6/2/2020	27536	18095 (-1891687,1927876)	18804 (17311,20297)	15470 (3289,27651)	18300 (-8738586,8775187)	18855 (16674,21035)	10140 (-11393,31674)		

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Table A.56

Actual and Predicted Cases with 95% Confidence Intervals for El Salvador using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1265	148 (-2041,2337)	1210 (1102,1318)	506 (-982,1994)	1149 (921,1376)	1210 (1102,1318)	1210 (1210,1210)	1264 (1158,1369)
5/17/2020	1338	148 (-2113,2410)	1210 (959,1461)	512 (-1043,2067)	1200 (949,1450)	1210 (1017,1403)	1210 (1210,1210)	1327 (178,2475)
5/18/2020	1413	148 (-2188,2484)	1210 (812,1608)	518 (-1106,2142)	1252 (978,1526)	1210 (931,1489)	1210 (1210,1210)	1390 (-1095,3874)
5/19/2020	1498	148 (-2269,2566)	1210 (646,1774)	524 (-1176,2224)	1306 (1002,1609)	1210 (839,1581)	1210 (1210,1210)	1452 (-2649,5553)
5/20/2020	1571	148 (-2348,2644)	1210 (502,1918)	530 (-1243,2303)	1361 (1033,1688)	1210 (751,1669)	1210 (1210,1210)	1515 (-4443,7474)
5/21/2020	1640	148 (-2424,2720)	1210 (367,2053)	536 (-1308,2380)	1417 (1069,1765)	1210 (668,1752)	1210 (1210,1210)	1578 (-6451,9607)
5/22/2020	1725	148 (-2504,2801)	1210 (201,2219)	542 (-1377,2461)	1475 (1103,1847)	1210 (580,1840)	1210 (1210,1210)	1641 (-8652,11935)
5/23/2020	1819	148 (-2590,2886)	1210 (16,2404)	548 (-1451,2548)	1534 (1134,1934)	1210 (485,1935)	1210 (1210,1210)	1704 (-11032,14440)
5/24/2020	1915	148 (-2679,2976)	1210 (-172,2592)	554 (-1530,2638)	1595 (1164,2026)	1210 (386,2034)	1210 (1210,1210)	1767 (-13579,17113)
5/25/2020	1983	148 (-2765,3062)	1210 (-305,2725)	560 (-1605,2725)	1658 (1202,2114)	1210 (293,2127)	1210 (1210,1210)	1830 (-16282,19942)
5/26/2020	2042	148 (-2847,3143)	1210 (-421,2841)	566 (-1674,2807)	1722 (1248,2196)	1210 (207,2213)	1210 (1210,1210)	1893 (-19133,22919)
5/27/2020	2109	148 (-2926,3223)	1210 (-552,2972)	572 (-1742,2887)	1787 (1298,2276)	1210 (123,2297)	1210 (1210,1210)	1956 (-22125,26036)
5/28/2020	2194	148 (-3008,3305)	1210 (-719,3139)	579 (-1813,2970)	1854 (1350,2359)	1210 (37,2383)	1210 (1210,1210)	2019 (-25252,29289)
5/29/2020	2278	148 (-3091,3388)	1210 (-883,3303)	585 (-1884,3054)	1923 (1402,2444)	1210 (-51,2471)	1210 (1210,1210)	2082 (-28508,32671)
5/30/2020	2395	148 (-3182,3478)	1210 (-1113,3533)	591 (-1963,3145)	1993 (1451,2536)	1210 (-148,2568)	1210 (1210,1210)	2145 (-31888,36178)
5/31/2020	2517	148 (-3279,3575)	1210 (-1352,3772)	597 (-2049,3243)	2065 (1495,2635)	1210 (-253,2673)	1210 (1210,1210)	2208 (-35389,39804)
6/1/2020	2582	148 (-3372,3668)	1210 (-1479,3899)	603 (-2131,3337)	2139 (1547,2731)	1210 (-352,2772)	1210 (1210,1210)	2271 (-39006,43547)
6/2/2020	2653	148 (-3463,3760)	1210 (-1618,4038)	609 (-2211,3429)	2214 (1604,2824)	1210 (-448,2868)	1210 (1210,1210)	2333 (-42735,47402)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3058	1265	1264 (1158,1369)	1284 (1270,1298)	1248 (1215,1281)	1255 (1167,1344)	1283 (1268,1297)	678 (-471,1828)	
	1338	1327 (178,2475)	1337 (1315,1359)	1325 (1295,1355)	1358 (-1754,4471)	1335 (1312,1357)	708 (-485,1901)	
	1413	1390 (-1095,3874)	1396 (1369,1422)	1405 (1379,1431)	1431 (-4680,7542)	1392 (1365,1420)	737 (-502,1976)	
	1498	1452 (-2649,5553)	1474 (1440,1507)	1488 (1464,1513)	1482 (-7633,10596)	1468 (1433,1503)	772 (-516,2059)	
	1571	1515 (-4443,7474)	1560 (1513,1606)	1575 (1553,1597)	1546 (-11035,14127)	1551 (1502,1599)	820 (-507,2146)	
	1640	1578 (-6451,9607)	1638 (1574,1702)	1666 (1637,1696)	1636 (-15302,18574)	1625 (1559,1691)	859 (-504,2222)	
	1725	1641 (-8652,11935)	1706 (1625,1787)	1763 (1724,1801)	1701 (-19820,23222)	1689 (1606,1773)	892 (-513,2296)	
	1819	1704 (-11032,14440)	1774 (1677,1871)	1864 (1816,1912)	1767 (-24600,28135)	1753 (1653,1853)	926 (-527,2378)	
	1915	1767 (-13579,17113)	1850 (1737,1963)	1970 (1913,2028)	1870 (-30216,33957)	1824 (1707,1941)	968 (-535,2470)	
	1983	1830 (-16282,19942)	1932 (1801,2063)	2083 (2000,2165)	1943 (-36096,39981)	1899 (1763,2035)	1013 (-534,2560)	
	2042	1893 (-19133,22919)	2012 (1860,2164)	2201 (2078,2323)	1993 (-41915,45902)	1973 (1816,2130)	1050 (-537,2638)	
	2109	1956 (-22125,26036)	2088 (1915,2261)	2325 (2156,2495)	2058 (-47905,52021)	2041 (1862,2220)	1082 (-545,2709)	
	2194	2019 (-25252,29289)	2163 (1968,2357)	2457 (2240,2674)	2148 (-54412,58707)	2109 (1908,2310)	1114 (-556,2784)	
	2278	2082 (-28508,32671)	2241 (2025,2457)	2596 (2329,2863)	2213 (-61095,65521)	2178 (1955,2402)	1156 (-557,2869)	
	2395	2145 (-31888,36178)	2323 (2084,2562)	2742 (2430,3055)	2279 (-67949,72506)	2251 (2003,2498)	1201 (-560,2963)	
	2517	2208 (-35389,39804)	2405 (2141,2668)	2897 (2542,3252)	2382 (-75403,80167)	2323 (2051,2595)	1251 (-564,3066)	
	2582	2271 (-39006,43547)	2485 (2197,2773)	3060 (2647,3473)	2454 (-83087,87995)	2393 (2095,2691)	1298 (-566,3161)	
	2653	2333 (-42735,47402)	2565 (2251,2879)	3232 (2750,3714)	2505 (-90731,95741)	2462 (2138,2786)	1334 (-577,3245)	

Table A.57

Actual and Predicted Cases with 95% Confidence Intervals for Equatorial Guinea using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	594	81 (-924,1086)	594 (594,594)	280 (-337,896)	632 (558,706)	439 (135,743)	594 (594,594)	623 (566,679)
5/17/2020	594	81 (-924,1086)	594 (594,594)	283 (-330,896)	659 (555,764)	439 (135,743)	594 (594,594)	650 (352,948)
5/18/2020	719	81 (-1012,1174)	594 (349,839)	286 (-414,987)	688 (595,780)	439 (37,841)	594 (594,594)	678 (61,1294)
5/19/2020	825	81 (-1113,1276)	594 (141,1047)	290 (-512,1092)	717 (584,850)	439 (-75,953)	594 (594,594)	705 (-295,1705)
5/20/2020	890	81 (-1201,1363)	594 (14,1174)	293 (-595,1181)	747 (574,920)	439 (-168,1046)	594 (594,594)	733 (-706,2172)
5/21/2020	903	81 (-1261,1424)	594 (-12,1200)	296 (-648,1241)	777 (590,964)	439 (-228,1106)	594 (594,594)	760 (-1167,2687)
5/22/2020	960	81 (-1322,1484)	594 (-123,1311)	300 (-702,1302)	809 (602,1015)	439 (-289,1167)	594 (594,594)	788 (-1673,3248)
5/23/2020	960	81 (-1366,1528)	594 (-123,1311)	303 (-739,1345)	841 (631,1051)	439 (-332,1210)	594 (594,594)	815 (-2220,3850)
5/24/2020	960	81 (-1399,1561)	594 (-123,1311)	306 (-765,1378)	874 (668,1080)	439 (-363,1241)	594 (594,594)	842 (-2806,4491)
5/25/2020	1043	81 (-1444,1607)	594 (-286,1474)	310 (-804,1423)	908 (695,1120)	439 (-409,1287)	594 (594,594)	870 (-3428,5168)
5/26/2020	1043	81 (-1480,1643)	594 (-286,1474)	313 (-833,1459)	942 (731,1154)	439 (-445,1323)	594 (594,594)	897 (-4084,5879)
5/27/2020	1043	81 (-1510,1672)	594 (-286,1474)	317 (-855,1488)	978 (773,1183)	439 (-474,1352)	594 (594,594)	925 (-4774,6623)
5/28/2020	1043	81 (-1534,1697)	594 (-286,1474)	320 (-872,1512)	1014 (816,1212)	439 (-497,1375)	594 (594,594)	952 (-5494,7399)
5/29/2020	1306	81 (-1602,1765)	594 (-802,1990)	323 (-936,1582)	1051 (819,1284)	439 (-571,1449)	594 (594,594)	980 (-6245,8205)
5/30/2020	1306	81 (-1659,1822)	594 (-802,1990)	327 (-987,1640)	1090 (839,1340)	439 (-631,1509)	594 (594,594)	1007 (-7025,9039)
5/31/2020	1306	81 (-1708,1870)	594 (-802,1990)	330 (-1029,1689)	1128 (871,1386)	439 (-681,1559)	594 (594,594)	1035 (-7832,9902)
6/1/2020	1306	81 (-1749,1912)	594 (-802,1990)	333 (-1063,1730)	1168 (910,1426)	439 (-723,1601)	594 (594,594)	1062 (-8667,10791)
6/2/2020	1306	81 (-1786,1948)	594 (-802,1990)	337 (-1093,1766)	1209 (954,1464)	439 (-759,1637)	594 (594,594)	1090 (-9527,11707)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3059	594	621 (568,674)	603 (566,640)	368 (-76,811)	610 (578,643)	601 (564,639)	329 (-190,848)	
	594	647 (382,911)	617 (562,671)	349 (-113,811)	627 (558,696)	613 (557,668)	321 (-206,848)	
	719	672 (130,1213)	635 (569,700)	330 (-250,910)	644 (532,755)	628 (561,695)	319 (-305,944)	
	825	697 (-175,1568)	655 (582,728)	310 (-403,1022)	660 (498,822)	646 (571,721)	350 (-363,1064)	
	890	721 (-524,1966)	677 (598,757)	289 (-537,1116)	677 (460,893)	666 (583,748)	380 (-398,1159)	
	903	745 (-912,2402)	700 (614,786)	270 (-639,1179)	693 (416,970)	686 (596,776)	403 (-413,1219)	
	960	769 (-1333,2871)	723 (630,815)	251 (-741,1243)	710 (367,1052)	706 (609,804)	394 (-470,1258)	
	960	792 (-1785,3369)	746 (646,846)	233 (-823,1289)	726 (314,1138)	727 (621,833)	396 (-502,1294)	
	960	815 (-2264,3894)	769 (661,876)	217 (-891,1324)	742 (257,1228)	747 (633,862)	396 (-527,1319)	
	1043	838 (-2768,4444)	792 (676,908)	202 (-972,1375)	759 (196,1322)	768 (644,892)	406 (-555,1366)	
	1043	860 (-3295,5016)	815 (691,940)	188 (-1040,1415)	775 (131,1420)	788 (654,923)	422 (-565,1409)	
	1043	882 (-3844,5608)	839 (706,972)	175 (-1098,1449)	792 (63,1521)	809 (664,954)	434 (-572,1440)	
	1043	904 (-4412,6219)	863 (721,1005)	164 (-1150,1478)	808 (-9,1625)	829 (674,985)	446 (-573,1465)	
	1306	925 (-4998,6848)	887 (736,1039)	154 (-1249,1556)	825 (-84,1733)	850 (683,1017)	444 (-638,1525)	
	1306	946 (-5602,7493)	911 (750,1073)	144 (-1333,1621)	841 (-162,1845)	871 (691,1050)	504 (-616,1625)	
	1306	966 (-6221,8154)	936 (765,1107)	136 (-1405,1677)	858 (-243,1959)	891 (700,1082)	517 (-635,1668)	
	1306	987 (-6855,8829)	961 (779,1142)	129 (-1468,1725)	874 (-327,2076)	912 (707,1116)	529 (-648,1706)	
	1306	1007 (-7503,9517)	985 (793,1177)	122 (-1523,1766)	891 (-414,2196)	932 (715,1149)	493 (-711,1696)	

**Table A.58**

Actual and Predicted Cases with 95% Confidence Intervals for Eritrea using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	39	15 (-33,62)	39 (39,39)	42 (36,49)	42 (36,49)	39 (39,39)	39 (39,39)	39 (39,39)
5/17/2020	39	15 (-33,62)	39 (39,39)	43 (36,50)	42 (36,49)	39 (39,39)	39 (39,39)	39 (39,39)
5/18/2020	39	15 (-33,62)	39 (39,39)	43 (36,51)	42 (36,49)	39 (39,39)	39 (39,39)	39 (39,39)
5/19/2020	39	15 (-33,62)	39 (39,39)	44 (36,51)	42 (36,48)	39 (39,39)	39 (39,39)	39 (39,39)
5/20/2020	39	15 (-33,62)	39 (39,39)	44 (36,52)	42 (36,48)	39 (39,39)	39 (39,39)	39 (39,39)
5/21/2020	39	15 (-33,62)	39 (39,39)	45 (36,53)	42 (36,47)	39 (39,39)	39 (39,39)	39 (39,39)
5/22/2020	39	15 (-33,62)	39 (39,39)	45 (36,54)	41 (36,47)	39 (39,39)	39 (39,39)	39 (39,39)
5/23/2020	39	15 (-33,62)	39 (39,39)	46 (36,55)	41 (35,46)	39 (39,39)	39 (39,39)	39 (39,39)
5/24/2020	39	15 (-33,62)	39 (39,39)	46 (36,56)	41 (35,46)	39 (39,39)	39 (39,39)	39 (39,39)
5/25/2020	39	15 (-33,62)	39 (39,39)	46 (36,57)	40 (35,45)	39 (39,39)	39 (39,39)	39 (39,39)
5/26/2020	39	15 (-33,62)	39 (39,39)	47 (36,58)	40 (35,45)	39 (39,39)	39 (39,39)	39 (39,39)
5/27/2020	39	15 (-33,62)	39 (39,39)	47 (36,59)	39 (35,44)	39 (39,39)	39 (39,39)	39 (39,39)
5/28/2020	39	15 (-33,62)	39 (39,39)	48 (36,60)	39 (34,43)	39 (39,39)	39 (39,39)	39 (39,39)
5/29/2020	39	15 (-33,62)	39 (39,39)	48 (35,61)	38 (34,42)	39 (39,39)	39 (39,39)	39 (39,39)
5/30/2020	39	15 (-33,62)	39 (39,39)	49 (35,62)	37 (33,42)	39 (39,39)	39 (39,39)	39 (39,39)
5/31/2020	39	15 (-33,62)	39 (39,39)	49 (35,63)	37 (32,41)	39 (39,39)	39 (39,39)	39 (39,39)
6/1/2020	39	15 (-33,62)	39 (39,39)	50 (35,64)	36 (32,40)	39 (39,39)	39 (39,39)	39 (39,39)
6/2/2020	39	15 (-33,62)	39 (39,39)	50 (35,65)	35 (31,40)	39 (39,39)	39 (39,39)	39 (39,39)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	39	39 (39,39)	39 (37,41)	39 (39,39)	39 (39,39)	39 (37,41)	20 (-19,58)	
5/17/2020	39	39 (39,39)	39 (36,42)	39 (39,39)	39 (39,39)	39 (36,42)	20 (-19,58)	
5/18/2020	39	39 (39,39)	39 (35,43)	39 (39,39)	39 (39,39)	39 (35,43)	20 (-19,58)	
5/19/2020	39	39 (39,39)	39 (34,44)	39 (39,39)	39 (39,39)	39 (34,44)	20 (-19,58)	
5/20/2020	39	39 (39,39)	39 (33,45)	39 (39,39)	39 (39,39)	39 (33,45)	20 (-19,58)	
5/21/2020	39	39 (39,39)	39 (32,46)	39 (39,39)	39 (39,39)	39 (32,46)	20 (-19,58)	
5/22/2020	39	39 (39,39)	39 (30,48)	39 (39,39)	39 (39,39)	39 (30,48)	20 (-19,58)	
5/23/2020	39	39 (39,39)	39 (29,49)	39 (39,40)	39 (39,39)	39 (29,49)	20 (-19,58)	
5/24/2020	39	39 (39,39)	39 (27,51)	39 (39,40)	39 (39,39)	39 (27,51)	20 (-19,58)	
5/25/2020	39	39 (39,39)	39 (26,52)	39 (39,40)	39 (39,39)	39 (26,52)	20 (-19,58)	
5/26/2020	39	39 (39,39)	39 (24,54)	39 (39,40)	39 (39,39)	39 (24,54)	20 (-19,58)	
5/27/2020	39	39 (39,39)	39 (23,55)	39 (39,40)	39 (39,39)	39 (23,55)	20 (-19,58)	
5/28/2020	39	39 (39,39)	39 (21,57)	39 (39,40)	39 (39,39)	39 (21,57)	20 (-19,58)	
5/29/2020	39	39 (39,39)	39 (20,58)	39 (39,40)	39 (39,39)	39 (20,58)	20 (-19,58)	
5/30/2020	39	39 (39,39)	39 (18,60)	39 (39,40)	39 (39,39)	39 (18,60)	20 (-19,58)	
5/31/2020	39	39 (39,39)	39 (16,62)	39 (39,40)	39 (39,39)	39 (16,62)	20 (-19,58)	
6/1/2020	39	39 (39,39)	39 (14,64)	39 (39,40)	39 (39,39)	39 (14,64)	20 (-19,58)	
6/2/2020	39	39 (39,39)	39 (12,66)	39 (39,40)	39 (39,39)	39 (12,66)	20 (-19,58)	

**Table A.59**

Actual and Predicted Cases with 95% Confidence Intervals for Estonia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1770	646 (-1556,2849)	1766 (1758,1774)	1825 (1718,1932)	1869 (1675,2063)	1766 (1758,1774)	1766 (1766,1766)	1772 (1761,1782)
5/17/2020	1774	646 (-1560,2853)	1766 (1750,1782)	1845 (1721,1968)	1872 (1679,2064)	1766 (1754,1778)	1766 (1766,1766)	1778 (1756,1800)
5/18/2020	1784	646 (-1568,2861)	1766 (1731,1801)	1865 (1728,2001)	1873 (1686,2059)	1766 (1743,1789)	1766 (1766,1766)	1784 (1747,1821)
5/19/2020	1791	646 (-1575,2868)	1766 (1717,1815)	1885 (1735,2034)	1873 (1692,2053)	1766 (1735,1797)	1766 (1766,1766)	1790 (1735,1844)
5/20/2020	1794	646 (-1581,2874)	1766 (1711,1821)	1905 (1740,2070)	1871 (1696,2046)	1766 (1729,1803)	1766 (1766,1766)	1796 (1721,1870)
5/21/2020	1800	646 (-1587,2879)	1766 (1699,1833)	1925 (1744,2105)	1868 (1700,2037)	1766 (1722,1810)	1766 (1766,1766)	1802 (1705,1898)
5/22/2020	1807	646 (-1593,2885)	1766 (1686,1846)	1944 (1749,2140)	1864 (1702,2026)	1766 (1715,1817)	1766 (1766,1766)	1808 (1688,1928)
5/23/2020	1821	646 (-1601,2893)	1766 (1658,1874)	1964 (1756,2173)	1858 (1705,2012)	1766 (1705,1827)	1766 (1766,1766)	1814 (1668,1960)
5/24/2020	1823	646 (-1607,2900)	1766 (1654,1878)	1984 (1761,2207)	1851 (1705,1997)	1766 (1698,1834)	1766 (1766,1766)	1820 (1647,1993)
5/25/2020	1824	646 (-1613,2905)	1766 (1652,1880)	2004 (1765,2244)	1843 (1704,1982)	1766 (1692,1840)	1766 (1766,1766)	1826 (1625,2027)
5/26/2020	1834	646 (-1619,2912)	1766 (1633,1899)	2024 (1770,2279)	1832 (1700,1965)	1766 (1685,1847)	1766 (1766,1766)	1832 (1601,2063)
5/27/2020	1840	646 (-1625,2918)	1766 (1621,1911)	2044 (1775,2314)	1821 (1693,1948)	1766 (1678,1854)	1766 (1766,1766)	1838 (1576,2101)
5/28/2020	1851	646 (-1632,2925)	1766 (1599,1933)	2064 (1781,2348)	1807 (1683,1932)	1766 (1669,1863)	1766 (1766,1766)	1844 (1549,2139)
5/29/2020	1859	646 (-1640,2932)	1766 (1584,1948)	2084 (1786,2382)	1793 (1668,1918)	1766 (1661,1871)	1766 (1766,1766)	1850 (1522,2179)
5/30/2020	1865	646 (-1647,2939)	1766 (1572,1960)	2104 (1792,2416)	1776 (1647,1905)	1766 (1653,1879)	1766 (1766,1766)	1856 (1493,2220)
5/31/2020	1869	646 (-1653,2946)	1766 (1564,1968)	2124 (1797,2451)	1758 (1622,1894)	1766 (1645,1887)	1766 (1766,1766)	1862 (1462,2262)
6/1/2020	1870	646 (-1659,2952)	1766 (1562,1970)	2144 (1801,2487)	1738 (1592,1884)	1766 (1639,1893)	1766 (1766,1766)	1868 (1431,2306)
6/2/2020	1870	646 (-1664,2957)	1766 (1562,1970)	2164 (1804,2524)	1716 (1558,1875)	1766 (1633,1899)	1766 (1766,1766)	1875 (1399,2350)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	1770	1771 (1761,1781)	1773 (1739,1806)	1735 (1666,1804)	1772 (1760,1783)	1772 (1739,1806)	890 (-836,2615)	
5/17/2020	1774	1776 (1758,1795)	1779 (1723,1836)	1734 (1660,1808)	1777 (1742,1813)	1779 (1722,1835)	893 (-833,2619)	
5/18/2020	1784	1782 (1751,1813)	1786 (1707,1865)	1733 (1650,1817)	1782 (1717,1848)	1785 (1706,1864)	896 (-836,2627)	
5/19/2020	1791	1787 (1742,1832)	1793 (1691,1894)	1732 (1640,1825)	1787 (1687,1888)	1791 (1690,1893)	899 (-836,2635)	
5/20/2020	1794	1792 (1732,1853)	1799 (1674,1924)	1731 (1632,1831)	1792 (1654,1930)	1798 (1673,1922)	903 (-834,2641)	
5/21/2020	1800	1797 (1720,1875)	1806 (1657,1955)	1730 (1624,1837)	1796 (1618,1975)	1804 (1654,1953)	906 (-834,2646)	
5/22/2020	1807	1802 (1707,1898)	1813 (1638,1988)	1729 (1615,1843)	1800 (1579,2022)	1810 (1635,1985)	909 (-834,2652)	
5/23/2020	1821	1807 (1692,1923)	1820 (1618,2021)	1729 (1604,1853)	1804 (1539,2070)	1816 (1615,2018)	913 (-835,2660)	
5/24/2020	1823	1812 (1677,1948)	1827 (1598,2056)	1728 (1595,1860)	1808 (1497,2119)	1823 (1593,2052)	918 (-833,2668)	
5/25/2020	1824	1817 (1660,1974)	1834 (1576,2092)	1727 (1587,1866)	1812 (1454,2170)	1829 (1571,2087)	921 (-832,2673)	
5/26/2020	1834	1822 (1643,2001)	1841 (1553,2128)	1726 (1578,1874)	1815 (1409,2221)	1835 (1547,2123)	923 (-832,2679)	
5/27/2020	1840	1826 (1625,2028)	1848 (1530,2166)	1725 (1570,1881)	1818 (1364,2272)	1841 (1523,2160)	926 (-832,2685)	
5/28/2020	1851	1831 (1606,2056)	1855 (1505,2205)	1725 (1560,1889)	1821 (1318,2325)	1848 (1498,2198)	930 (-832,2692)	
5/29/2020	1859	1835 (1586,2085)	1862 (1480,2245)	1724 (1551,1898)	1824 (1271,2377)	1854 (1471,2236)	936 (-830,2701)	
5/30/2020	1865	1840 (1566,2114)	1870 (1454,2286)	1724 (1541,1906)	1827 (1224,2429)	1860 (1444,2276)	939 (-830,2708)	
5/31/2020	1869	1844 (1545,2144)	1877 (1427,2327)	1723 (1533,1913)	1829 (1177,2482)	1866 (1416,2317)	943 (-829,2715)	
6/1/2020	1870	1849 (1523,2174)	1885 (1399,2370)	1723 (1525,1920)	1832 (1129,2534)	1873 (1387,2358)	945 (-829,2719)	
6/2/2020	1870	1853 (1501,2205)	1892 (1371,2413)	1722 (1518,1926)	1834 (1081,2587)	1879 (1357,2401)	948 (-828,2724)	

**Table A.60**

Actual and Predicted Cases with 95% Confidence Intervals for Eswatini using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	202	28 (-314,369)	190 (166,214)	95 (-116,305)	219 (186,252)	187 (158,216)	190 (190,190)	196 (184,207)
5/17/2020	203	28 (-315,370)	190 (165,215)	96 (-115,306)	229 (186,272)	187 (157,217)	190 (190,190)	201 (179,222)
5/18/2020	205	28 (-317,372)	190 (161,219)	97 (-114,308)	239 (187,291)	187 (155,219)	190 (190,190)	206 (171,240)
5/19/2020	208	28 (-319,374)	190 (155,225)	98 (-114,310)	249 (189,310)	187 (152,222)	190 (190,190)	211 (161,261)
5/20/2020	217	28 (-324,379)	190 (137,243)	99 (-117,315)	260 (194,326)	187 (146,228)	190 (190,190)	216 (148,283)
5/21/2020	220	28 (-329,384)	190 (131,249)	100 (-119,320)	271 (198,343)	187 (141,233)	190 (190,190)	221 (134,307)
5/22/2020	225	28 (-333,388)	190 (121,259)	101 (-121,324)	282 (203,362)	187 (136,238)	190 (190,190)	226 (119,333)
5/23/2020	238	28 (-340,395)	190 (96,284)	103 (-126,331)	294 (210,377)	187 (128,246)	190 (190,190)	230 (101,360)
5/24/2020	250	28 (-348,403)	190 (72,308)	104 (-132,339)	305 (219,392)	187 (118,256)	190 (190,190)	235 (83,388)
5/25/2020	256	28 (-356,411)	190 (61,319)	105 (-138,347)	318 (227,408)	187 (109,265)	190 (190,190)	240 (63,417)
5/26/2020	261	28 (-363,418)	190 (51,329)	106 (-143,355)	330 (234,426)	187 (100,274)	190 (190,190)	245 (42,448)
5/27/2020	272	28 (-371,427)	190 (29,351)	107 (-149,363)	343 (243,443)	187 (91,283)	190 (190,190)	250 (20,480)
5/28/2020	279	28 (-379,435)	190 (16,364)	108 (-154,371)	356 (251,460)	187 (82,292)	190 (190,190)	255 (-3,513)
5/29/2020	279	28 (-386,441)	190 (16,364)	109 (-159,378)	369 (258,480)	187 (75,299)	190 (190,190)	260 (-27,548)
5/30/2020	283	28 (-392,448)	190 (8,372)	110 (-163,384)	383 (264,501)	187 (68,306)	190 (190,190)	265 (-52,583)
5/31/2020	285	28 (-398,453)	190 (4,376)	112 (-166,390)	397 (269,524)	187 (63,311)	190 (190,190)	270 (-79,619)
6/1/2020	293	28 (-404,460)	190 (-12,392)	113 (-170,396)	411 (275,546)	187 (56,318)	190 (190,190)	275 (-106,656)
6/2/2020	294	28 (-410,465)	190 (-14,394)	114 (-173,401)	425 (280,570)	187 (51,323)	190 (190,190)	280 (-134,694)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	202	195 (185,206)	196 (189,203)	175 (121,228)	195 (185,206)	195 (188,202)	99 (-103,301)	
5/17/2020	203	200 (181,219)	202 (191,213)	174 (119,229)	201 (179,222)	201 (190,212)	104 (-95,302)	
5/18/2020	205	204 (174,234)	208 (194,222)	174 (116,231)	206 (171,241)	206 (192,220)	107 (-90,303)	
5/19/2020	208	209 (166,251)	214 (197,232)	172 (112,233)	211 (161,262)	211 (194,229)	110 (-86,305)	
5/20/2020	217	213 (156,270)	221 (200,241)	171 (103,238)	216 (149,284)	217 (195,238)	111 (-87,309)	
5/21/2020	220	217 (145,290)	227 (203,250)	169 (95,243)	222 (135,308)	222 (197,247)	116 (-83,315)	
5/22/2020	225	221 (133,310)	233 (207,260)	167 (86,248)	227 (120,334)	227 (199,256)	119 (-81,319)	
5/23/2020	238	226 (119,332)	240 (210,270)	165 (75,256)	232 (104,361)	233 (201,265)	123 (-81,326)	
5/24/2020	250	230 (105,355)	246 (213,279)	164 (61,266)	238 (87,389)	238 (202,274)	127 (-81,335)	
5/25/2020	256	234 (89,378)	253 (216,289)	162 (49,275)	243 (68,418)	244 (204,283)	131 (-81,344)	
5/26/2020	261	238 (73,402)	259 (219,299)	161 (37,284)	248 (48,448)	249 (205,292)	135 (-80,350)	
5/27/2020	272	242 (56,427)	266 (223,309)	159 (25,293)	254 (27,480)	254 (207,302)	137 (-83,357)	
5/28/2020	279	246 (39,453)	273 (226,320)	158 (13,303)	259 (5,513)	260 (208,311)	140 (-84,365)	
5/29/2020	279	250 (20,479)	279 (229,330)	157 (3,310)	264 (-18,546)	265 (209,321)	144 (-84,371)	
5/30/2020	283	253 (1,505)	286 (232,341)	156 (-6,318)	269 (-42,581)	270 (210,331)	146 (-84,377)	
5/31/2020	285	257 (-18,533)	293 (235,351)	155 (-14,324)	275 (-67,616)	276 (211,340)	148 (-85,381)	
6/1/2020	293	261 (-38,560)	300 (238,362)	154 (-22,331)	280 (-93,653)	281 (212,350)	151 (-85,387)	
6/2/2020	294	265 (-59,588)	307 (241,373)	154 (-30,337)	285 (-120,690)	286 (213,360)	156 (-82,394)	

**Table A.61**

Actual and Predicted Cases with 95% Confidence Intervals for Ethiopia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	306	50 (-451,552)	287 (250,324)	159 (-128,447)	282 (235,329)	287 (250,324)	287 (287,287)	298 (277,318)
5/17/2020	317	50 (-462,562)	287 (228,346)	161 (-135,458)	292 (244,340)	287 (238,336)	287 (287,287)	309 (251,366)
5/18/2020	352	50 (-490,590)	287 (160,414)	163 (-160,486)	302 (232,371)	287 (203,371)	287 (287,287)	320 (212,428)
5/19/2020	365	50 (-510,610)	287 (134,440)	165 (-176,506)	312 (232,391)	287 (182,392)	287 (287,287)	331 (164,499)
5/20/2020	389	50 (-532,633)	287 (87,487)	167 (-195,529)	322 (229,414)	287 (157,417)	287 (287,287)	342 (107,578)
5/21/2020	399	50 (-550,651)	287 (67,507)	169 (-210,547)	332 (232,432)	287 (138,436)	287 (287,287)	354 (43,664)
5/22/2020	433	50 (-574,674)	287 (1,573)	171 (-230,571)	343 (229,457)	287 (112,462)	287 (287,287)	365 (-27,757)
5/23/2020	494	50 (-610,710)	287 (-119,693)	172 (-264,609)	354 (209,498)	287 (69,505)	287 (287,287)	376 (-104,856)
5/24/2020	582	50 (-662,763)	287 (-291,865)	174 (-316,664)	365 (168,561)	287 (5,569)	287 (287,287)	387 (-186,961)
5/25/2020	655	50 (-723,823)	287 (-434,1008)	176 (-375,728)	376 (122,630)	287 (-64,638)	287 (287,287)	399 (-274,1072)
5/26/2020	701	50 (-781,881)	287 (-524,1098)	178 (-432,788)	388 (83,693)	287 (-128,702)	287 (287,287)	410 (-367,1187)
5/27/2020	731	50 (-834,934)	287 (-583,1157)	180 (-482,842)	400 (53,747)	287 (-183,757)	287 (287,287)	421 (-465,1307)
5/28/2020	831	50 (-899,1000)	287 (-779,1353)	182 (-546,909)	412 (8,816)	287 (-253,827)	287 (287,287)	432 (-567,1432)
5/29/2020	968	50 (-983,1084)	287 (-1048,1622)	183 (-629,996)	424 (-58,906)	287 (-344,918)	287 (287,287)	444 (-674,1562)
5/30/2020	1063	50 (-1072,1173)	287 (-1234,1808)	185 (-717,1087)	436 (-127,1000)	287 (-438,1012)	287 (287,287)	455 (-786,1695)
5/31/2020	1172	50 (-1168,1268)	287 (-1448,2022)	187 (-811,1185)	449 (-201,1100)	287 (-538,1112)	287 (287,287)	466 (-901,1833)
6/1/2020	1257	50 (-1263,1364)	287 (-1614,2188)	189 (-904,1282)	462 (-273,1198)	287 (-637,1211)	287 (287,287)	477 (-1020,1975)
6/2/2020	1344	50 (-1359,1460)	287 (-1785,2359)	191 (-997,1379)	475 (-344,1295)	287 (-735,1309)	287 (287,287)	488 (-1144,2121)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3063	306	298 (277,318)	298 (291,305)	257 (161,353)	298 (276,321)	298 (291,305)	153 (-145,452)	
	317	309 (251,366)	310 (298,322)	260 (156,364)	310 (203,417)	309 (297,321)	162 (-139,463)	
	352	320 (212,428)	322 (305,338)	261 (128,395)	321 (107,536)	320 (304,337)	169 (-153,490)	
	365	331 (164,499)	334 (312,355)	262 (108,415)	333 (-10,676)	331 (309,353)	178 (-155,512)	
	389	342 (107,578)	346 (319,372)	261 (84,438)	344 (-146,835)	342 (315,370)	183 (-166,532)	
	399	354 (43,664)	358 (325,390)	260 (63,456)	356 (-297,1009)	354 (320,387)	191 (-168,550)	
	433	365 (-27,757)	370 (332,408)	258 (35,482)	367 (-463,1198)	365 (325,404)	193 (-184,570)	
	494	376 (-104,856)	382 (338,427)	256 (-9,522)	379 (-643,1401)	376 (330,422)	203 (-203,609)	
	582	387 (-186,961)	395 (344,445)	254 (-75,584)	390 (-835,1616)	387 (334,440)	216 (-236,667)	
	655	399 (-274,1072)	407 (350,465)	252 (-148,652)	402 (-1039,1843)	398 (338,458)	236 (-265,737)	
	701	410 (-367,1187)	420 (356,484)	250 (-216,715)	413 (-1255,2082)	409 (342,477)	250 (-297,797)	
	731	421 (-465,1307)	433 (361,504)	248 (-275,771)	425 (-1481,2331)	421 (345,496)	253 (-336,842)	
	831	432 (-567,1432)	446 (366,525)	245 (-349,840)	436 (-1718,2591)	432 (348,515)	249 (-400,897)	
	968	444 (-674,1562)	459 (372,545)	243 (-444,931)	448 (-1964,2860)	443 (351,535)	260 (-467,987)	
	1063	455 (-786,1695)	472 (377,566)	241 (-543,1025)	459 (-2221,3139)	454 (354,554)	283 (-522,1089)	
	1172	466 (-901,1833)	485 (382,588)	239 (-647,1125)	471 (-2486,3427)	465 (356,574)	301 (-588,1190)	
	1257	477 (-1020,1975)	498 (387,610)	237 (-750,1223)	482 (-2760,3724)	477 (358,595)	309 (-664,1282)	
	1344	488 (-1144,2121)	511 (391,632)	234 (-853,1322)	494 (-3043,4030)	488 (360,615)	306 (-754,1366)	

**Table A.62**

Actual and Predicted Cases with 95% Confidence Intervals for Fiji using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	18	7 (-15,29)	18 (18,18)	20 (17,23)	19 (17,22)	18 (18,18)	18 (18,18)	18 (18,18)
5/17/2020	18	7 (-15,29)	18 (18,18)	20 (17,23)	19 (17,22)	18 (18,18)	18 (18,18)	18 (18,18)
5/18/2020	18	7 (-15,29)	18 (18,18)	20 (17,23)	19 (17,22)	18 (18,18)	18 (18,18)	18 (18,18)
5/19/2020	18	7 (-15,29)	18 (18,18)	20 (17,24)	19 (17,22)	18 (18,18)	18 (18,18)	18 (18,18)
5/20/2020	18	7 (-15,29)	18 (18,18)	20 (17,24)	19 (17,22)	18 (18,18)	18 (18,18)	18 (18,18)
5/21/2020	18	7 (-15,29)	18 (18,18)	21 (16,25)	19 (17,22)	18 (18,18)	18 (18,18)	18 (18,18)
5/22/2020	18	7 (-15,29)	18 (18,18)	21 (16,25)	19 (16,21)	18 (18,18)	18 (18,18)	18 (18,18)
5/23/2020	18	7 (-15,29)	18 (18,18)	21 (16,26)	19 (16,21)	18 (18,18)	18 (18,18)	18 (18,18)
5/24/2020	18	7 (-15,29)	18 (18,18)	21 (16,26)	19 (16,21)	18 (18,18)	18 (18,18)	18 (18,18)
5/25/2020	18	7 (-15,29)	18 (18,18)	21 (16,27)	18 (16,21)	18 (18,18)	18 (18,18)	18 (18,18)
5/26/2020	18	7 (-15,29)	18 (18,18)	22 (16,27)	18 (16,20)	18 (18,18)	18 (18,18)	18 (18,18)
5/27/2020	18	7 (-15,29)	18 (18,18)	22 (16,27)	18 (16,20)	18 (18,18)	18 (18,18)	18 (18,18)
5/28/2020	18	7 (-15,29)	18 (18,18)	22 (16,28)	18 (16,20)	18 (18,18)	18 (18,18)	18 (18,18)
5/29/2020	18	7 (-15,29)	18 (18,18)	22 (16,28)	18 (16,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/30/2020	18	7 (-15,29)	18 (18,18)	23 (16,29)	17 (15,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/31/2020	18	7 (-15,29)	18 (18,18)	23 (16,29)	17 (15,19)	18 (18,18)	18 (18,18)	18 (18,18)
6/1/2020	18	7 (-15,29)	18 (18,18)	23 (16,30)	17 (15,19)	18 (18,18)	18 (18,18)	18 (18,18)
6/2/2020	18	7 (-15,29)	18 (18,18)	23 (16,30)	16 (14,18)	18 (18,18)	18 (18,18)	18 (18,18)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	18	18 (18,18)	18 (17,19)	18 (18,19)	18 (18,18)	18 (17,19)	9 (-9,27)	
5/17/2020	18	18 (18,18)	18 (17,20)	18 (18,19)	18 (18,18)	18 (17,19)	9 (-8,27)	
5/18/2020	18	18 (18,18)	18 (16,20)	18 (18,19)	18 (18,18)	18 (16,20)	9 (-8,27)	
5/19/2020	18	18 (18,18)	18 (16,21)	18 (18,19)	18 (18,18)	18 (15,21)	9 (-8,27)	
5/20/2020	18	18 (18,18)	19 (16,22)	18 (18,19)	18 (18,18)	18 (15,21)	9 (-8,27)	
5/21/2020	18	18 (18,18)	19 (15,22)	18 (18,19)	18 (18,18)	18 (14,22)	9 (-8,27)	
5/22/2020	18	18 (18,18)	19 (15,23)	18 (18,19)	18 (18,18)	18 (14,22)	9 (-8,27)	
5/23/2020	18	18 (18,18)	19 (15,23)	18 (18,19)	18 (18,18)	18 (14,22)	10 (-8,27)	
5/24/2020	18	18 (18,18)	19 (15,24)	18 (18,19)	18 (18,18)	18 (13,23)	10 (-7,27)	
5/25/2020	18	18 (18,18)	19 (15,24)	18 (18,19)	18 (18,18)	18 (13,23)	10 (-7,27)	
5/26/2020	18	18 (18,18)	20 (15,25)	18 (18,19)	18 (18,18)	18 (13,23)	10 (-7,27)	
5/27/2020	18	18 (18,18)	20 (14,25)	18 (18,19)	18 (18,18)	18 (12,24)	10 (-7,27)	
5/28/2020	18	18 (18,18)	20 (14,25)	18 (18,19)	18 (18,18)	18 (12,24)	10 (-7,27)	
5/29/2020	18	18 (18,18)	20 (14,26)	18 (18,19)	18 (18,18)	18 (12,24)	10 (-7,27)	
5/30/2020	18	18 (18,18)	20 (14,26)	18 (18,19)	18 (18,18)	18 (12,24)	10 (-6,27)	
5/31/2020	18	18 (18,18)	20 (14,27)	18 (18,19)	18 (18,18)	18 (11,25)	10 (-6,27)	
6/1/2020	18	18 (18,18)	21 (14,27)	18 (18,19)	18 (18,18)	18 (11,25)	10 (-6,27)	
6/2/2020	18	18 (18,18)	21 (14,27)	18 (18,19)	18 (18,18)	18 (11,25)	10 (-6,27)	

**Table A.63**

Actual and Predicted Cases with 95% Confidence Intervals for Finland using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	6286	1725 (-7215,10665)	6228 (6114,6342)	5162 (2960,7365)	7049 (5554,8543)	6228 (6114,6342)	6228 (6228,6228)	6298 (6161,6435)	
5/17/2020	6347	1725 (-7275,10725)	6228 (5995,6461)	5221 (3016,7426)	7192 (5615,8769)	6228 (6045,6411)	6228 (6228,6228)	6371 (4658,8084)	
5/18/2020	6380	1725 (-7317,10766)	6228 (5930,6526)	5279 (3090,7468)	7336 (5654,9019)	6228 (6000,6456)	6228 (6228,6228)	6444 (2721,10166)	
5/19/2020	6399	1725 (-7347,10796)	6228 (5893,6563)	5337 (3174,7500)	7482 (5679,9284)	6228 (5969,6487)	6228 (6228,6228)	6517 (361,12673)	
5/20/2020	6443	1725 (-7382,10832)	6228 (5807,6649)	5395 (3254,7537)	7628 (5710,9546)	6228 (5929,6527)	6228 (6228,6228)	6590 (-2363,15543)	
5/21/2020	6493	1725 (-7423,10872)	6228 (5709,6747)	5454 (3329,7578)	7775 (5746,9804)	6228 (5883,6573)	6228 (6228,6228)	6663 (-5410,18735)	
5/22/2020	6537	1725 (-7464,10913)	6228 (5622,6834)	5512 (3404,7620)	7923 (5782,10064)	6228 (5835,6621)	6228 (6228,6228)	6736 (-8749,22220)	
5/23/2020	6568	1725 (-7502,10952)	6228 (5562,6894)	5570 (3481,7660)	8072 (5815,10330)	6228 (5791,6665)	6228 (6228,6228)	6808 (-12357,25974)	
5/24/2020	6579	1725 (-7535,10984)	6228 (5540,6916)	5629 (3563,7694)	8222 (5838,10606)	6228 (5757,6699)	6228 (6228,6228)	6881 (-16217,29979)	
5/25/2020	6599	1725 (-7564,11014)	6228 (5501,6955)	5687 (3647,7726)	8373 (5858,10888)	6228 (5725,6731)	6228 (6228,6228)	6954 (-20312,34221)	
5/26/2020	6628	1725 (-7594,11044)	6228 (5444,7012)	5745 (3732,7759)	8525 (5878,11172)	6228 (5693,6763)	6228 (6228,6228)	7027 (-24631,38686)	
5/27/2020	6692	1725 (-7630,11079)	6228 (5319,7137)	5803 (3811,7796)	8677 (5905,11449)	6228 (5653,6803)	6228 (6228,6228)	7100 (-29163,43364)	
5/28/2020	6743	1725 (-7667,11117)	6228 (5219,7237)	5862 (3888,7835)	8831 (5936,11725)	6228 (5608,6848)	6228 (6228,6228)	7173 (-33898,48245)	
5/29/2020	6776	1725 (-7705,11154)	6228 (5154,7302)	5920 (3966,7873)	8985 (5965,12005)	6228 (5566,6890)	6228 (6228,6228)	7246 (-38829,53321)	
5/30/2020	6826	1725 (-7744,11193)	6228 (5056,7400)	5978 (4043,7914)	9140 (5996,12283)	6228 (5520,6936)	6228 (6228,6228)	7319 (-43947,58585)	
5/31/2020	6859	1725 (-7782,11231)	6228 (4991,7465)	6036 (4120,7953)	9295 (6026,12565)	6228 (5476,6980)	6228 (6228,6228)	7392 (-49246,64030)	
6/1/2020	6885	1725 (-7819,11268)	6228 (4940,7516)	6095 (4197,7992)	9452 (6053,12851)	6228 (5434,7022)	6228 (6228,6228)	7465 (-54720,69650)	
6/2/2020	6887	1725 (-7851,11301)	6228 (4936,7520)	6153 (4278,8028)	9609 (6075,13144)	6228 (5399,7057)	6228 (6228,6228)	7538 (-60365,75441)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	6286	6297 (6162,6432)	6302 (6232,6372)	5719 (4607,6831)	6317 (6142,6492)	6299 (6229,6369)	3189 (-2882,9259)		
5/17/2020	6347	6369 (4691,8048)	6377 (6272,6482)	5686 (4478,6893)	6375 (3139,9612)	6371 (6266,6477)	3227 (-2865,9320)		
5/18/2020	6380	6441 (2796,10087)	6453 (6307,6599)	5659 (4379,6939)	6444 (-1130,14018)	6443 (6295,6591)	3260 (-2840,9360)		
5/19/2020	6399	6513 (490,12537)	6529 (6342,6716)	5631 (4291,6971)	6503 (-6034,19041)	6515 (6325,6704)	3290 (-2809,9388)		
5/20/2020	6443	6585 (-2170,15341)	6606 (6375,6837)	5602 (4195,7009)	6572 (-11947,25091)	6587 (6351,6822)	3322 (-2780,9424)		
5/21/2020	6493	6657 (-5141,18456)	6683 (6406,6961)	5574 (4094,7054)	6640 (-18654,31935)	6659 (6375,6942)	3358 (-2752,9467)		
5/22/2020	6537	6729 (-8395,21853)	6762 (6435,7088)	5546 (3992,7101)	6709 (-26075,39493)	6730 (6397,7064)	3400 (-2715,9515)		
5/23/2020	6568	6800 (-11909,25510)	6841 (6463,7218)	5519 (3894,7145)	6798 (-34789,48385)	6802 (6415,7189)	3443 (-2673,9560)		
5/24/2020	6579	6872 (-15663,29407)	6920 (6489,7351)	5494 (3805,7182)	6854 (-43573,57281)	6874 (6432,7316)	3481 (-2630,9592)		
5/25/2020	6599	6943 (-19644,33530)	7000 (6514,7487)	5469 (3720,7217)	6919 (-52799,66637)	6946 (6446,7446)	3515 (-2590,9619)		
5/26/2020	6628	7015 (-23838,37867)	7081 (6537,7625)	5445 (3637,7252)	6976 (-62237,76189)	7018 (6458,7577)	3551 (-2547,9649)		
5/27/2020	6692	7086 (-28234,42405)	7163 (6559,7767)	5422 (3547,7296)	7042 (-72149,86233)	7089 (6468,7711)	3591 (-2505,9688)		
5/28/2020	6743	7157 (-32823,47137)	7245 (6580,7911)	5400 (3457,7343)	7107 (-82503,96718)	7161 (6475,7847)	3641 (-2454,9736)		
5/29/2020	6776	7228 (-37597,52053)	7328 (6599,8057)	5379 (3369,7389)	7173 (-93292,107638)	7233 (6481,7985)	3688 (-2404,9780)		
5/30/2020	6826	7299 (-42549,57146)	7412 (6617,8206)	5359 (3280,7438)	7260 (-104964,119484)	7305 (6485,8125)	3731 (-2360,9821)		
5/31/2020	6859	7369 (-47670,62409)	7496 (6634,8358)	5340 (3194,7487)	7313 (-116713,131339)	7377 (6486,8267)	3770 (-2318,9858)		
6/1/2020	6885	7440 (-52957,67837)	7581 (6650,8512)	5322 (3111,7533)	7376 (-128761,143513)	7448 (6486,8410)	3810 (-2275,9894)		
6/2/2020	6887	7510 (-58402,73423)	7666 (6665,8668)	5305 (3035,7574)	7430 (-140938,155798)	7520 (6484,8556)	3851 (-2226,9928)		

Table A.64

Actual and Predicted Cases with 95% Confidence Intervals for France using the Time Series Models.

Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SA	SMA	LT	QT	ST
5/16/2020	179630	58695 (-178338,295728)	179630 (179630,179630)	173112 (160337,185887)	206727 (153617,259837)	174918 (165682,184154)
5/17/2020	179693	58695 (-178400,295790)	179630 (179507,179753)	175052 (163962,186141)	209085 (153680,264490)	174918 (165621,184215)
5/18/2020	180051	58695 (-178655,296044)	179630 (178805,180455)	176991 (167297,186685)	211386 (153907,268865)	174918 (165359,184477)
5/19/2020	180933	58695 (-179216,296606)	179630 (177076,182184)	178930 (170308,187552)	213628 (154429,272826)	174918 (164756,185080)
5/20/2020	181700	58695 (-179855,297245)	179630 (175573,183687)	180869 (173123,188615)	215809 (155002,276615)	174918 (164057,185779)
5/21/2020	181951	58695 (-180363,297753)	179630 (175081,184179)	182809 (175704,189913)	217927 (155398,280456)	174918 (163518,186318)
5/22/2020	182354	58695 (-180839,298229)	179630 (174291,184969)	184748 (177936,191560)	219981 (155729,284233)	174918 (163012,186824)
5/23/2020	182694	58695 (-181280,298670)	179630 (173625,185635)	186687 (179740,193634)	221969 (155991,287946)	174918 (162546,187290)
5/24/2020	182709	58695 (-181626,299015)	179630 (173595,185665)	188626 (181021,196232)	223888 (156116,291661)	174918 (162191,187645)
5/25/2020	183067	58695 (-181973,299363)	179630 (172893,186367)	190566 (181983,199148)	225738 (156216,295260)	174918 (161831,188005)
5/26/2020	182847	58695 (-182217,299607)	179630 (173325,185935)	192505 (182528,202482)	227516 (156167,298866)	174918 (161589,188247)
5/27/2020	183038	58695 (-182452,299841)	179630 (172950,186310)	194444 (182916,205972)	229221 (156082,302360)	174918 (161355,188481)
5/28/2020	186364	58695 (-183163,300552)	179630 (166431,192829)	196384 (184041,208726)	230850 (156536,305165)	174918 (160477,189359)
5/29/2020	186923	58695 (-183851,301241)	179630 (165336,193924)	198323 (185014,211631)	232403 (156933,307873)	174918 (159648,190188)
5/30/2020	188752	58695 (-184695,302085)	179630 (161751,197509)	200262 (186147,214377)	233877 (157473,310280)	174918 (158589,191247)
5/31/2020	189009	58695 (-185464,302854)	179630 (161247,198013)	202201 (187083,217320)	235270 (157897,312642)	174918 (157665,192171)
6/1/2020	189348	58695 (-186181,303571)	179630 (160583,198677)	204141 (187875,220407)	236580 (158232,314929)	174918 (156829,193007)
6/2/2020	188450	58695 (-186716,304105)	179630 (162343,196917)	206080 (188298,223862)	237807 (158325,317289)	174918 (156260,193576)
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SES	HLT	DT	ARIMA	
5/16/2020	179630	179630 (179630,179630)	180304 (178983,181625)	180185 (179097,181273)	180194 (174919,185470)	
5/17/2020	179693	179630 (179630,179630)	180967 (39700,322234)	180741 (83047,278435)	180773 (173027,188520)	
5/18/2020	180051	179630 (179630,179630)	181631 (-133296,496557)	181284 (-34313,396882)	181359 (171036,191682)	
5/19/2020	180933	179630 (179630,179630)	182294 (-343998,708586)	181814 (-175101,538729)	181951 (168827,195074)	
5/20/2020	181700	179630 (179630,179630)	182957 (-586903,952817)	182331 (-334995,699658)	182547 (166401,198693)	
5/21/2020	181951	179630 (179630,179630)	183620 (-858299,1225539)	182836 (-511007,876679)	183149 (163773,202525)	
5/22/2020	182354	179630 (179630,179630)	184284 (-1155504,1524072)	183329 (-700926,1067585)	183756 (160955,206557)	
5/23/2020	182694	179630 (179630,179630)	184947 (-1476471,1846364)	183810 (-903030,1270650)	184368 (157960,210777)	
5/24/2020	182709	179630 (179630,179630)	185610 (-1819567,2190787)	184280 (-1115923,1484482)	184986 (154795,215177)	
5/25/2020	183067	179630 (179630,179630)	186273 (-2183459,2556006)	184738 (-1338444,1707920)	185609 (151469,219748)	
5/26/2020	182847	179630 (179630,179630)	186937 (-2567026,2940899)	185185 (-1569607,1939978)	186237 (147988,224485)	
5/27/2020	183038	179630 (179630,179630)	187600 (-2969311,3344511)	185622 (-1808564,2179808)	186870 (144360,229380)	
5/28/2020	186364	179630 (179630,179630)	188263 (-3389484,3766010)	186048 (-2054568,2426665)	187508 (140589,234428)	
5/29/2020	186923	179630 (179630,179630)	188926 (-3826816,4204668)	186465 (-2306965,2679894)	188152 (136680,239624)	
5/30/2020	188752	179630 (179630,179630)	189590 (-4280660,4659839)	186871 (-2565168,2938909)	188801 (132637,244965)	
5/31/2020	189009	179630 (179630,179630)	190253 (-4750439,5130945)	187267 (-2828653,3203187)	189455 (128465,250445)	
6/1/2020	189348	179630 (179630,179630)	190916 (-5235630,5617462)	187654 (-3096944,3472253)	190114 (124167,256062)	
6/2/2020	188450	179630 (179630,179630)	191579 (-5735761,6118919)	188032 (-3369613,3745677)	190779 (119747,261812)	
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	179630	178892 (177445,180339)	179556 (179411,179701)	180171 (174461,185881)	90311 (-84754,265376)	
5/17/2020	179693	179093 (177774,180411)	180816 (135540,226093)	180726 (172367,189084)	90628 (-84188,265444)	
5/18/2020	180051	179287 (177907,180668)	181062 (110542,251582)	181283 (170155,192410)	90796 (-84061,265653)	
5/19/2020	180933	179460 (177585,181334)	181736 (76411,287061)	181840 (167698,195982)	91046 (-84143,266234)	
5/20/2020	181700	179615 (177135,182095)	181604 (53177,310030)	182397 (165000,199794)	91491 (-84023,267005)	
5/21/2020	181951	179754 (176888,182621)	182429 (17750,347109)	182955 (162077,203833)	91910 (-83766,267585)	
5/22/2020	182354	179881 (176657,183106)	182716 (-17204,382636)	183512 (158943,208081)	92195 (-83628,268019)	
5/23/2020	182694	179996 (176447,183545)	182586 (-44967,410138)	184069 (155610,212529)	92421 (-83542,268384)	
5/24/2020	182709	180100 (176345,183855)	183739 (-88808,456286)	184627 (152089,217164)	92659 (-83364,268681)	
5/25/2020	183067	180190 (176207,184174)	183881 (-129704,497466)	185184 (148388,221980)	92931 (-83156,269018)	

**Table A.64** (continued)

5/26/2020	182847	180271 (176180,184363)	184455 (-174991,543902)	185742 (144515,226968)	93237 (-82809,269283)
5/27/2020	183038	180344 (176141,184548)	184227 (-212329,580783)	186299 (140476,232122)	93460 (-82546,269467)
5/28/2020	186364	180411 (175236,185586)	184960 (-256406,626326)	186856 (136277,237435)	93809 (-82619,270237)
5/29/2020	186923	180472 (174447,186496)	185157 (-299753,670068)	187414 (131924,242903)	94631 (-82120,271381)
5/30/2020	188752	180526 (173371,187682)	184941 (-336994,706875)	187971 (127421,248521)	95085 (-82130,272300)
5/31/2020	189009	180576 (172509,188643)	186010 (-384925,756946)	188528 (122772,254285)	95686 (-81890,273263)
6/1/2020	189348	180621 (171764,189479)	186072 (-430812,802956)	189086 (117982,260190)	95500 (-82457,273457)
6/2/2020	188450	180661 (171332,189991)	186569 (-479591,852729)	189643 (113054,266233)	95795 (-82366,273957)

**Table A.65**

Actual and Predicted Cases with 95% Confidence Intervals for Gabon using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1320	111 (-2260,2481)	1209 (991,1427)	390 (-1432,2213)	1003 (381,1624)	661 (-631,1953)	1209 (1209,1209)	1289 (1133,1445)
5/17/2020	1320	111 (-2260,2481)	1209 (991,1427)	395 (-1423,2213)	1052 (476,1627)	661 (-631,1953)	1209 (1209,1209)	1375 (-906,3656)
5/18/2020	1432	111 (-2335,2556)	1209 (772,1646)	400 (-1489,2288)	1102 (501,1702)	661 (-708,2030)	1209 (1209,1209)	1461 (-3518,6440)
5/19/2020	1502	111 (-2408,2630)	1209 (635,1783)	405 (-1553,2362)	1154 (531,1776)	661 (-783,2105)	1209 (1209,1209)	1547 (-6702,9796)
5/20/2020	1567	111 (-2479,2700)	1209 (507,1911)	409 (-1614,2433)	1207 (567,1847)	661 (-855,2177)	1209 (1209,1209)	1633 (-10376,13642)
5/21/2020	1567	111 (-2525,2746)	1209 (507,1911)	414 (-1651,2479)	1261 (628,1895)	661 (-901,2223)	1209 (1209,1209)	1719 (-14484,17922)
5/22/2020	1728	111 (-2608,2829)	1209 (192,2226)	419 (-1725,2562)	1317 (657,1978)	661 (-987,2309)	1209 (1209,1209)	1805 (-18986,22597)
5/23/2020	1934	111 (-2729,2950)	1209 (-212,2630)	423 (-1839,2685)	1375 (646,2104)	661 (-1115,2437)	1209 (1209,1209)	1892 (-23851,27634)
5/24/2020	1934	111 (-2819,3041)	1209 (-212,2630)	428 (-1920,2777)	1434 (673,2195)	661 (-1209,2531)	1209 (1209,1209)	1978 (-29055,33010)
5/25/2020	2135	111 (-2939,3160)	1209 (-606,3024)	433 (-2032,2898)	1495 (671,2319)	661 (-1334,2656)	1209 (1209,1209)	2064 (-34576,38704)
5/26/2020	2238	111 (-3057,3279)	1209 (-808,3226)	438 (-2142,3018)	1557 (675,2440)	661 (-1458,2780)	1209 (1209,1209)	2150 (-40399,44699)
5/27/2020	2319	111 (-3170,3391)	1209 (-967,3385)	442 (-2246,3131)	1621 (689,2554)	661 (-1574,2896)	1209 (1209,1209)	2236 (-46508,50980)
5/28/2020	2431	111 (-3284,3505)	1209 (-1186,3604)	447 (-2352,3246)	1687 (704,2670)	661 (-1692,3014)	1209 (1209,1209)	2322 (-52890,57535)
5/29/2020	2613	111 (-3413,3635)	1209 (-1543,3961)	452 (-2473,3377)	1754 (705,2803)	661 (-1826,3148)	1209 (1209,1209)	2408 (-59536,64353)
5/30/2020	2655	111 (-3529,3751)	1209 (-1625,4043)	457 (-2581,3494)	1823 (726,2920)	661 (-1945,3267)	1209 (1209,1209)	2495 (-66434,71423)
5/31/2020	2655	111 (-3628,3849)	1209 (-1625,4043)	461 (-2670,3593)	1893 (767,3019)	661 (-2045,3367)	1209 (1209,1209)	2581 (-73576,78738)
6/1/2020	2655	111 (-3712,3934)	1209 (-1625,4043)	466 (-2745,3677)	1965 (825,3106)	661 (-2130,3452)	1209 (1209,1209)	2667 (-80955,86288)
6/2/2020	2803	111 (-3807,4029)	1209 (-1915,4333)	471 (-2830,3772)	2039 (876,3203)	1209 (-1602,4020)	1209 (1209,1209)	2753 (-88562,94068)

(continued on next page)

**Table A.65** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	1320	1289 (1133,1445)	1333 (1301,1364)	1144 (800,1489)	1310 (1112,1509)	1333 (1301,1365)	727 (-434,1889)
5/17/2020	1320	1375 (-906,3656)	1465 (1423,1506)	1248 (985,1511)	1407 (-4708,7522)	1464 (1421,1507)	787 (-317,1892)
5/18/2020	1432	1461 (-3518,6440)	1604 (1553,1655)	1361 (1132,1590)	1516 (-12757,15789)	1602 (1548,1656)	839 (-284,1963)
5/19/2020	1502	1547 (-6702,9796)	1749 (1686,1811)	1485 (1286,1685)	1620 (-22458,25699)	1746 (1679,1813)	913 (-218,2044)
5/20/2020	1567	1633 (-10376,13642)	1898 (1821,1976)	1623 (1439,1808)	1727 (-33723,37177)	1894 (1810,1978)	981 (-155,2116)
5/21/2020	1567	1719 (-14484,17922)	2052 (1955,2149)	1778 (1539,2016)	1833 (-46324,49990)	2046 (1941,2150)	1068 (-42,2179)
5/22/2020	1728	1805 (-18986,22597)	2209 (2089,2329)	1954 (1677,2231)	1940 (-60180,64060)	2200 (2070,2331)	1128 (8,2248)
5/23/2020	1934	1892 (-23851,27634)	2369 (2222,2517)	2157 (1855,2459)	2043 (-75052,79139)	2357 (2197,2518)	1224 (66,2381)
5/24/2020	1934	1978 (-29055,33010)	2532 (2353,2711)	2395 (1981,2809)	2140 (-90648,94927)	2517 (2322,2711)	1330 (170,2491)
5/25/2020	2135	2064 (-34576,38704)	2697 (2483,2911)	2678 (2161,3196)	2249 (-107396,111893)	2677 (2444,2911)	1413 (224,2601)
5/26/2020	2238	2150 (-40399,44699)	2864 (2611,3117)	3019 (2344,3695)	2353 (-125065,129771)	2839 (2563,3116)	1503 (290,2717)
5/27/2020	2319	2236 (-46508,50980)	3033 (2737,3329)	3437 (2532,4342)	2460 (-143667,148587)	3002 (2679,3325)	1569 (332,2806)
5/28/2020	2431	2322 (-52890,57535)	3204 (2862,3545)	3959 (2756,5161)	2566 (-163129,168261)	3166 (2792,3540)	1668 (410,2927)
5/29/2020	2613	2408 (-59536,64353)	3376 (2986,3766)	4625 (3059,6192)	2673 (-183442,188788)	3331 (2903,3759)	1738 (442,3035)
5/30/2020	2655	2495 (-66434,71423)	3550 (3108,3992)	5501 (3412,7590)	2776 (-204474,210026)	3496 (3010,3982)	1839 (521,3158)
5/31/2020	2655	2581 (-73576,78738)	3725 (3229,4222)	6694 (3864,9524)	2873 (-226018,231763)	3661 (3115,4208)	1920 (594,3247)
6/1/2020	2655	2667 (-80955,86288)	3902 (3349,4456)	8389 (4520,12258)	2982 (-248401,254364)	3827 (3216,4438)	1990 (664,3315)
6/2/2020	2803	2753 (-88562,94068)	4081 (3467,4694)	10926 (5614,16239)	3086 (-271483,277655)	3994 (3315,4672)	2048 (713,3382)

**Table A.66**

Actual and Predicted Cases with 95% Confidence Intervals for Gambia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	23	5 (-31,40)	23 (23,23)	15 (-1,31)	25 (21,29)	17 (5,29)	23 (23,23)	24 (22,25)
5/17/2020	23	5 (-31,40)	23 (23,23)	15 (0,31)	26 (21,31)	23 (15,31)	23 (23,23)	24 (22,26)
5/18/2020	24	5 (-31,41)	23 (21,25)	15 (-1,31)	27 (22,32)	23 (16,30)	23 (23,23)	25 (23,27)
5/19/2020	24	5 (-32,41)	23 (21,25)	16 (-1,32)	27 (22,33)	23 (17,29)	23 (23,23)	25 (23,28)
5/20/2020	24	5 (-32,42)	23 (21,25)	16 (0,32)	28 (22,34)	23 (18,28)	23 (23,23)	26 (23,29)
5/21/2020	24	5 (-32,42)	23 (21,25)	16 (0,32)	29 (22,36)	23 (18,28)	23 (23,23)	26 (23,30)
5/22/2020	25	5 (-32,42)	23 (19,27)	16 (0,32)	30 (23,37)	23 (18,28)	23 (23,23)	27 (23,30)
5/23/2020	25	5 (-33,42)	23 (19,27)	16 (0,33)	31 (23,39)	23 (18,28)	23 (23,23)	27 (23,31)
5/24/2020	25	5 (-33,43)	23 (19,27)	16 (0,33)	32 (23,41)	23 (18,28)	23 (23,23)	28 (23,32)
5/25/2020	25	5 (-33,43)	23 (19,27)	17 (0,33)	33 (23,42)	23 (18,28)	23 (23,23)	28 (23,33)
5/26/2020	25	5 (-33,43)	23 (19,27)	17 (0,33)	34 (23,44)	23 (18,28)	23 (23,23)	29 (23,34)
5/27/2020	25	5 (-33,43)	23 (19,27)	17 (0,33)	35 (23,46)	23 (18,28)	23 (23,23)	29 (23,35)
5/28/2020	25	5 (-34,43)	23 (19,27)	17 (1,33)	36 (23,48)	23 (19,27)	23 (23,23)	30 (24,36)
5/29/2020	25	5 (-34,43)	23 (19,27)	17 (1,34)	37 (23,50)	23 (19,27)	23 (23,23)	30 (24,37)
5/30/2020	25	5 (-34,43)	23 (19,27)	17 (1,34)	38 (23,52)	23 (19,27)	23 (23,23)	31 (24,38)
5/31/2020	25	5 (-34,43)	23 (19,27)	18 (2,34)	39 (23,54)	23 (19,27)	23 (23,23)	31 (24,39)
6/1/2020	25	5 (-34,43)	23 (19,27)	18 (2,34)	40 (23,56)	23 (19,27)	23 (23,23)	32 (24,40)
6/2/2020	25	5 (-34,44)	23 (19,27)	18 (2,34)	41 (23,58)	23 (19,27)	23 (23,23)	32 (24,41)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	23	23 (23,24)	24 (22,25)	21 (18,25)	24 (22,25)	23 (22,25)	12 (-10,34)	
5/17/2020	23	24 (23,24)	24 (22,26)	21 (18,25)	24 (22,26)	24 (22,26)	12 (-9,34)	
5/18/2020	24	24 (23,25)	25 (22,27)	21 (17,25)	24 (22,27)	24 (22,27)	12 (-10,34)	
5/19/2020	24	24 (23,25)	25 (22,28)	21 (17,26)	25 (22,28)	25 (22,28)	13 (-9,35)	
5/20/2020	24	24 (23,25)	26 (23,29)	21 (16,26)	25 (22,29)	25 (22,29)	13 (-9,35)	
5/21/2020	24	24 (23,26)	26 (23,30)	21 (16,26)	26 (22,30)	26 (22,30)	13 (-8,35)	
5/22/2020	25	24 (23,26)	27 (23,31)	21 (16,26)	26 (22,31)	26 (22,31)	14 (-8,35)	
5/23/2020	25	24 (23,26)	28 (24,32)	21 (15,27)	27 (23,32)	27 (23,32)	14 (-8,36)	
5/24/2020	25	25 (23,26)	28 (24,32)	21 (15,27)	27 (22,32)	27 (22,33)	14 (-7,36)	
5/25/2020	25	25 (23,27)	29 (24,33)	21 (15,27)	28 (23,33)	28 (22,33)	15 (-7,36)	
5/26/2020	25	25 (23,27)	30 (25,34)	21 (14,27)	28 (23,34)	28 (22,34)	15 (-7,36)	
5/27/2020	25	25 (23,27)	30 (25,35)	21 (14,27)	29 (23,35)	29 (22,35)	15 (-6,36)	
5/28/2020	25	25 (23,27)	31 (26,36)	21 (14,28)	29 (23,35)	29 (22,36)	15 (-6,36)	
5/29/2020	25	25 (22,27)	31 (26,37)	21 (14,28)	30 (23,36)	30 (22,37)	16 (-5,37)	
5/30/2020	25	25 (22,28)	32 (27,38)	21 (14,28)	31 (24,37)	30 (22,38)	16 (-5,37)	
5/31/2020	25	25 (22,28)	33 (27,38)	21 (13,28)	31 (24,38)	31 (22,39)	16 (-4,37)	
6/1/2020	25	25 (22,28)	33 (28,39)	21 (13,28)	31 (24,39)	31 (23,40)	17 (-4,37)	
6/2/2020	25	25 (22,28)	34 (28,40)	20 (13,28)	32 (24,39)	32 (23,40)	17 (-3,37)	

**Table A.67**

Actual and Predicted Cases with 95% Confidence Intervals for Georgia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	683	177 (-815,1169)	671 (647,695)	537 (251,823)	788 (582,993)	671 (647,695)	671 (671,671)	679 (663,696)
5/17/2020	695	177 (-827,1181)	671 (624,718)	543 (251,835)	807 (594,1020)	671 (634,708)	671 (671,671)	688 (649,726)
5/18/2020	701	177 (-835,1189)	671 (612,730)	549 (256,843)	827 (602,1051)	671 (625,717)	671 (671,671)	696 (628,764)
5/19/2020	707	177 (-842,1196)	671 (600,742)	555 (261,850)	846 (609,1084)	671 (618,724)	671 (671,671)	704 (601,807)
5/20/2020	713	177 (-848,1202)	671 (589,753)	561 (266,857)	866 (615,1118)	671 (611,731)	671 (671,671)	712 (569,855)
5/21/2020	721	177 (-855,1209)	671 (573,769)	568 (272,864)	886 (622,1151)	671 (603,739)	671 (671,671)	720 (533,907)
5/22/2020	723	177 (-861,1215)	671 (569,773)	574 (278,869)	907 (626,1187)	671 (597,745)	671 (671,671)	728 (494,962)
5/23/2020	728	177 (-866,1220)	671 (559,783)	580 (285,875)	928 (631,1224)	671 (592,750)	671 (671,671)	736 (451,1022)
5/24/2020	730	177 (-871,1225)	671 (555,787)	586 (292,879)	949 (635,1262)	671 (587,755)	671 (671,671)	744 (404,1084)
5/25/2020	731	177 (-875,1229)	671 (553,789)	592 (300,884)	970 (637,1302)	671 (583,759)	671 (671,671)	752 (355,1150)
5/26/2020	732	177 (-878,1232)	671 (551,791)	598 (309,887)	991 (639,1343)	671 (580,762)	671 (671,671)	760 (303,1218)
5/27/2020	735	177 (-882,1235)	671 (546,796)	604 (318,891)	1013 (641,1385)	671 (576,766)	671 (671,671)	768 (247,1289)
5/28/2020	738	177 (-885,1238)	671 (540,802)	610 (327,894)	1035 (643,1427)	671 (573,769)	671 (671,671)	777 (190,1363)
5/29/2020	746	177 (-889,1242)	671 (524,818)	616 (335,898)	1057 (646,1469)	671 (569,773)	671 (671,671)	785 (129,1440)
5/30/2020	757	177 (-894,1247)	671 (502,840)	623 (342,903)	1080 (650,1509)	671 (563,779)	671 (671,671)	793 (67,1519)
5/31/2020	783	177 (-901,1255)	671 (451,891)	629 (347,911)	1102 (658,1547)	671 (553,789)	671 (671,671)	801 (1,1600)
6/1/2020	794	177 (-910,1263)	671 (430,912)	635 (351,919)	1125 (666,1585)	671 (542,800)	671 (671,671)	809 (-66,1684)
6/2/2020	796	177 (-917,1271)	671 (426,916)	641 (356,926)	1149 (674,1624)	671 (533,809)	671 (671,671)	817 (-136,1770)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3070	683	679 (663,695)	682 (671,692)	674 (656,692)	679 (663,695)	681 (671,692)	346 (-315,1007)	
	695	687 (651,723)	688 (672,705)	679 (654,705)	687 (642,732)	687 (670,704)	350 (-318,1019)	
	701	695 (631,758)	700 (676,723)	684 (656,712)	695 (613,777)	698 (674,722)	354 (-317,1026)	
	707	702 (606,799)	707 (677,737)	689 (660,719)	703 (578,828)	704 (674,734)	358 (-316,1033)	
	713	710 (577,843)	718 (681,754)	694 (663,725)	711 (537,886)	714 (677,751)	363 (-314,1040)	
	721	718 (545,891)	725 (683,768)	698 (665,732)	719 (490,948)	721 (677,765)	366 (-315,1046)	
	723	725 (509,942)	736 (687,786)	703 (668,737)	727 (440,1014)	731 (680,781)	372 (-310,1053)	
	728	733 (470,996)	744 (688,801)	707 (671,742)	735 (384,1086)	738 (680,795)	375 (-308,1058)	
	730	740 (428,1053)	755 (692,819)	710 (674,746)	743 (325,1161)	747 (682,812)	380 (-303,1063)	
	731	748 (383,1112)	764 (693,834)	714 (678,750)	751 (263,1239)	754 (682,827)	383 (-300,1066)	
	732	755 (336,1174)	774 (696,852)	717 (682,753)	759 (196,1322)	764 (683,844)	389 (-294,1071)	
	735	762 (287,1238)	783 (698,869)	721 (686,755)	767 (126,1408)	771 (683,859)	392 (-289,1074)	
	738	770 (236,1304)	794 (701,887)	724 (690,758)	775 (53,1497)	780 (684,877)	398 (-282,1078)	
	746	777 (182,1372)	803 (702,904)	727 (692,761)	783 (-23,1589)	788 (683,893)	403 (-277,1082)	
	757	784 (127,1442)	814 (705,923)	730 (694,766)	791 (-103,1685)	797 (683,911)	409 (-270,1089)	
	783	791 (69,1514)	824 (706,941)	732 (689,775)	799 (-185,1783)	804 (682,927)	415 (-267,1098)	
	794	798 (10,1587)	834 (708,961)	735 (684,785)	807 (-270,1884)	813 (682,945)	425 (-260,1110)	
	796	806 (-51,1662)	844 (709,979)	737 (681,793)	815 (-358,1988)	821 (680,962)	430 (-257,1117)	

**Table A.68**

Actual and Predicted Cases with 95% Confidence Intervals for Germany using the Time Series Models.

Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SA	SMA	LT	QT	ST
5/16/2020	175752	61569 (-162228,285367)	175233 (174216,176250)	176182 (175339,177025)	187725 (164258,211192)	173171 (168112,178230)
5/17/2020	176369	61569 (-162834,285973)	175233 (173006,177460)	178124 (175620,180629)	188468 (164877,212060)	173171 (167475,178867)
5/18/2020	176551	61569 (-163154,286293)	175233 (172650,177816)	180067 (175593,184541)	189101 (165170,213033)	173171 (167150,179192)
5/19/2020	177778	61569 (-163919,287058)	175233 (170245,180221)	182010 (176334,187685)	189621 (165867,213375)	173171 (166273,180069)
5/20/2020	178473	61569 (-164653,287791)	175233 (168883,181583)	183952 (176964,190940)	190025 (166489,213561)	173171 (165447,180895)
5/21/2020	179021	61569 (-165321,288460)	175233 (167809,182657)	185895 (177472,194318)	190311 (167004,213619)	173171 (164708,181634)
5/22/2020	179710	61569 (-165993,289132)	175233 (166458,184008)	187837 (177985,197689)	190476 (167471,213482)	173171 (163959,182383)
5/23/2020	179986	61569 (-166565,289704)	175233 (165917,184549)	189780 (178335,201225)	190518 (167795,213242)	173171 (163345,182997)
5/24/2020	180328	61569 (-167084,290223)	175233 (165247,185219)	191723 (178613,204832)	190435 (168016,212853)	173171 (162794,183548)
5/25/2020	180600	61569 (-167553,290692)	175233 (164714,185752)	193665 (178824,208506)	190222 (168134,212311)	173171 (162303,184039)
5/26/2020	181200	61569 (-168045,291184)	175233 (163538,186928)	195608 (179094,212122)	189879 (168203,211555)	173171 (161774,184568)
5/27/2020	181524	61569 (-168508,291647)	175233 (162903,187563)	197550 (179323,215777)	189403 (168176,210630)	173171 (161279,185063)
5/28/2020	182196	61569 (-169003,292142)	175233 (161586,188880)	199493 (179616,219369)	188791 (168084,209497)	173171 (160737,185605)
5/29/2020	182922	61569 (-169530,292669)	175233 (160163,190303)	201436 (179967,222904)	188040 (167907,208173)	173171 (160146,186196)
5/30/2020	183189	61569 (-170022,293161)	175233 (159639,190827)	203378 (180257,226499)	187148 (167595,206701)	173171 (159605,186737)
5/31/2020	183410	61569 (-170480,293619)	175233 (159206,191260)	205321 (180493,230149)	186113 (167135,205091)	173171 (159110,187232)
6/1/2020	183594	61569 (-170905,294044)	175233 (158845,191621)	207263 (180678,233848)	184932 (166509,203355)	173171 (158658,187684)
6/2/2020	183879	61569 (-171314,294452)	175233 (158287,192179)	209206 (180844,237568)	183602 (165698,201506)	173171 (158224,188118)
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SES	HLT	DT	ARIMA	
5/16/2020	175752	175233 (175233,175233)	176002 (174495,177510)	175934 (174560,177307)	175841 (174702,176980)	
5/17/2020	176369	175233 (175233,175233)	176751 (-5112,358614)	176620 (24755,328484)	176338 (173981,178695)	
5/18/2020	176551	175233 (175233,175233)	177500 (-228069,583069)	177297 (-159577,514171)	176833 (173223,180442)	
5/19/2020	177778	175233 (175233,175233)	178249 (-499621,856119)	177966 (-382281,738212)	177427 (172548,182305)	
5/20/2020	178473	175233 (175233,175233)	178998 (-812672,1170668)	178626 (-636978,994231)	178149 (171898,184400)	
5/21/2020	179021	175233 (175233,175233)	179747 (-1162437,1521931)	179278 (-919297,1277853)	178946 (171104,186788)	
5/22/2020	179710	175233 (175233,175233)	180496 (-1545461,1906453)	179921 (-1226024,1585866)	179723 (170001,189444)	
5/23/2020	179986	175233 (175233,175233)	181245 (-1959102,2321591)	180557 (-1554664,1915777)	180412 (168547,192278)	
5/24/2020	180328	175233 (175233,175233)	181994 (-2401259,2765247)	181184 (-1903206,2265574)	181016 (166843,195188)	
5/25/2020	180600	175233 (175233,175233)	182743 (-2870213,3235698)	181803 (-2269977,2633583)	181592 (165053,198132)	
5/26/2020	181200	175233 (175233,175233)	183492 (-3364518,3731501)	182415 (-2653557,3018386)	182218 (163299,201137)	
5/27/2020	181524	175233 (175233,175233)	184241 (-3882942,4251424)	183018 (-3052717,3418754)	182930 (161601,204259)	
5/28/2020	182196	175233 (175233,175233)	184990 (-4424416,4794395)	183614 (-3466382,3833611)	183710 (159879,207541)	
5/29/2020	182922	175233 (175233,175233)	185739 (-4987999,5359476)	184203 (-3893597,4262003)	184500 (158019,210980)	
5/30/2020	183189	175233 (175233,175233)	186487 (-5572860,5945835)	184784 (-4333508,4703075)	185245 (155950,214539)	
5/31/2020	183410	175233 (175233,175233)	187236 (-6178252,6552725)	185357 (-4785342,5156057)	185928 (153686,218171)	
6/1/2020	183594	175233 (175233,175233)	187985 (-6803504,7179475)	185923 (-5248400,5620247)	186581 (151309,221852)	
6/2/2020	183879	175233 (175233,175233)	188734 (-7448005,7825473)	186482 (-5722040,6095005)	187251 (148908,225594)	
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	175752	160979 (132024,189934)	175929 (174565,177292)	175833 (174693,176973)	88265 (-83210,259740)	
5/17/2020	176369	159575 (128576,190574)	176589 (-678040,1031218)	176315 (173957,178673)	88445 (-83458,260348)	
5/18/2020	176551	158346 (125712,190981)	177216 (-1693590,2048022)	176790 (173181,180399)	88732 (-83245,260709)	
5/19/2020	177778	157137 (122381,191892)	177811 (-2891626,3247249)	177360 (172485,182236)	88933 (-83586,261453)	
5/20/2020	178473	155974 (119160,192788)	178370 (-4222923,4579662)	178057 (171813,184301)	89413 (-83516,262342)	
5/21/2020	179021	154871 (116106,193637)	178901 (-5662321,6020123)	178823 (170992,186655)	89824 (-83422,263071)	
5/22/2020	179710	153836 (113147,194524)	179404 (-7188754,7547562)	179563 (169856,189271)	90274 (-83266,263814)	
5/23/2020	179986	152870 (110424,195316)	179881 (-8784721,9144482)	180209 (168360,192058)	90529 (-83237,264295)	
5/24/2020	180328	151975 (107877,196073)	180333 (-10438059,10798726)	180761 (166606,194915)	90760 (-83205,264726)	
5/25/2020	180600	151144 (105498,196789)	180763 (-12138393,12499919)	181281 (164762,197799)	91014 (-83114,265143)	

(continued on next page)

**Table A.68** (continued)

5/26/2020	181200	150369 (103188,197550)	181172 (-13877584,14239927)	181846 (162952,200739)	91257 (-83068,265583)
5/27/2020	181524	149648 (101008,198288)	181553 (-15644068,16007173)	182494 (161196,203793)	91668 (-82808,266143)
5/28/2020	182196	148982 (98883,199080)	181916 (-1743335,17797168)	183206 (159411,207002)	92055 (-82591,266701)
5/29/2020	182922	148366 (96808,199924)	182261 (-19240357,19604879)	183922 (157482,210363)	92516 (-82313,267346)
5/30/2020	183189	147794 (94861,200727)	182587 (-21059937,21425111)	184586 (155336,213836)	92910 (-82062,267881)
5/31/2020	183410	147264 (93038,201490)	182897 (-22888813,23254608)	185182 (152988,217377)	93242 (-81840,268324)
6/1/2020	183594	146769 (91326,202212)	183192 (-24723887,25090271)	185741 (150521,220961)	93493 (-81678,268664)
6/2/2020	183879	146301 (89693,202910)	183473 (-26562825,26929771)	186314 (148028,224599)	93738 (-81518,268993)

**Table A.69**

Actual and Predicted Cases with 95% Confidence Intervals for Ghana using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	5735	714 (-9126,10555)	5638 (5448,5828)	2452 (-3982,8886)	5713 (5671,5756)	4263 (1378,7148)	5638 (5638,5638)	5922 (5365,6479)
5/17/2020	5735	714 (-9126,10555)	5638 (5448,5828)	2482 (-3924,8887)	5972 (5642,6301)	4263 (1378,7148)	5638 (5638,5638)	6165 (-15947,28278)
5/18/2020	5735	714 (-9126,10555)	5638 (5448,5828)	2511 (-3866,8888)	6237 (5609,6865)	4263 (1378,7148)	5638 (5638,5638)	6408 (-42626,55443)
5/19/2020	6096	714 (-9308,10736)	5638 (4740,6536)	2541 (-3989,9070)	6509 (5831,7188)	4263 (1186,7340)	5638 (5638,5638)	6652 (-75110,88413)
5/20/2020	6269	714 (-9487,10915)	5638 (4401,6875)	2570 (-4110,9250)	6789 (6030,7548)	4263 (997,7529)	5638 (5638,5638)	6895 (-112557,126347)
5/21/2020	6269	714 (-9604,11033)	5638 (4401,6875)	2599 (-4169,9368)	7077 (6129,8024)	4263 (877,7649)	5638 (5638,5638)	7138 (-154400,168676)
5/22/2020	6486	714 (-9752,11181)	5638 (3976,7300)	2629 (-4258,9516)	7372 (6276,8467)	4263 (722,7804)	5638 (5638,5638)	7381 (-200225,214987)
5/23/2020	6617	714 (-9896,11325)	5638 (3719,7557)	2658 (-4343,9660)	7674 (6415,8934)	4263 (571,7955)	5638 (5638,5638)	7625 (-249717,264966)
5/24/2020	6683	714 (-10022,11451)	5638 (3590,7686)	2688 (-4411,9786)	7985 (6524,9445)	4263 (440,8086)	5638 (5638,5638)	7868 (-302624,318360)
5/25/2020	6808	714 (-10149,11578)	5638 (3345,7931)	2717 (-4479,9913)	8303 (6636,9970)	4263 (308,8218)	5638 (5638,5638)	8111 (-358742,374964)
5/26/2020	7117	714 (-10313,11742)	5638 (2739,8537)	2747 (-4584,10078)	8629 (6806,10452)	4263 (132,8394)	5638 (5638,5638)	8354 (-417898,434606)
5/27/2020	7303	714 (-10482,11911)	5638 (2375,8901)	2776 (-4695,10248)	8963 (6981,10945)	4263 (-50,8576)	5638 (5638,5638)	8597 (-479943,497138)
5/28/2020	7303	714 (-10624,12052)	5638 (2375,8901)	2806 (-4778,10389)	9305 (7112,11499)	4263 (-198,8724)	5638 (5638,5638)	8841 (-544750,562431)
5/29/2020	7616	714 (-10794,12223)	5638 (1761,9515)	2835 (-4890,10560)	9656 (7287,12024)	4263 (-381,8907)	5638 (5638,5638)	9084 (-612207,630374)
5/30/2020	7768	714 (-10963,12391)	5638 (1463,9813)	2865 (-5000,10729)	10014 (7459,12569)	4263 (-561,9087)	5638 (5638,5638)	9327 (-682213,700867)
5/31/2020	8070	714 (-11152,12581)	5638 (871,10405)	2894 (-5132,10920)	10382 (7661,13102)	4263 (-767,9293)	5638 (5638,5638)	9570 (-754680,773821)
6/1/2020	8070	714 (-11317,12746)	5638 (871,10405)	2923 (-5238,11085)	10757 (7825,13690)	4263 (-942,9468)	5638 (5638,5638)	9814 (-829527,849154)
6/2/2020	8297	714 (-11492,12921)	5638 (426,10850)	2953 (-5354,11260)	11141 (8003,14279)	4263 (-1127,9653)	5638 (5638,5638)	10057 (-906681,926795)

**Table A.69** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	5735	5922 (5365,6479)	6025 (5824,6226)	6132 (5354,6911)	6018 (5274,6761)	6003 (5801,6204)	3099 (-2067,8265)
5/17/2020	5735	6165 (-15947,28278)	6261 (6014,6509)	6485 (5309,7662)	6238 (-30843,43318)	6211 (5963,6459)	3186 (-1896,8268)
5/18/2020	5735	6408 (-42626,55443)	6500 (6191,6810)	6854 (5265,8444)	6458 (-76130,89046)	6419 (6104,6735)	3285 (-1706,8275)
5/19/2020	6096	6652 (-75110,88413)	6741 (6356,7126)	7236 (5463,9009)	6678 (-131282,144637)	6628 (6229,7026)	3387 (-1686,8459)
5/20/2020	6269	6895 (-112557,126347)	6984 (6513,7455)	7638 (5650,9627)	6897 (-194861,208656)	6836 (6342,7331)	3554 (-1569,8677)
5/21/2020	6269	7138 (-154400,168676)	7229 (6664,7794)	8061 (5748,10374)	7117 (-265893,280128)	7045 (6443,7646)	3706 (-1401,8812)
5/22/2020	6486	7381 (-200225,214987)	7476 (6808,8144)	8510 (5896,11125)	7337 (-343685,358360)	7253 (6535,7971)	3829 (-1292,8951)
5/23/2020	6617	7625 (-249717,264966)	7725 (6948,8503)	8979 (6036,11921)	7557 (-427689,442803)	7461 (6618,8305)	3929 (-1211,9069)
5/24/2020	6683	7868 (-302624,318360)	7977 (7083,8870)	9476 (6155,12796)	7777 (-517478,533032)	7670 (6694,8646)	4047 (-1096,9190)
5/25/2020	6808	8111 (-358742,374964)	8230 (7214,9246)	10000 (6280,13720)	7997 (-612708,628702)	7878 (6763,8994)	4185 (-958,9328)
5/26/2020	7117	8354 (-417898,434606)	8485 (7342,9629)	10558 (6469,14646)	8217 (-713079,729513)	8087 (6825,9349)	4297 (-882,9476)
5/27/2020	7303	8597 (-479943,497138)	8743 (7466,10020)	11138 (6662,15613)	8437 (-818343,835217)	8295 (6880,9710)	4456 (-757,9670)
5/28/2020	7303	8841 (-544750,562431)	9002 (7587,10417)	11753 (6819,16686)	8656 (-928281,945594)	8503 (6930,10077)	4606 (-613,9825)
5/29/2020	7616	9084 (-612207,630374)	9264 (7706,10822)	12410 (7033,17786)	8876 (-1042708,1060461)	8712 (6973,10450)	4716 (-538,9970)
5/30/2020	7768	9327 (-682213,700867)	9528 (7822,11234)	13106 (7252,18961)	9096 (-1161447,1179638)	8920 (7012,10829)	4849 (-438,10135)
5/31/2020	8070	9570 (-754680,773821)	9794 (7935,11652)	13847 (7511,20183)	9316 (-1284346,1302977)	9129 (7044,11213)	4976 (-362,10314)
6/1/2020	8070	9814 (-829527,849154)	10062 (8046,12077)	14638 (7743,21532)	9535 (-1411272,1430343)	9337 (7072,11602)	5161 (-199,10521)
6/2/2020	8297	10057 (-906681,926795)	10332 (8155,12508)	15488 (8009,22966)	9755 (-1542098,1561608)	9545 (7094,11997)	5243 (-154,10640)

**Table A.70**

Actual and Predicted Cases with 95% Confidence Intervals for Greece using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	2819	1027 (-2485,4539)	2810 (2792,2828)	2863 (2776,2951)	2871 (2769,2974)	2810 (2792,2828)	2810 (2810,2810)	2823 (2798,2847)
5/17/2020	2834	1027 (-2500,4554)	2810 (2763,2857)	2895 (2790,2999)	2872 (2782,2962)	2810 (2774,2846)	2810 (2810,2810)	2840 (2748,2933)
5/18/2020	2836	1027 (-2506,4560)	2810 (2759,2861)	2926 (2793,3058)	2871 (2788,2954)	2810 (2769,2851)	2810 (2810,2810)	2858 (2674,3041)
5/19/2020	2840	1027 (-2511,4565)	2810 (2751,2869)	2957 (2795,3119)	2867 (2790,2944)	2810 (2764,2856)	2810 (2810,2810)	2876 (2583,3168)
5/20/2020	2850	1027 (-2518,4572)	2810 (2732,2888)	2988 (2799,3177)	2861 (2792,2930)	2810 (2756,2864)	2810 (2810,2810)	2893 (2476,3310)
5/21/2020	2853	1027 (-2523,4578)	2810 (2726,2894)	3019 (2801,3237)	2853 (2790,2916)	2810 (2750,2870)	2810 (2810,2810)	2911 (2356,3466)
5/22/2020	2874	1027 (-2533,4588)	2810 (2685,2935)	3050 (2810,3290)	2843 (2780,2906)	2810 (2737,2883)	2810 (2810,2810)	2929 (2222,3635)
5/23/2020	2876	1027 (-2541,4596)	2810 (2681,2939)	3081 (2815,3347)	2830 (2764,2897)	2810 (2728,2892)	2810 (2810,2810)	2946 (2078,3815)
5/24/2020	2878	1027 (-2548,4602)	2810 (2677,2943)	3112 (2819,3406)	2815 (2740,2891)	2810 (2721,2899)	2810 (2810,2810)	2964 (1922,4005)
5/25/2020	2882	1027 (-2554,4608)	2810 (2669,2951)	3144 (2821,3466)	2798 (2710,2886)	2810 (2714,2906)	2810 (2810,2810)	2982 (1757,4206)
5/26/2020	2892	1027 (-2561,4615)	2810 (2649,2971)	3175 (2825,3525)	2778 (2671,2886)	2810 (2707,2913)	2810 (2810,2810)	2999 (1582,4417)
5/27/2020	2903	1027 (-2568,4623)	2810 (2628,2992)	3206 (2830,3582)	2756 (2624,2888)	2810 (2698,2922)	2810 (2810,2810)	3017 (1398,4636)
5/28/2020	2906	1027 (-2575,4629)	2810 (2622,2998)	3237 (2833,3641)	2731 (2573,2890)	2810 (2690,2930)	2810 (2810,2810)	3035 (1205,4865)
5/29/2020	2909	1027 (-2581,4636)	2810 (2616,3004)	3268 (2836,3700)	2704 (2517,2891)	2810 (2683,2937)	2810 (2810,2810)	3052 (1003,5101)
5/30/2020	2915	1027 (-2587,4642)	2810 (2604,3016)	3299 (2839,3760)	2674 (2457,2892)	2810 (2677,2943)	2810 (2810,2810)	3070 (794,5346)
5/31/2020	2917	1027 (-2593,4647)	2810 (2600,3020)	3330 (2841,3820)	2642 (2391,2892)	2810 (2671,2949)	2810 (2810,2810)	3088 (576,5599)
6/1/2020	2918	1027 (-2598,4653)	2810 (2598,3022)	3361 (2842,3881)	2606 (2322,2891)	2810 (2665,2955)	2810 (2810,2810)	3105 (351,5859)
6/2/2020	2937	1027 (-2605,4659)	2810 (2561,3059)	3393 (2845,3940)	2568 (2244,2893)	2810 (2658,2962)	2810 (2810,2810)	3123 (119,6127)

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**Table A.70** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	2819	2821 (2799,2844)	2827 (2781,2873)	2714 (2509,2919)	2824 (2796,2853)	2827 (2781,2872)	1425 (-1308,4158)
5/17/2020	2834	2838 (2758,2918)	2852 (2782,2921)	2713 (2491,2935)	2846 (2617,3076)	2851 (2781,2920)	1436 (-1301,4173)
5/18/2020	2836	2854 (2697,3011)	2873 (2774,2973)	2711 (2482,2941)	2854 (2477,3231)	2871 (2771,2971)	1447 (-1284,4179)
5/19/2020	2840	2870 (2622,3119)	2896 (2766,3027)	2709 (2473,2946)	2881 (2215,3547)	2893 (2763,3023)	1453 (-1276,4181)
5/20/2020	2850	2886 (2534,3238)	2919 (2755,3083)	2707 (2461,2953)	2896 (1940,3851)	2914 (2750,3079)	1463 (-1264,4190)
5/21/2020	2853	2902 (2436,3368)	2942 (2743,3142)	2705 (2451,2958)	2913 (1636,4190)	2936 (2736,3136)	1474 (-1249,4197)
5/22/2020	2874	2917 (2328,3507)	2965 (2728,3203)	2702 (2435,2969)	2935 (1279,4592)	2958 (2720,3196)	1486 (-1237,4208)
5/23/2020	2876	2933 (2212,3654)	2989 (2711,3266)	2700 (2422,2978)	2950 (911,4988)	2979 (2701,3257)	1500 (-1219,4219)
5/24/2020	2878	2948 (2087,3808)	3013 (2693,3332)	2697 (2410,2985)	2969 (515,5423)	3001 (2681,3321)	1511 (-1204,4226)
5/25/2020	2882	2963 (1956,3970)	3036 (2673,3400)	2695 (2399,2991)	2974 (142,5806)	3022 (2658,3387)	1522 (-1188,4232)
5/26/2020	2892	2978 (1818,4137)	3060 (2651,3469)	2693 (2387,2999)	2999 (-275,6272)	3044 (2634,3454)	1532 (-1175,4238)
5/27/2020	2903	2992 (1674,4310)	3085 (2628,3541)	2691 (2374,3007)	3011 (-704,6725)	3066 (2608,3523)	1545 (-1157,4247)
5/28/2020	2906	3006 (1524,4489)	3109 (2604,3615)	2689 (2362,3015)	3026 (-1144,7196)	3087 (2580,3594)	1559 (-1139,4256)
5/29/2020	2909	3021 (1369,4673)	3134 (2578,3690)	2687 (2351,3022)	3046 (-1615,7707)	3109 (2551,3666)	1571 (-1121,4263)
5/30/2020	2915	3035 (1208,4861)	3159 (2550,3767)	2685 (2341,3029)	3058 (-2093,8209)	3130 (2520,3740)	1582 (-1105,4269)
5/31/2020	2917	3048 (1043,5054)	3184 (2521,3846)	2683 (2331,3036)	3075 (-2587,8737)	3152 (2488,3816)	1594 (-1088,4275)
6/1/2020	2918	3062 (873,5251)	3209 (2491,3926)	2682 (2322,3042)	3078 (-3064,9219)	3173 (2454,3893)	1606 (-1069,4281)
6/2/2020	2937	3076 (700,5452)	3234 (2460,4009)	2680 (2311,3050)	3100 (-3564,9764)	3195 (2419,3971)	1619 (-1051,4289)

**Table A.71**

Actual and Predicted Cases with 95% Confidence Intervals for Grenada using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	22	7 (-23,36)	22 (22,22)	20 (17,24)	24 (20,28)	21 (19,23)	22 (22,22)	22 (22,22)
5/17/2020	22	7 (-23,36)	22 (22,22)	21 (17,24)	24 (20,28)	21 (19,23)	22 (22,22)	22 (22,22)
5/18/2020	22	7 (-23,36)	22 (22,22)	21 (18,24)	24 (20,29)	21 (19,23)	22 (22,22)	22 (22,22)
5/19/2020	22	7 (-23,36)	22 (22,22)	21 (18,24)	25 (20,29)	21 (19,23)	22 (22,22)	23 (23,23)
5/20/2020	22	7 (-23,36)	22 (22,22)	21 (19,24)	25 (20,30)	21 (19,23)	22 (22,22)	23 (23,23)
5/21/2020	22	7 (-23,36)	22 (22,22)	21 (19,24)	25 (20,30)	21 (19,23)	22 (22,22)	23 (23,23)
5/22/2020	22	7 (-23,36)	22 (22,22)	22 (19,24)	25 (20,31)	21 (19,23)	22 (22,22)	23 (23,23)
5/23/2020	22	7 (-23,36)	22 (22,22)	22 (20,24)	26 (20,31)	21 (19,23)	22 (22,22)	23 (23,23)
5/24/2020	22	7 (-23,36)	22 (22,22)	22 (20,24)	26 (20,32)	21 (19,23)	22 (22,22)	23 (23,24)
5/25/2020	23	7 (-23,37)	22 (20,24)	22 (20,24)	26 (20,32)	21 (19,23)	22 (22,22)	24 (24,24)
5/26/2020	23	7 (-23,37)	22 (20,24)	23 (21,24)	26 (20,32)	21 (19,23)	22 (22,22)	24 (24,24)
5/27/2020	23	7 (-23,37)	22 (20,24)	23 (21,25)	26 (20,32)	21 (18,24)	22 (22,22)	24 (24,24)
5/28/2020	23	7 (-23,37)	22 (20,24)	23 (21,25)	27 (21,33)	21 (18,24)	22 (22,22)	24 (24,24)
5/29/2020	23	7 (-23,37)	22 (20,24)	23 (22,25)	27 (21,33)	21 (18,24)	22 (22,22)	24 (24,24)
5/30/2020	23	7 (-23,37)	22 (20,24)	23 (22,25)	27 (21,33)	21 (18,24)	22 (22,22)	25 (25,25)
5/31/2020	23	7 (-24,37)	22 (20,24)	24 (22,25)	27 (21,33)	21 (18,24)	22 (22,22)	25 (25,25)
6/1/2020	23	7 (-24,37)	22 (20,24)	24 (22,25)	27 (21,34)	21 (18,24)	22 (22,22)	25 (25,25)
6/2/2020	23	7 (-24,37)	22 (20,24)	24 (22,26)	27 (21,34)	21 (18,24)	22 (22,22)	25 (25,25)

**Table A.71** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	22	22 (22,22)	22 (21,24)	22 (21,22)	22 (22,22)	22 (21,23)	11 (-9,32)
5/17/2020	22	22 (22,22)	23 (21,25)	22 (21,22)	22 (22,22)	22 (20,24)	12 (-9,32)
5/18/2020	22	22 (22,22)	23 (21,25)	22 (21,22)	22 (22,22)	22 (20,25)	12 (-9,32)
5/19/2020	22	22 (22,22)	24 (21,26)	22 (21,22)	22 (22,22)	23 (20,25)	12 (-9,32)
5/20/2020	22	22 (22,23)	24 (21,27)	22 (21,22)	22 (22,22)	23 (19,26)	12 (-8,32)
5/21/2020	22	23 (22,23)	24 (21,28)	22 (22,22)	22 (22,22)	23 (19,27)	12 (-8,32)
5/22/2020	22	23 (22,23)	25 (22,28)	22 (22,22)	22 (22,23)	23 (19,28)	12 (-7,32)
5/23/2020	22	23 (22,23)	25 (22,29)	22 (22,23)	23 (22,23)	23 (18,28)	13 (-7,32)
5/24/2020	22	23 (23,23)	26 (22,30)	22 (22,23)	23 (22,23)	23 (18,29)	13 (-7,32)
5/25/2020	23	23 (23,23)	26 (22,30)	22 (22,23)	22 (22,23)	24 (18,30)	13 (-6,33)
5/26/2020	23	23 (23,23)	27 (22,31)	22 (22,23)	22 (22,23)	24 (17,31)	13 (-6,33)
5/27/2020	23	23 (23,23)	27 (23,31)	22 (22,23)	22 (22,23)	24 (17,31)	14 (-6,33)
5/28/2020	23	23 (23,23)	28 (23,32)	22 (22,23)	23 (22,23)	24 (16,32)	14 (-5,33)
5/29/2020	23	23 (23,23)	28 (23,33)	23 (22,23)	23 (23,23)	24 (16,33)	14 (-5,33)
5/30/2020	23	23 (23,23)	28 (24,33)	23 (22,23)	23 (23,23)	25 (15,34)	14 (-5,33)
5/31/2020	23	23 (23,23)	29 (24,34)	23 (22,23)	23 (23,23)	25 (15,35)	14 (-4,33)
6/1/2020	23	23 (23,24)	29 (24,35)	23 (22,23)	23 (22,23)	25 (14,35)	15 (-4,33)
6/2/2020	23	23 (23,24)	30 (25,35)	23 (22,23)	23 (22,23)	25 (14,36)	15 (-4,33)

**Table A.72**

Actual and Predicted Cases with 95% Confidence Intervals for Guatemala using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1763	196 (-2875,3267)	1643 (1408,1878)	666 (-1483,2816)	1489 (951,2026)	1643 (1408,1878)	1643 (1643,1643)	1734 (1555,1914)
5/17/2020	1763	196 (-2875,3267)	1643 (1408,1878)	674 (-1467,2816)	1553 (1075,2032)	1643 (1408,1878)	1643 (1643,1643)	1837 (-1250,4923)
5/18/2020	1912	196 (-2976,3368)	1643 (1116,2170)	682 (-1552,2917)	1620 (1108,2132)	1643 (1283,2003)	1643 (1643,1643)	1939 (-4825,8704)
5/19/2020	2133	196 (-3143,3535)	1643 (683,2603)	690 (-1706,3087)	1688 (1067,2310)	1643 (1071,2215)	1643 (1643,1643)	2042 (-9182,13266)
5/20/2020	2265	196 (-3298,3690)	1643 (424,2862)	698 (-1847,3244)	1758 (1047,2470)	1643 (895,2391)	1643 (1643,1643)	2144 (-14210,18499)
5/21/2020	2512	196 (-3493,3885)	1643 (-60,3346)	706 (-2030,3443)	1830 (982,2679)	1643 (668,2618)	1643 (1643,1643)	2247 (-19832,24326)
5/22/2020	2743	196 (-3706,4098)	1643 (-513,3799)	714 (-2231,3660)	1904 (903,2906)	1643 (427,2859)	1643 (1643,1643)	2349 (-25993,30691)
5/23/2020	3054	196 (-3956,4348)	1643 (-1123,4409)	722 (-2472,3917)	1980 (783,3176)	1643 (143,3143)	1643 (1643,1643)	2452 (-32650,37553)
5/24/2020	3424	196 (-4251,4643)	1643 (-1848,5134)	730 (-2758,4218)	2057 (619,3496)	1643 (-188,3474)	1643 (1643,1643)	2554 (-39769,44877)
5/25/2020	3760	196 (-4566,4958)	1643 (-2506,5792)	738 (-3064,4541)	2137 (441,3832)	1643 (-534,3820)	1643 (1643,1643)	2657 (-47323,52636)
5/26/2020	3954	196 (-4858,5250)	1643 (-2887,6173)	746 (-3345,4837)	2218 (304,4133)	1643 (-842,4128)	1643 (1643,1643)	2759 (-55289,60807)
5/27/2020	4145	196 (-5134,5526)	1643 (-3261,6547)	754 (-3607,5116)	2302 (193,4411)	1643 (-1125,4411)	1643 (1643,1643)	2862 (-63645,69369)
5/28/2020	4348	196 (-5400,5792)	1643 (-3659,6945)	762 (-3860,5384)	2387 (97,4677)	1643 (-1396,4682)	1643 (1643,1643)	2964 (-72376,78305)
5/29/2020	4607	196 (-5671,6063)	1643 (-4166,7452)	770 (-4116,5656)	2474 (1,4947)	1643 (-1672,4958)	1643 (1643,1643)	3067 (-81466,87599)
5/30/2020	4739	196 (-5921,6313)	1643 (-4425,7711)	778 (-4350,5906)	2564 (-67,5194)	1643 (-1922,5208)	1643 (1643,1643)	3169 (-90902,97240)
5/31/2020	5087	196 (-6193,6585)	1643 (-5107,8393)	786 (-4608,6180)	2655 (-157,5467)	1643 (-2199,5485)	1643 (1643,1643)	3272 (-100671,107214)
6/1/2020	5336	196 (-6466,6858)	1643 (-5595,8881)	794 (-4867,6455)	2748 (-244,5741)	1643 (-2477,5763)	1643 (1643,1643)	3374 (-110762,117510)
6/2/2020	5586	196 (-6741,7133)	1643 (-6085,9371)	802 (-5127,6731)	2844 (-328,6016)	1643 (-2756,6042)	1643 (1643,1643)	3476 (-121166,128119)

(continued on next page)

**Table A.72** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	1763	1734 (1555,1914)	1765 (1742,1789)	1726 (1654,1798)	1777 (1515,2039)	1765 (1740,1789)	961 (-612,2533)
5/17/2020	1763	1837 (-1250,4923)	1893 (1844,1942)	1903 (1702,2104)	1910 (-26001,29822)	1890 (1840,1940)	1020 (-496,2535)
5/18/2020	1912	1939 (-4825,8704)	2022 (1946,2098)	2112 (1832,2391)	2044 (-60130,64218)	2016 (1937,2094)	1053 (-520,2627)
5/19/2020	2133	2042 (-9182,13266)	2152 (2047,2257)	2360 (2031,2689)	2178 (-101687,106042)	2142 (2033,2251)	1123 (-562,2807)
5/20/2020	2265	2144 (-14210,18499)	2284 (2148,2420)	2661 (2206,3116)	2311 (-149590,154212)	2268 (2126,2410)	1207 (-563,2976)
5/21/2020	2512	2247 (-19832,24326)	2416 (2247,2586)	3033 (2445,3622)	2445 (-203105,207995)	2394 (2216,2572)	1296 (-590,3181)
5/22/2020	2743	2349 (-25993,30691)	2550 (2346,2755)	3505 (2720,4289)	2579 (-261703,266861)	2520 (2304,2736)	1380 (-637,3397)
5/23/2020	3054	2452 (-32650,37553)	2685 (2443,2927)	4114 (3076,5152)	2712 (-324981,330405)	2646 (2390,2902)	1449 (-741,3639)
5/24/2020	3424	2554 (-39769,44877)	2821 (2540,3102)	4927 (3541,6314)	2846 (-392615,398306)	2772 (2474,3070)	1549 (-852,3950)
5/25/2020	3760	2657 (-47323,52636)	2958 (2636,3280)	6058 (4119,7997)	2979 (-464344,470302)	2898 (2556,3240)	1639 (-991,4269)
5/26/2020	3954	2759 (-55289,60807)	3097 (2732,3461)	7711 (4822,10600)	3113 (-539946,546171)	3024 (2636,3412)	1727 (-1105,4559)
5/27/2020	4145	2862 (-63645,69369)	3236 (2827,3645)	10265 (5833,14698)	3246 (-619233,625726)	3150 (2714,3586)	1775 (-1250,4800)
5/28/2020	4348	2964 (-72376,78305)	3376 (2921,3832)	14477 (7517,21438)	3380 (-702040,708800)	3276 (2790,3762)	1813 (-1404,5029)
5/29/2020	4607	3067 (-81466,87599)	3518 (3015,4021)	21878 (10616,33141)	3513 (-788222,795249)	3402 (2864,3939)	1859 (-1558,5277)
5/30/2020	4739	3169 (-90902,97240)	3661 (3108,4213)	35540 (16531,54549)	3647 (-877651,884945)	3528 (2937,4119)	1942 (-1650,5534)
5/31/2020	5087	3272 (-100671,107214)	3805 (3202,4408)	60915 (27944,93886)	3780 (-970214,977775)	3654 (3008,4300)	2004 (-1788,5796)
6/1/2020	5336	3374 (-110762,117510)	3950 (3294,4605)	106406 (48687,164126)	3914 (-1065808,1073636)	3780 (3078,4482)	2102 (-1886,6089)
6/2/2020	5586	3476 (-121166,128119)	4096 (3387,4805)	184611 (84678,284545)	4047 (-1164339,1172434)	3906 (3146,4666)	2173 (-2011,6356)

**Table A.73**

Actual and Predicted Cases with 95% Confidence Intervals for Guinea-Bissau using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	969	90 (-1632,1813)	913 (803,1023)	326 (-934,1586)	903 (773,1033)	913 (803,1023)	913 (913,913)	965 (863,1068)
5/17/2020	990	90 (-1653,1833)	913 (762,1064)	330 (-947,1607)	949 (840,1057)	913 (781,1045)	913 (913,913)	1009 (207,1810)
5/18/2020	1032	90 (-1688,1868)	913 (680,1146)	334 (-974,1642)	996 (899,1093)	913 (741,1085)	913 (913,913)	1052 (-655,2759)
5/19/2020	1038	90 (-1708,1888)	913 (668,1158)	338 (-986,1662)	1045 (961,1130)	913 (720,1106)	913 (913,913)	1095 (-1704,3895)
5/20/2020	1089	90 (-1741,1921)	913 (568,1258)	342 (-1011,1695)	1095 (1020,1171)	913 (681,1145)	913 (913,913)	1139 (-2915,5192)
5/21/2020	1109	90 (-1769,1950)	913 (529,1297)	346 (-1032,1724)	1147 (1072,1223)	913 (650,1176)	913 (913,913)	1182 (-4269,6633)
5/22/2020	1114	90 (-1791,1972)	913 (519,1307)	350 (-1045,1746)	1200 (1106,1295)	913 (627,1199)	913 (913,913)	1225 (-5753,8203)
5/23/2020	1114	90 (-1807,1988)	913 (519,1307)	354 (-1053,1762)	1255 (1123,1387)	913 (612,1214)	913 (913,913)	1268 (-7356,9893)
5/24/2020	1114	90 (-1820,2000)	913 (519,1307)	358 (-1058,1774)	1311 (1132,1490)	913 (600,1226)	913 (913,913)	1312 (-9071,11694)
5/25/2020	1178	90 (-1843,2024)	913 (394,1432)	362 (-1073,1797)	1369 (1162,1576)	913 (574,1252)	913 (913,913)	1355 (-10891,13601)
5/26/2020	1178	90 (-1862,2042)	913 (394,1432)	366 (-1084,1816)	1428 (1181,1675)	913 (554,1272)	913 (913,913)	1398 (-12810,15607)
5/27/2020	1195	90 (-1881,2061)	913 (360,1466)	370 (-1095,1835)	1489 (1200,1777)	913 (534,1292)	913 (913,913)	1442 (-14824,17707)
5/28/2020	1195	90 (-1896,2077)	913 (360,1466)	374 (-1102,1851)	1551 (1213,1889)	913 (518,1308)	913 (913,913)	1485 (-16929,19898)
5/29/2020	1256	90 (-1919,2100)	913 (241,1585)	378 (-1117,1873)	1615 (1239,1991)	913 (492,1334)	913 (913,913)	1528 (-19120,22176)
5/30/2020	1256	90 (-1939,2119)	913 (241,1585)	382 (-1128,1893)	1681 (1258,2103)	913 (471,1355)	913 (913,913)	1571 (-21395,24537)
5/31/2020	1256	90 (-1955,2136)	913 (241,1585)	386 (-1137,1910)	1748 (1273,2222)	913 (453,1373)	913 (913,913)	1615 (-23750,26979)
6/1/2020	1339	90 (-1981,2162)	913 (78,1748)	390 (-1155,1935)	1817 (1303,2330)	913 (423,1403)	913 (913,913)	1658 (-26184,29500)
6/2/2020	1339	90 (-2004,2184)	913 (78,1748)	394 (-1170,1958)	1887 (1328,2446)	913 (398,1428)	913 (913,913)	1701 (-28693,32095)

**Table A.73 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	969	965 (863,1068)	969 (933,1006)	764 (361,1166)	964 (864,1065)	968 (932,1004)	501 (-417,1419)
5/17/2020	990	1009 (207,1810)	1010 (965,1055)	747 (307,1188)	998 (115,1880)	1008 (963,1054)	528 (-384,1440)
5/18/2020	1032	1052 (-655,2759)	1044 (990,1098)	722 (219,1224)	1038 (-1033,3109)	1042 (988,1096)	535 (-398,1468)
5/19/2020	1038	1095 (-1704,3895)	1076 (1010,1141)	688 (134,1242)	1069 (-2291,4429)	1072 (1007,1138)	558 (-377,1493)
5/20/2020	1089	1139 (-2915,5192)	1106 (1025,1187)	649 (20,1277)	1108 (-3824,6040)	1102 (1020,1183)	565 (-389,1519)
5/21/2020	1109	1182 (-4269,6633)	1136 (1036,1235)	606 (-95,1306)	1143 (-5522,7809)	1130 (1030,1230)	585 (-382,1551)
5/22/2020	1114	1225 (-5753,8203)	1166 (1044,1287)	561 (-206,1328)	1173 (-7294,9640)	1158 (1036,1281)	596 (-378,1570)
5/23/2020	1114	1268 (-7356,9893)	1196 (1050,1342)	518 (-310,1346)	1204 (-9159,11566)	1187 (1040,1334)	611 (-364,1586)
5/24/2020	1114	1312 (-9071,11694)	1226 (1053,1400)	475 (-410,1361)	1234 (-11125,13594)	1215 (1040,1390)	617 (-358,1592)
5/25/2020	1178	1355 (-10891,13601)	1257 (1054,1460)	435 (-522,1393)	1272 (-13272,15816)	1243 (1039,1447)	629 (-356,1615)
5/26/2020	1178	1398 (-12810,15607)	1287 (1053,1522)	399 (-624,1421)	1300 (-15483,18084)	1271 (1035,1507)	655 (-335,1644)
5/27/2020	1195	1442 (-14824,17707)	1318 (1051,1586)	365 (-721,1451)	1337 (-17839,20513)	1299 (1030,1569)	670 (-323,1663)
5/28/2020	1195	1485 (-16929,19898)	1350 (1048,1652)	335 (-809,1478)	1370 (-20297,23036)	1327 (1023,1632)	689 (-304,1681)
5/29/2020	1256	1528 (-19120,22176)	1381 (1043,1719)	308 (-901,1517)	1397 (-22794,25588)	1356 (1014,1697)	693 (-308,1694)
5/30/2020	1256	1571 (-21395,24537)	1413 (1037,1789)	284 (-983,1551)	1425 (-25340,28190)	1384 (1004,1763)	720 (-285,1724)
5/31/2020	1256	1615 (-23750,26979)	1445 (1029,1860)	263 (-1057,1583)	1453 (-27942,30848)	1412 (993,1831)	733 (-273,1738)
6/1/2020	1339	1658 (-26184,29500)	1477 (1021,1933)	245 (-1137,1627)	1488 (-30662,33638)	1440 (980,1900)	749 (-266,1764)
6/2/2020	1339	1701 (-28693,32095)	1509 (1011,2007)	230 (-1208,1667)	1514 (-33422,36450)	1468 (965,1971)	769 (-252,1790)

**Table A.74**

Actual and Predicted Cases with 95% Confidence Intervals for Guinea using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	2658	400 (-4025,4825)	2473 (2110,2836)	1361 (-1182,3903)	2890 (2436,3344)	2473 (2110,2836)	2473 (2473,2473)	2557 (2393,2721)
5/17/2020	2658	400 (-4025,4825)	2473 (2110,2836)	1377 (-1150,3904)	3009 (2426,3591)	2473 (2110,2836)	2473 (2473,2473)	2626 (682,4569)
5/18/2020	2796	400 (-4117,4917)	2473 (1840,3106)	1393 (-1210,3996)	3131 (2523,3738)	2473 (2003,2943)	2473 (2473,2473)	2694 (-1523,6911)
5/19/2020	2863	400 (-4196,4997)	2473 (1709,3237)	1410 (-1257,4076)	3256 (2604,3908)	2473 (1914,3032)	2473 (2473,2473)	2763 (-4206,9731)
5/20/2020	2863	400 (-4243,5044)	2473 (1709,3237)	1426 (-1271,4123)	3384 (2643,4125)	2473 (1868,3078)	2473 (2473,2473)	2832 (-7299,12962)
5/21/2020	3067	400 (-4345,5146)	2473 (1309,3637)	1442 (-1342,4227)	3515 (2750,4281)	2473 (1744,3202)	2473 (2473,2473)	2900 (-10756,16557)
5/22/2020	3067	400 (-4417,5218)	2473 (1309,3637)	1458 (-1382,4298)	3650 (2820,4480)	2473 (1667,3279)	2473 (2473,2473)	2969 (-14544,20482)
5/23/2020	3176	400 (-4499,5300)	2473 (1095,3851)	1475 (-1432,4381)	3788 (2903,4672)	2473 (1576,3370)	2473 (2473,2473)	3038 (-18636,24712)
5/24/2020	3275	400 (-4586,5387)	2473 (901,4045)	1491 (-1487,4469)	3929 (2992,4866)	2473 (1478,3468)	2473 (2473,2473)	3106 (-23012,29225)
5/25/2020	3275	400 (-4655,5455)	2473 (901,4045)	1507 (-1523,4537)	4074 (3056,5091)	2473 (1406,3540)	2473 (2473,2473)	3175 (-27655,34005)
5/26/2020	3275	400 (-4710,5511)	2473 (901,4045)	1524 (-1545,4592)	4221 (3102,5341)	2473 (1351,3595)	2473 (2473,2473)	3244 (-32550,39038)
5/27/2020	3275	400 (-4756,5556)	2473 (901,4045)	1540 (-1558,4638)	4373 (3134,5612)	2473 (1307,3639)	2473 (2473,2473)	3312 (-37686,44310)
5/28/2020	3553	400 (-4842,5642)	2473 (356,4590)	1556 (-1612,4724)	4527 (3224,5830)	2473 (1208,3738)	2473 (2473,2473)	3381 (-43051,49813)
5/29/2020	3656	400 (-4931,5732)	2473 (154,4792)	1572 (-1670,4814)	4685 (3319,6052)	2473 (1105,3841)	2473 (2473,2473)	3450 (-48636,55536)
5/30/2020	3706	400 (-5015,5816)	2473 (56,4890)	1589 (-1722,4899)	4847 (3406,6288)	2473 (1012,3934)	2473 (2473,2473)	3518 (-54434,61471)
5/31/2020	3706	400 (-5088,5888)	2473 (56,4890)	1605 (-1762,4971)	5012 (3477,6547)	2473 (935,4011)	2473 (2473,2473)	3587 (-60436,67611)
6/1/2020	3844	400 (-5170,5970)	2473 (-214,5160)	1621 (-1811,5054)	5181 (3562,6800)	2473 (845,4101)	2473 (2473,2473)	3656 (-66637,73948)
6/2/2020	3886	400 (-5247,6048)	2473 (-296,5242)	1637 (-1856,5131)	5353 (3640,7067)	2473 (761,4185)	2473 (2473,2473)	3725 (-73029,80478)

(continued on next page)

**Table A.74** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	2658	2557 (2393,2721)	2565 (2517,2614)	2385 (1849,2920)	2558 (2391,2725)	2561 (2512,2610)	1312 (-1325,3950)
5/17/2020	2658	2626 (682,4569)	2638 (2573,2704)	2427 (1931,2923)	2616 (681,4552)	2629 (2563,2696)	1368 (-1215,3951)
5/18/2020	2796	2694 (-1523,6911)	2712 (2629,2795)	2468 (1919,3017)	2689 (-1917,7295)	2698 (2612,2784)	1388 (-1255,4031)
5/19/2020	2863	2763 (-4206,9731)	2786 (2685,2888)	2506 (1915,3096)	2763 (-5190,10717)	2767 (2660,2874)	1449 (-1227,4125)
5/20/2020	2863	2832 (-7299,12962)	2861 (2740,2983)	2543 (1944,3141)	2832 (-8894,14558)	2835 (2706,2964)	1466 (-1223,4154)
5/21/2020	3067	2900 (-10756,16557)	2937 (2794,3080)	2578 (1907,3250)	2908 (-13140,18955)	2904 (2752,3056)	1503 (-1252,4258)
5/22/2020	3067	2969 (-14544,20482)	3013 (2848,3178)	2613 (1906,3320)	2971 (-17624,23566)	2973 (2796,3150)	1553 (-1233,4339)
5/23/2020	3176	3038 (-18636,24712)	3090 (2902,3278)	2647 (1890,3403)	3035 (-22383,28452)	3041 (2839,3244)	1580 (-1251,4412)
5/24/2020	3275	3106 (-23012,29225)	3168 (2956,3380)	2680 (1867,3492)	3093 (-27324,33510)	3110 (2880,3340)	1638 (-1238,4513)
5/25/2020	3275	3175 (-27655,34005)	3246 (3009,3483)	2712 (1866,3558)	3166 (-32676,39008)	3179 (2921,3436)	1658 (-1248,4565)
5/26/2020	3275	3244 (-32550,39038)	3325 (3063,3587)	2745 (1880,3610)	3240 (-38435,44915)	3247 (2961,3534)	1698 (-1226,4621)
5/27/2020	3275	3312 (-37686,44310)	3405 (3116,3694)	2777 (1902,3652)	3309 (-44484,51101)	3316 (3000,3633)	1719 (-1215,4653)
5/28/2020	3553	3381 (-43051,49813)	3485 (3169,3801)	2809 (1877,3742)	3384 (-50897,57665)	3385 (3037,3732)	1742 (-1244,4729)
5/29/2020	3656	3450 (-48636,55536)	3566 (3221,3910)	2841 (1846,3836)	3447 (-57488,64382)	3453 (3074,3833)	1831 (-1201,4863)
5/30/2020	3706	3518 (-54434,61471)	3647 (3274,4021)	2872 (1822,3922)	3511 (-64266,71288)	3522 (3110,3934)	1889 (-1181,4959)
5/31/2020	3706	3587 (-60436,67611)	3729 (3326,4133)	2903 (1813,3993)	3570 (-71164,78304)	3591 (3145,4037)	1939 (-1157,5035)
6/1/2020	3844	3656 (-66637,73948)	3812 (3379,4246)	2933 (1790,4076)	3642 (-78354,85639)	3659 (3179,4140)	1932 (-1206,5070)
6/2/2020	3886	3725 (-73029,80478)	3896 (3431,4361)	2962 (1772,4152)	3717 (-85852,93285)	3728 (3212,4244)	1980 (-1195,5154)

**Table A.75** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	117	118 (114,122)	119 (113,124)	112 (101,122)	118 (114,121)	118 (113,124)	60 (-52,172)
5/17/2020	117	120 (114,126)	121 (114,129)	113 (104,122)	121 (115,126)	120 (112,128)	61 (-49,172)
5/18/2020	124	122 (114,130)	124 (115,133)	114 (101,128)	123 (116,130)	122 (113,132)	63 (-51,177)
5/19/2020	125	124 (113,135)	127 (117,137)	115 (100,130)	125 (116,133)	125 (113,136)	65 (-50,180)
5/20/2020	125	126 (112,139)	129 (118,141)	116 (101,132)	127 (117,137)	127 (113,140)	66 (-49,181)
5/21/2020	127	128 (111,144)	132 (120,145)	117 (101,133)	129 (117,140)	129 (114,144)	67 (-48,183)
5/22/2020	127	129 (110,149)	135 (122,148)	118 (102,135)	131 (118,144)	131 (115,148)	68 (-47,183)
5/23/2020	127	131 (109,153)	138 (124,152)	119 (103,135)	133 (118,147)	133 (115,152)	69 (-46,184)
5/24/2020	135	133 (107,158)	141 (126,156)	120 (102,138)	136 (120,152)	136 (116,155)	71 (-46,187)
5/25/2020	137	134 (105,163)	144 (128,160)	121 (101,141)	138 (120,156)	138 (116,159)	73 (-44,190)
5/26/2020	139	136 (104,168)	147 (130,163)	122 (101,143)	140 (120,159)	140 (117,163)	75 (-43,193)
5/27/2020	139	137 (102,173)	150 (132,167)	123 (100,145)	142 (121,163)	142 (117,167)	77 (-42,195)
5/28/2020	150	139 (100,178)	153 (134,171)	124 (98,149)	144 (121,167)	144 (118,171)	77 (-43,197)
5/29/2020	150	140 (97,183)	156 (137,174)	124 (96,153)	146 (121,171)	146 (118,174)	80 (-42,202)
5/30/2020	152	142 (95,188)	159 (139,178)	125 (95,156)	148 (122,174)	149 (119,178)	81 (-42,204)
5/31/2020	153	143 (93,193)	162 (141,182)	126 (94,158)	151 (123,179)	151 (119,182)	83 (-41,207)
6/1/2020	153	144 (90,199)	165 (144,186)	127 (93,161)	153 (123,183)	153 (120,186)	83 (-42,208)
6/2/2020	153	146 (88,204)	168 (146,189)	127 (93,162)	155 (123,186)	155 (120,190)	84 (-41,210)

**Table A.76**

Actual and Predicted Cases with 95% Confidence Intervals for Haiti using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	358	34 (-602,669)	310 (216,404)	112 (-370,594)	244 (19,468)	209 (-83,501)	310 (310,310)	328 (292,364)
5/17/2020	456	34 (-705,772)	310 (24,596)	113 (-471,698)	254 (-68,576)	209 (-191,609)	310 (310,310)	351 (187,515)
5/18/2020	533	34 (-793,860)	310 (-127,747)	115 (-558,787)	265 (-137,666)	209 (-282,700)	310 (310,310)	374 (40,709)
5/19/2020	533	34 (-833,900)	310 (-127,747)	116 (-596,827)	276 (-154,705)	209 (-322,740)	310 (310,310)	397 (-142,936)
5/20/2020	596	34 (-885,952)	310 (-251,871)	117 (-645,880)	287 (-183,757)	209 (-374,792)	310 (310,310)	420 (-353,1193)
5/21/2020	734	34 (-975,1042)	310 (-521,1141)	119 (-734,971)	299 (-254,851)	209 (-469,887)	310 (310,310)	443 (-591,1476)
5/22/2020	812	34 (-1064,1131)	310 (-674,1294)	120 (-821,1061)	311 (-322,943)	209 (-562,980)	310 (310,310)	466 (-852,1783)
5/23/2020	865	34 (-1144,1211)	310 (-778,1398)	121 (-899,1141)	323 (-378,1023)	209 (-643,1061)	310 (310,310)	489 (-1135,2112)
5/24/2020	865	34 (-1202,1269)	310 (-778,1398)	123 (-955,1200)	335 (-410,1081)	209 (-702,1120)	310 (310,310)	511 (-1438,2461)
5/25/2020	958	34 (-1271,1338)	310 (-960,1580)	124 (-1021,1269)	348 (-454,1150)	209 (-772,1190)	310 (310,310)	534 (-1761,2829)
5/26/2020	1174	34 (-1381,1449)	310 (-1383,2003)	125 (-1130,1381)	361 (-542,1264)	209 (-886,1304)	310 (310,310)	557 (-2102,3216)
5/27/2020	1320	34 (-1504,1571)	310 (-1670,2290)	127 (-1252,1505)	375 (-642,1391)	209 (-1014,1432)	310 (310,310)	580 (-2460,3620)
5/28/2020	1320	34 (-1601,1668)	310 (-1670,2290)	128 (-1347,1603)	389 (-712,1489)	209 (-1112,1530)	310 (310,310)	603 (-2835,4041)
5/29/2020	1584	34 (-1739,1806)	310 (-2187,2807)	129 (-1483,1742)	403 (-825,1630)	209 (-1253,1671)	310 (310,310)	626 (-3226,4477)
5/30/2020	1865	34 (-1913,1980)	310 (-2738,3358)	131 (-1658,1919)	417 (-977,1811)	209 (-1434,1852)	310 (310,310)	649 (-3632,4929)
5/31/2020	2124	34 (-2112,2179)	310 (-3245,3865)	132 (-1856,2119)	432 (-1152,2016)	209 (-1638,2056)	310 (310,310)	672 (-4053,5396)
6/1/2020	2226	34 (-2294,2361)	310 (-3445,4065)	133 (-2037,2303)	447 (-1307,2201)	209 (-1823,2241)	310 (310,310)	694 (-4488,5877)
6/2/2020	2226	34 (-2445,2512)	310 (-3445,4065)	135 (-2185,2454)	462 (-1427,2352)	209 (-1975,2393)	310 (310,310)	717 (-4937,6372)

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**Table A.76** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	358	328 (292,364)	339 (332,346)	275 (112,438)	338 (284,391)	339 (332,346)	188 (-146,522)
5/17/2020	456	351 (187,515)	394 (381,407)	299 (53,545)	381 (-939,1702)	391 (378,405)	219 (-185,624)
5/18/2020	533	374 (40,709)	446 (425,466)	324 (13,634)	420 (-2372,3213)	441 (421,461)	256 (-199,711)
5/19/2020	533	397 (-142,936)	474 (444,505)	350 (26,673)	447 (-3830,4724)	469 (439,499)	278 (-189,745)
5/20/2020	596	420 (-353,1193)	517 (475,558)	377 (30,724)	487 (-5648,6622)	510 (468,551)	291 (-206,787)
5/21/2020	734	443 (-591,1476)	577 (525,629)	408 (-2,818)	532 (-7845,8909)	566 (514,618)	313 (-251,878)
5/22/2020	812	466 (-852,1783)	616 (551,681)	443 (-25,911)	561 (-10072,11193)	603 (539,667)	345 (-282,971)
5/23/2020	865	489 (-1135,2112)	648 (569,727)	483 (-29,995)	592 (-12396,13579)	633 (555,711)	374 (-304,1052)
5/24/2020	865	511 (-1438,2461)	705 (612,798)	530 (0,1060)	636 (-15015,16286)	685 (593,777)	401 (-307,1108)
5/25/2020	958	534 (-1761,2829)	759 (652,866)	586 (33,1139)	675 (-17829,19179)	734 (628,840)	402 (-352,1157)
5/26/2020	1174	557 (-2102,3216)	790 (666,913)	655 (45,1265)	702 (-20649,22052)	763 (641,884)	420 (-426,1266)
5/27/2020	1320	580 (-2460,3620)	835 (695,975)	740 (71,1410)	741 (-23658,25140)	803 (665,942)	474 (-467,1414)
5/28/2020	1320	603 (-2835,4041)	898 (741,1054)	849 (156,1541)	786 (-26914,28486)	859 (704,1013)	531 (-470,1531)
5/29/2020	1584	626 (-3226,4477)	939 (765,1113)	991 (255,1727)	815 (-30203,31833)	896 (724,1067)	535 (-575,1645)
5/30/2020	1865	649 (-3632,4929)	973 (781,1166)	1184 (394,1974)	846 (-33551,35243)	927 (737,1117)	560 (-699,1820)
5/31/2020	2124	672 (-4053,5396)	1033 (822,1245)	1457 (625,2289)	890 (-37106,38886)	978 (770,1187)	615 (-811,2041)
6/1/2020	2226	694 (-4488,5877)	1089 (859,1320)	1867 (1042,2692)	929 (-40811,42669)	1026 (799,1254)	689 (-875,2254)
6/2/2020	2226	717 (-4937,6372)	1122 (871,1373)	2529 (1715,3343)	956 (-44524,46435)	1056 (809,1303)	675 (-1006,2356)

**Table A.77**

Actual and Predicted Cases with 95% Confidence Intervals for Holy See using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	12	4 (-11,20)	12 (12,12)	12 (11,12)	13 (11,14)	12 (12,12)	12 (12,12)	12 (12,12)
5/17/2020	12	4 (-11,20)	12 (12,12)	12 (11,12)	13 (11,14)	12 (12,12)	12 (12,12)	12 (12,12)
5/18/2020	12	4 (-11,20)	12 (12,12)	12 (11,12)	13 (11,14)	12 (12,12)	12 (12,12)	12 (12,12)
5/19/2020	12	4 (-11,20)	12 (12,12)	12 (12,12)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,12)
5/20/2020	12	4 (-11,20)	12 (12,12)	12 (12,13)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,12)
5/21/2020	12	4 (-11,20)	12 (12,12)	12 (12,13)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,12)
5/22/2020	12	4 (-11,20)	12 (12,12)	12 (12,13)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,12)
5/23/2020	12	4 (-11,20)	12 (12,12)	13 (12,13)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,13)
5/24/2020	12	4 (-11,20)	12 (12,12)	13 (12,13)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,13)
5/25/2020	12	4 (-11,20)	12 (12,12)	13 (12,14)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,13)
5/26/2020	12	4 (-11,20)	12 (12,12)	13 (12,14)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,13)
5/27/2020	12	4 (-11,20)	12 (12,12)	13 (12,14)	13 (11,15)	12 (12,12)	12 (12,12)	12 (12,13)
5/28/2020	12	4 (-11,20)	12 (12,12)	13 (12,14)	13 (11,15)	12 (12,12)	12 (12,12)	13 (12,13)
5/29/2020	12	4 (-11,20)	12 (12,12)	13 (12,15)	13 (11,16)	12 (12,12)	12 (12,12)	13 (12,13)
5/30/2020	12	4 (-11,20)	12 (12,12)	13 (12,15)	13 (11,16)	12 (12,12)	12 (12,12)	13 (12,13)
5/31/2020	12	4 (-11,20)	12 (12,12)	14 (12,15)	13 (11,16)	12 (12,12)	12 (12,12)	13 (12,13)
6/1/2020	12	4 (-11,20)	12 (12,12)	14 (12,16)	13 (11,16)	12 (12,12)	12 (12,12)	13 (12,13)
6/2/2020	12	4 (-11,20)	12 (12,12)	14 (12,16)	13 (11,16)	12 (12,12)	12 (12,12)	13 (12,13)

**Table A.77** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	12	12 (12,12)	12 (11,13)	12 (11,12)	12 (12,12)	12 (11,13)	6 (-6,18)
5/17/2020	12	12 (12,12)	12 (11,13)	11 (10,12)	12 (12,12)	12 (11,13)	6 (-6,18)
5/18/2020	12	12 (12,12)	12 (11,14)	11 (10,12)	12 (12,13)	12 (11,14)	6 (-5,18)
5/19/2020	12	12 (12,12)	12 (11,14)	11 (10,12)	12 (12,13)	12 (11,14)	6 (-5,18)
5/20/2020	12	12 (12,12)	13 (11,14)	11 (10,12)	12 (12,13)	12 (11,14)	6 (-5,18)
5/21/2020	12	12 (12,12)	13 (11,14)	11 (10,12)	13 (12,13)	12 (10,14)	6 (-5,18)
5/22/2020	12	12 (12,12)	13 (11,15)	11 (10,12)	13 (12,13)	13 (10,15)	6 (-5,18)
5/23/2020	12	12 (12,12)	13 (11,15)	11 (10,12)	13 (12,13)	13 (10,15)	6 (-5,18)
5/24/2020	12	12 (12,12)	13 (11,15)	11 (10,13)	13 (12,13)	13 (10,15)	6 (-5,18)
5/25/2020	12	12 (12,12)	13 (11,15)	11 (9,13)	13 (12,13)	13 (10,15)	7 (-5,18)
5/26/2020	12	12 (12,12)	13 (11,15)	11 (9,13)	13 (12,14)	13 (10,16)	7 (-5,18)
5/27/2020	12	12 (12,12)	13 (11,16)	11 (9,13)	13 (12,14)	13 (10,16)	7 (-5,18)
5/28/2020	12	12 (12,12)	13 (11,16)	11 (9,13)	13 (12,14)	13 (10,16)	7 (-4,18)
5/29/2020	12	12 (12,12)	13 (11,16)	11 (9,13)	13 (12,14)	13 (9,16)	7 (-4,18)
5/30/2020	12	12 (12,12)	14 (11,16)	11 (9,13)	13 (12,14)	13 (9,17)	7 (-4,18)
5/31/2020	12	12 (12,12)	14 (11,16)	11 (9,13)	13 (12,14)	13 (9,17)	7 (-4,18)
6/1/2020	12	12 (12,12)	14 (11,17)	11 (9,13)	13 (12,14)	13 (9,17)	7 (-4,18)
6/2/2020	12	12 (12,12)	14 (11,17)	11 (9,13)	14 (13,14)	13 (9,17)	7 (-4,18)

**Table A.78**

Actual and Predicted Cases with 95% Confidence Intervals for Honduras using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	2565	342 (-4014,4699)	2460 (2254,2666)	1137 (-1661,3936)	2427 (2157,2697)	2460 (2254,2666)	2460 (2460,2460)	2557 (2367,2748)	
5/17/2020	2646	342 (-4094,4779)	2460 (2095,2825)	1151 (-1714,4016)	2529 (2280,2779)	2460 (2164,2756)	2460 (2460,2460)	2662 (-697,6022)	
5/18/2020	2798	342 (-4223,4908)	2460 (1798,3122)	1164 (-1818,4146)	2634 (2359,2910)	2460 (2008,2912)	2460 (2460,2460)	2767 (-4599,10133)	
5/19/2020	2955	342 (-4368,5053)	2460 (1490,3430)	1178 (-1937,4292)	2742 (2425,3059)	2460 (1836,3084)	2460 (2460,2460)	2872 (-9353,15097)	
5/20/2020	2955	342 (-4453,5138)	2460 (1490,3430)	1191 (-1995,4377)	2852 (2555,3150)	2460 (1753,3167)	2460 (2460,2460)	2977 (-14838,20791)	
5/21/2020	3204	342 (-4598,5283)	2460 (1002,3918)	1205 (-2115,4524)	2966 (2634,3298)	2460 (1582,3338)	2460 (2460,2460)	3081 (-20970,27133)	
5/22/2020	3477	342 (-4787,5472)	2460 (467,4453)	1218 (-2281,4717)	3082 (2657,3506)	2460 (1352,3568)	2460 (2460,2460)	3186 (-27689,34062)	
5/23/2020	3477	342 (-4924,5609)	2460 (467,4453)	1232 (-2393,4856)	3201 (2760,3642)	2460 (1207,3713)	2460 (2460,2460)	3291 (-34949,41532)	
5/24/2020	3950	342 (-5154,5839)	2460 (-460,5380)	1245 (-2602,5092)	3323 (2739,3906)	2460 (929,3991)	2460 (2460,2460)	3396 (-42713,49505)	
5/25/2020	4189	342 (-5391,6076)	2460 (-929,5849)	1259 (-2818,5335)	3448 (2728,4167)	2460 (655,4265)	2460 (2460,2460)	3501 (-50951,57953)	
5/26/2020	4401	342 (-5628,6312)	2460 (-1344,6264)	1272 (-3032,5576)	3576 (2734,4417)	2460 (392,4528)	2460 (2460,2460)	3606 (-59637,66848)	
5/27/2020	4640	342 (-5869,6554)	2460 (-1813,6733)	1286 (-3252,5823)	3706 (2743,4670)	2460 (127,4793)	2460 (2460,2460)	3710 (-68750,76170)	
5/28/2020	4752	342 (-6089,6774)	2460 (-2032,6952)	1299 (-3447,6045)	3840 (2790,4891)	2460 (-104,5024)	2460 (2460,2460)	3815 (-78270,85900)	
5/29/2020	4752	342 (-6271,6956)	2460 (-2032,6952)	1312 (-3603,6228)	3977 (2887,5068)	2460 (-287,5207)	2460 (2460,2460)	3920 (-88181,96021)	
5/30/2020	5094	342 (-6485,7169)	2460 (-2703,7623)	1326 (-3791,6443)	4118 (2954,5281)	2460 (-510,5430)	2460 (2460,2460)	4025 (-98469,106519)	
5/31/2020	5202	342 (-6684,7368)	2460 (-2914,7834)	1339 (-3965,6643)	4261 (3044,5478)	2460 (-714,5634)	2460 (2460,2460)	4130 (-109121,117380)	
6/1/2020	5362	342 (-6879,7564)	2460 (-3228,8148)	1353 (-4134,6840)	4408 (3143,5673)	2460 (-914,5834)	2460 (2460,2460)	4234 (-120123,128592)	
6/2/2020	5527	342 (-7073,7758)	2460 (-3551,8471)	1366 (-4302,7035)	4558 (3249,5866)	2460 (-1112,6032)	2460 (2460,2460)	4339 (-131467,140145)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3082	2565	2557 (2367,2748)	2555 (2497,2614)	2472 (2290,2654)	2549 (2374,2724)	2553 (2495,2612)	1343 (-1052,3738)		
	2646	2662 (-697,6022)	2665 (2580,2749)	2563 (2391,2736)	2648 (-3940,9235)	2661 (2575,2746)	1385 (-1048,3819)		
	2798	2767 (-4599,10133)	2784 (2669,2899)	2652 (2435,2869)	2756 (-12438,17949)	2778 (2662,2894)	1448 (-1058,3954)		
	2955	2872 (-9353,15097)	2902 (2746,3059)	2738 (2455,3022)	2846 (-21955,27646)	2892 (2734,3051)	1509 (-1084,4101)		
	2955	2977 (-14838,20791)	3019 (2816,3223)	2822 (2543,3101)	2956 (-33612,39525)	3005 (2798,3212)	1576 (-1038,4191)		
	3204	3081 (-20970,27133)	3138 (2883,3393)	2906 (2556,3255)	3060 (-46664,52784)	3118 (2859,3377)	1622 (-1080,4324)		
	3477	3186 (-27689,34062)	3258 (2948,3568)	2988 (2502,3473)	3161 (-60855,67177)	3231 (2916,3547)	1699 (-1128,4526)		
	3477	3291 (-34949,41532)	3379 (3010,3747)	3068 (2533,3604)	3266 (-76294,82826)	3345 (2969,3720)	1780 (-1114,4674)		
	3950	3396 (-42713,49505)	3501 (3070,3932)	3148 (2421,3876)	3360 (-92460,99180)	3458 (3018,3898)	1841 (-1216,4898)		
	4189	3501 (-50951,57953)	3624 (3127,4120)	3228 (2316,4139)	3463 (-109694,116621)	3571 (3064,4078)	1943 (-1274,5160)		
	4401	3606 (-59637,66848)	3747 (3182,4313)	3306 (2223,4390)	3548 (-127343,134440)	3684 (3107,4262)	1999 (-1381,5378)		
	4640	3710 (-68750,76170)	3872 (3235,4509)	3384 (2127,4641)	3654 (-146095,153404)	3798 (3146,4449)	2097 (-1444,5638)		
	4752	3815 (-78270,85900)	3998 (3287,4710)	3461 (2063,4858)	3753 (-165677,173184)	3911 (3183,4639)	2117 (-1574,5809)		
	4752	3920 (-88181,96021)	4125 (3336,4914)	3536 (2046,5026)	3850 (-185966,193665)	4024 (3217,4831)	2159 (-1649,5966)		
	5094	4025 (-98469,106519)	4253 (3384,5121)	3610 (1987,5234)	3950 (-207070,214971)	4137 (3248,5027)	2186 (-1776,6148)		
	5202	4130 (-109121,117380)	4382 (3431,5333)	3683 (1944,5422)	4039 (-228648,236727)	4251 (3277,5224)	2269 (-1828,6365)		
	5362	4234 (-120123,128592)	4512 (3476,5547)	3755 (1903,5607)	4138 (-250954,259230)	4364 (3303,5425)	2333 (-1894,6560)		
	5527	4339 (-131467,140145)	4643 (3520,5766)	3825 (1861,5789)	4219 (-273514,281952)	4477 (3327,5628)	2426 (-1925,6776)		

**Table A.79**

Actual and Predicted Cases with 95% Confidence Intervals for Hungary using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	3473	869 (-4235,5973)	3417 (3307,3527)	2704 (1198,4211)	4118 (2854,5381)	3313 (2999,3627)	3417 (3417,3417)	3453 (3382,3524)	
5/17/2020	3509	869 (-4271,6008)	3417 (3237,3597)	2736 (1225,4247)	4224 (2890,5558)	3313 (2962,3664)	3417 (3417,3417)	3490 (3015,3964)	
5/18/2020	3535	869 (-4299,6037)	3417 (3186,3648)	2767 (1257,4276)	4332 (2918,5746)	3313 (2932,3694)	3417 (3417,3417)	3526 (2524,4528)	
5/19/2020	3556	869 (-4324,6062)	3417 (3145,3689)	2798 (1294,4301)	4441 (2941,5942)	3313 (2906,3720)	3417 (3417,3417)	3562 (1925,5200)	
5/20/2020	3598	869 (-4356,6094)	3417 (3062,3772)	2829 (1325,4333)	4552 (2971,6134)	3313 (2872,3754)	3417 (3417,3417)	3599 (1233,5965)	
5/21/2020	3641	869 (-4391,6129)	3417 (2978,3856)	2860 (1351,4369)	4665 (3005,6324)	3380 (2926,3834)	3417 (3417,3417)	3635 (458,6812)	
5/22/2020	3678	869 (-4427,6165)	3417 (2905,3929)	2891 (1378,4405)	4779 (3039,6518)	3380 (2905,3855)	3417 (3417,3417)	3671 (-392,7735)	
5/23/2020	3713	869 (-4463,6200)	3417 (2837,3997)	2922 (1404,4440)	4894 (3073,6715)	3380 (2880,3880)	3417 (3417,3417)	3708 (-1311,8727)	
5/24/2020	3741	869 (-4496,6234)	3417 (2782,4052)	2953 (1432,4474)	5011 (3104,6918)	3380 (2853,3907)	3417 (3417,3417)	3744 (-2295,9783)	
5/25/2020	3756	869 (-4527,6264)	3417 (2753,4081)	2984 (1464,4505)	5130 (3130,7129)	3380 (2828,3932)	3417 (3417,3417)	3780 (-3340,10901)	
5/26/2020	3771	869 (-4554,6292)	3417 (2723,4111)	3016 (1499,4532)	5250 (3152,7347)	3380 (2805,3955)	3417 (3417,3417)	3817 (-4442,12075)	
5/27/2020	3793	869 (-4580,6318)	3417 (2680,4154)	3047 (1535,4559)	5371 (3174,7569)	3380 (2782,3978)	3417 (3417,3417)	3853 (-5599,13305)	
5/28/2020	3816	869 (-4606,6344)	3417 (2635,4199)	3078 (1571,4585)	5495 (3194,7795)	3380 (2759,4001)	3417 (3417,3417)	3889 (-6808,14587)	
5/29/2020	3841	869 (-4632,6370)	3417 (2586,4248)	3109 (1607,4611)	5620 (3215,8024)	3380 (2734,4026)	3417 (3417,3417)	3926 (-8068,15919)	
5/30/2020	3867	869 (-4658,6395)	3417 (2535,4299)	3140 (1643,4637)	5746 (3236,8256)	3380 (2709,4051)	3417 (3417,3417)	3962 (-9375,17300)	
5/31/2020	3876	869 (-4681,6419)	3417 (2517,4317)	3171 (1681,4661)	5874 (3254,8494)	3380 (2687,4073)	3417 (3417,3417)	3999 (-10730,18727)	
6/1/2020	3892	869 (-4704,6442)	3417 (2486,4348)	3202 (1720,4685)	6003 (3271,8736)	3417 (2707,4127)	3417 (3417,3417)	4035 (-12130,20200)	
6/2/2020	3921	869 (-4728,6465)	3417 (2429,4405)	3233 (1758,4709)	6135 (3289,8981)	3417 (2689,4145)	3417 (3417,3417)	4071 (-13573,21716)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3083	3473	3452 (3384,3519)	3452 (3407,3496)	3424 (3329,3520)	3434 (3400,3468)	3451 (3406,3496)	1743 (-1647,5134)		
	3509	3486 (3049,3923)	3486 (3410,3562)	3447 (3337,3556)	3466 (3061,3871)	3484 (3407,3560)	1765 (-1639,5169)		
	3535	3521 (2603,4439)	3520 (3414,3625)	3468 (3351,3585)	3490 (2683,4297)	3516 (3409,3623)	1781 (-1634,5197)		
	3556	3555 (2061,5050)	3553 (3417,3689)	3488 (3367,3609)	3525 (2151,4900)	3548 (3411,3685)	1796 (-1627,5220)		
	3598	3590 (1436,5743)	3587 (3420,3754)	3507 (3373,3642)	3558 (1521,5596)	3579 (3410,3748)	1807 (-1634,5248)		
	3641	3624 (740,6507)	3620 (3421,3819)	3525 (3371,3679)	3592 (806,6378)	3610 (3409,3812)	1825 (-1636,5286)		
	3678	3657 (-21,7336)	3653 (3421,3885)	3541 (3367,3716)	3632 (-30,7293)	3641 (3405,3876)	1844 (-1636,5325)		
	3713	3691 (-841,8223)	3686 (3420,3952)	3557 (3361,3753)	3649 (-830,8127)	3671 (3400,3942)	1863 (-1635,5362)		
	3741	3724 (-1715,9164)	3719 (3419,4019)	3572 (3356,3787)	3680 (-1683,9043)	3700 (3393,4007)	1879 (-1637,5395)		
	3756	3757 (-2640,10155)	3751 (3416,4087)	3585 (3355,3815)	3705 (-2563,9972)	3729 (3385,4074)	1892 (-1638,5422)		
	3771	3790 (-3612,11192)	3783 (3412,4155)	3598 (3356,3840)	3740 (-3517,10997)	3758 (3375,4141)	1905 (-1637,5446)		
	3793	3823 (-4628,12274)	3816 (3407,4224)	3610 (3356,3864)	3773 (-4538,12083)	3786 (3364,4208)	1917 (-1636,5471)		
	3816	3855 (-5687,13397)	3847 (3402,4293)	3622 (3356,3887)	3806 (-5619,13231)	3814 (3352,4276)	1932 (-1632,5496)		
	3841	3888 (-6785,14560)	3879 (3395,4363)	3632 (3354,3911)	3846 (-6786,14478)	3841 (3339,4344)	1950 (-1625,5524)		
	3867	3920 (-7921,15760)	3911 (3388,4433)	3642 (3350,3934)	3863 (-7939,15665)	3868 (3324,4413)	1967 (-1617,5552)		
	3876	3952 (-9092,16996)	3942 (3381,4504)	3652 (3348,3955)	3894 (-9124,16913)	3895 (3308,4482)	1983 (-1609,5576)		
	3892	3983 (-10299,18265)	3973 (3373,4574)	3660 (3346,3975)	3919 (-10328,18166)	3921 (3291,4551)	1997 (-1603,5597)		
	3921	4015 (-11538,19568)	4005 (3364,4645)	3669 (3342,3996)	3954 (-11585,19492)	3947 (3273,4621)	2011 (-1597,5619)		

**Table A.80**

Actual and Predicted Cases with 95% Confidence Intervals for Iceland using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1802	769 (-1255,2794)	1802 (1802,1802)	2085 (1531,2638)	1727 (1579,1874)	1801 (1799,1803)	1802 (1802,1802)	1802 (1802,1803)
5/17/2020	1802	769 (-1255,2794)	1802 (1802,1802)	2107 (1531,2683)	1699 (1522,1876)	1801 (1799,1803)	1802 (1802,1802)	1803 (1802,1804)
5/18/2020	1802	769 (-1255,2794)	1802 (1802,1802)	2129 (1531,2728)	1669 (1460,1878)	1801 (1799,1803)	1802 (1802,1802)	1803 (1802,1804)
5/19/2020	1802	769 (-1255,2794)	1802 (1802,1802)	2151 (1530,2773)	1636 (1393,1879)	1801 (1799,1803)	1802 (1802,1802)	1803 (1802,1805)
5/20/2020	1803	769 (-1256,2794)	1802 (1800,1804)	2174 (1530,2817)	1601 (1320,1881)	1801 (1799,1803)	1802 (1802,1802)	1804 (1802,1805)
5/21/2020	1803	769 (-1256,2794)	1802 (1800,1804)	2196 (1530,2863)	1563 (1243,1883)	1801 (1798,1804)	1802 (1802,1802)	1804 (1802,1806)
5/22/2020	1803	769 (-1256,2794)	1802 (1800,1804)	2218 (1529,2908)	1523 (1161,1884)	1801 (1798,1804)	1802 (1802,1802)	1804 (1802,1806)
5/23/2020	1804	769 (-1257,2795)	1802 (1798,1806)	2241 (1528,2953)	1479 (1073,1886)	1801 (1798,1804)	1802 (1802,1802)	1805 (1802,1807)
5/24/2020	1804	769 (-1257,2795)	1802 (1798,1806)	2263 (1527,2998)	1433 (980,1887)	1801 (1797,1805)	1802 (1802,1802)	1805 (1802,1807)
5/25/2020	1804	769 (-1257,2795)	1802 (1798,1806)	2285 (1526,3044)	1385 (882,1887)	1801 (1797,1805)	1802 (1802,1802)	1805 (1803,1808)
5/26/2020	1804	769 (-1257,2796)	1802 (1798,1806)	2308 (1525,3090)	1333 (779,1887)	1801 (1797,1805)	1802 (1802,1802)	1805 (1803,1808)
5/27/2020	1805	769 (-1258,2796)	1802 (1796,1808)	2330 (1524,3136)	1279 (670,1887)	1801 (1796,1806)	1802 (1802,1802)	1806 (1803,1809)
5/28/2020	1805	769 (-1258,2796)	1802 (1796,1808)	2352 (1523,3181)	1221 (556,1886)	1801 (1796,1806)	1802 (1802,1802)	1806 (1803,1809)
5/29/2020	1805	769 (-1258,2796)	1802 (1796,1808)	2374 (1521,3227)	1161 (437,1885)	1801 (1796,1806)	1802 (1802,1802)	1806 (1803,1810)
5/30/2020	1806	769 (-1259,2797)	1802 (1794,1810)	2397 (1520,3273)	1098 (312,1884)	1801 (1795,1807)	1802 (1802,1802)	1807 (1803,1810)
5/31/2020	1806	769 (-1259,2797)	1802 (1794,1810)	2419 (1519,3319)	1031 (181,1882)	1801 (1795,1807)	1802 (1802,1802)	1807 (1803,1811)
6/1/2020	1806	769 (-1259,2797)	1802 (1794,1810)	2441 (1517,3366)	962 (44,1879)	1801 (1795,1807)	1802 (1802,1802)	1807 (1803,1811)
6/2/2020	1806	769 (-1259,2798)	1802 (1794,1810)	2464 (1515,3412)	889 (-98,1876)	1801 (1794,1808)	1802 (1802,1802)	1808 (1803,1812)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	1802	1802 (1802,1803)	1802 (1777,1827)	1798 (1791,1806)	1802 (1802,1802)	1802 (1777,1827)	901 (-864,2667)
5/17/2020	1802	1803 (1802,1803)	1802 (1758,1847)	1798 (1790,1806)	1802 (1802,1803)	1802 (1758,1847)	901 (-864,2667)
5/18/2020	1802	1803 (1802,1804)	1802 (1737,1868)	1798 (1790,1806)	1802 (1802,1803)	1802 (1737,1868)	901 (-864,2667)
5/19/2020	1802	1803 (1802,1804)	1803 (1713,1892)	1797 (1789,1806)	1803 (1802,1803)	1803 (1713,1892)	901 (-864,2667)
5/20/2020	1803	1803 (1802,1805)	1803 (1687,1918)	1797 (1788,1806)	1803 (1802,1803)	1803 (1687,1918)	901 (-865,2667)
5/21/2020	1803	1803 (1802,1805)	1803 (1660,1946)	1797 (1787,1806)	1803 (1802,1804)	1803 (1660,1946)	902 (-864,2668)
5/22/2020	1803	1804 (1802,1805)	1803 (1630,1976)	1796 (1786,1807)	1803 (1802,1804)	1803 (1630,1976)	902 (-864,2668)
5/23/2020	1804	1804 (1802,1806)	1803 (1599,2007)	1796 (1785,1807)	1803 (1802,1804)	1803 (1599,2007)	902 (-865,2668)
5/24/2020	1804	1804 (1802,1806)	1803 (1566,2041)	1796 (1784,1808)	1803 (1802,1804)	1803 (1566,2041)	902 (-865,2668)
5/25/2020	1804	1804 (1802,1806)	1803 (1531,2076)	1796 (1784,1808)	1803 (1802,1804)	1803 (1531,2076)	902 (-865,2669)
5/26/2020	1804	1805 (1802,1807)	1804 (1495,2112)	1796 (1783,1808)	1804 (1802,1805)	1803 (1495,2112)	902 (-865,2669)
5/27/2020	1805	1805 (1803,1807)	1804 (1458,2150)	1795 (1782,1809)	1804 (1802,1805)	1804 (1457,2150)	902 (-865,2669)
5/28/2020	1805	1805 (1803,1807)	1804 (1419,2189)	1795 (1781,1809)	1804 (1802,1805)	1804 (1419,2189)	902 (-865,2669)
5/29/2020	1805	1805 (1803,1808)	1804 (1378,2230)	1795 (1781,1809)	1804 (1803,1805)	1804 (1378,2230)	902 (-865,2670)
5/30/2020	1806	1805 (1803,1808)	1804 (1337,2272)	1795 (1780,1810)	1804 (1803,1806)	1804 (1337,2272)	902 (-866,2670)
5/31/2020	1806	1806 (1803,1808)	1804 (1294,2315)	1795 (1779,1810)	1804 (1803,1806)	1804 (1294,2315)	902 (-866,2670)
6/1/2020	1806	1806 (1803,1809)	1804 (1250,2359)	1795 (1779,1811)	1804 (1803,1806)	1804 (1249,2359)	902 (-866,2671)
6/2/2020	1806	1806 (1803,1809)	1805 (1204,2405)	1795 (1778,1811)	1804 (1803,1806)	1804 (1204,2405)	902 (-866,2671)

**Table A.81**

Actual and Predicted Cases with 95% Confidence Intervals for India using the Time Series Models.

Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SA	SMA	LT	QT	ST
5/16/2020	90648	11853 (-142584,166291)	85784 (76251,95317)	40333 (-58284,138950)	88892 (85449,92334)	81997 (65041,98953)
5/17/2020	95698	11853 (-147610,171317)	85784 (66353,105215)	40816 (-62375,144006)	92705 (87895,97515)	81997 (59540,104454)
5/18/2020	100328	11853 (-152390,176097)	85784 (57278,114290)	41298 (-66223,148820)	96620 (90873,102367)	81997 (54311,109683)
5/19/2020	106475	11853 (-157943,181650)	85784 (45230,126338)	41781 (-70870,154432)	100638 (93056,108220)	81997 (48081,115913)
5/20/2020	112028	11853 (-163574,187280)	85784 (34346,137222)	42264 (-75599,160126)	104761 (95457,114065)	81997 (41833,122161)
5/21/2020	118226	11853 (-169503,193210)	85784 (22198,149370)	42747 (-80639,161632)	108990 (97731,120248)	81997 (35256,128738)
5/22/2020	124794	11853 (-175742,199448)	85784 (9324,162244)	43229 (-86000,172459)	113325 (99878,126773)	81997 (28352,135642)
5/23/2020	131423	11853 (-182204,205911)	85784 (-3668,175236)	43712 (-91591,179015)	117769 (102029,133509)	81997 (21242,142752)
5/24/2020	138536	11853 (-188956,212662)	85784 (-17610,189178)	44195 (-97481,185870)	122323 (104090,140555)	81997 (13839,150155)
5/25/2020	144950	11853 (-195745,219452)	85784 (-30181,201749)	44677 (-103401,192756)	126987 (106417,147557)	81997 (6476,157518)
5/26/2020	150793	11853 (-202438,226145)	85784 (-41634,213202)	45160 (-109212,199532)	131763 (109155,154372)	81997 (-694,164688)
5/27/2020	158086	11853 (-209370,233077)	85784 (-55928,227496)	45643 (-115269,206554)	136653 (111842,161465)	81997 (-8122,172116)
5/28/2020	165386	11853 (-216491,240198)	85784 (-70236,241804)	46126 (-121516,213767)	141658 (114554,168762)	81997 (-15735,179729)
5/29/2020	173491	11853 (-223913,247620)	85784 (-86122,257690)	46608 (-128074,221291)	146779 (117149,176409)	81997 (-23674,187668)
5/30/2020	181827	11853 (-231620,255327)	85784 (-102460,274028)	47091 (-134923,229105)	152017 (119659,184374)	81997 (-31908,195902)
5/31/2020	190609	11853 (-239635,263342)	85784 (-119673,291241)	47574 (-142086,237233)	157373 (122063,192683)	81997 (-40460,204454)
6/1/2020	198370	11853 (-247737,271444)	85784 (-134885,306453)	48056 (-149328,245441)	162850 (124659,201041)	81997 (-49053,213047)
6/2/2020	207191	11853 (-256078,279785)	85784 (-152174,323742)	48539 (-156809,253888)	168447 (127242,209653)	81997 (-57878,221872)
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SES	HLT	DT	ARIMA	
5/16/2020	90648	85784 (85784,85784)	89327 (82383,96271)	89327 (82383,96271)	89681 (89206,90157)	
5/17/2020	95698	85784 (85784,85784)	92938 (-3924942,4110819)	92938 (-3924942,4110819)	93603 (92815,94391)	
5/18/2020	100328	85784 (85784,85784)	96550 (-8882725,9075824)	96550 (-8882725,9075824)	97559 (96369,98749)	
5/19/2020	106475	85784 (85784,85784)	100161 (-14921473,15121795)	100161 (-14921473,15121795)	101549 (99891,103207)	
5/20/2020	112028	85784 (85784,85784)	103772 (-21882750,22090294)	103772 (-21882750,22090294)	105574 (103391,107756)	
5/21/2020	118226	85784 (85784,85784)	107383 (-29660010,29874777)	107383 (-29660010,29874777)	109632 (106876,112388)	
5/22/2020	124794	85784 (85784,85784)	110995 (-38176322,38398312)	110995 (-38176322,38398312)	113725 (110351,117098)	
5/23/2020	131423	85784 (85784,85784)	114606 (-47372943,47602155)	114606 (-47372943,47602155)	117852 (113819,121885)	
5/24/2020	138536	85784 (85784,85784)	118217 (-57203167,57439602)	118217 (-57203167,57439602)	122013 (117283,126744)	
5/25/2020	144950	85784 (85784,85784)	121829 (-67628725,67872383)	121829 (-67628725,67872383)	126209 (120743,131674)	
5/26/2020	150793	85784 (85784,85784)	125440 (-78617522,78868402)	125440 (-78617522,78868402)	130438 (124204,136673)	
5/27/2020	158086	85784 (85784,85784)	129051 (-90142139,90400242)	129051 (-90142139,90400242)	134702 (127665,141739)	
5/28/2020	165386	85784 (85784,85784)	132663 (-102178805,102444131)	132663 (-102178805,102444131)	139000 (131128,146872)	
5/29/2020	173491	85784 (85784,85784)	136274 (-114706651,114979199)	136274 (-114706651,114979199)	143333 (134595,152070)	
5/30/2020	181827	85784 (85784,85784)	139885 (-127707164,127986934)	139885 (-127707164,127986934)	147699 (138067,157331)	
5/31/2020	190609	85784 (85784,85784)	143497 (-141163777,141450770)	143497 (-141163777,141450770)	152100 (141544,162656)	
6/1/2020	198370	85784 (85784,85784)	147108 (-155061550,155355766)	147108 (-155061550,155355766)	156535 (145027,168042)	
6/2/2020	207191	85784 (85784,85784)	150719 (-169386921,169688360)	150719 (-169386921,169688360)	161004 (148518,173490)	

(continued on next page)

**Table A.81** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	90648	89169 (86270,92068)	89630 (82092,97168)	89630 (89141,90119)	46802 (-39136,132740)
5/17/2020	95698	93552 (89941,97164)	93476 (-1798021,18166972)	93480 (92653,94308)	48953 (-39871,137778)
5/18/2020	100328	98125 (94264,101987)	97321 (-40308823,40503465)	97331 (96056,98605)	51122 (-40312,142557)
5/19/2020	106475	102896 (98051,107742)	101165 (-67501837,67704167)	101181 (99381,102980)	53262 (-41552,148076)
5/20/2020	112028	107874 (102214,113535)	105009 (-98847710,99057729)	105031 (102641,107421)	55496 (-42724,153716)
5/21/2020	118226	113079 (106471,119687)	108854 (-133866174,134083881)	108881 (105844,111918)	57610 (-44331,159550)
5/22/2020	124794	118524 (110843,126205)	112697 (-172208417,172433811)	112731 (108995,116468)	59927 (-45981,165835)
5/23/2020	131423	124210 (115457,132963)	116540 (-213610512,213843592)	116582 (112098,121065)	62060 (-48053,172173)
5/24/2020	138536	130171 (120273,140069)	120383 (-257862758,258103525)	120432 (115157,125707)	64325 (-50254,178904)
5/25/2020	144950	136418 (125642,147195)	124226 (-304792007,305040459)	124282 (118173,130391)	66579 (-52480,185638)
5/26/2020	150793	142983 (131719,154247)	128067 (-354251708,354507843)	128132 (121149,135116)	68662 (-54797,192122)
5/27/2020	158086	149891 (138152,161630)	131909 (-406119762,406383580)	131983 (124086,139879)	70654 (-57483,198791)
5/28/2020	165386	157179 (145050,169308)	135750 (-460289238,460560739)	135833 (126987,144678)	72831 (-60164,205825)
5/29/2020	173491	164856 (152324,177388)	139591 (-516664701,516943883)	139683 (129853,149513)	75148 (-62976,213271)
5/30/2020	181827	172977 (160068,185887)	143431 (-575163166,575450029)	143533 (132684,154382)	77721 (-65743,221185)
5/31/2020	190609	181586 (168328,194844)	147272 (-635710557,636005101)	147383 (135482,159285)	80099 (-68991,229189)
6/1/2020	198370	190727 (177361,204092)	151112 (-698239083,698541306)	151234 (138248,164219)	82571 (-72189,237330)
6/2/2020	207191	200452 (187095,213809)	154950 (-762686111,762996012)	155084 (140984,169184)	84741 (-75944,245427)

**Table A.82**

Actual and Predicted Cases with 95% Confidence Intervals for Indonesia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	17025	3271 (-23687,30229)	16496 (15459,17533)	10433 (-2487,23353)	18129 (15965,20293)	16496 (15459,17533)	16496 (16496,16496)	16960 (16051,17868)	
5/17/2020	17514	3271 (-24171,30712)	16496 (14501,18491)	10554 (-2731,23840)	18723 (16454,20992)	16496 (14906,18086)	16496 (16496,16496)	17436 (-52535,87406)	
5/18/2020	18010	3271 (-24662,31203)	16496 (13529,19463)	10676 (-2982,24334)	19329 (16950,21709)	16496 (14346,18646)	16496 (16496,16496)	17912 (-137886,173710)	
5/19/2020	18496	3271 (-25151,31692)	16496 (12576,20416)	10797 (-3233,24827)	19948 (17444,22453)	16496 (13793,19199)	16496 (16496,16496)	18388 (-241843,278620)	
5/20/2020	19189	3271 (-25728,32269)	16496 (11218,21774)	10919 (-3573,25411)	20580 (18030,23130)	16496 (13117,19875)	16496 (16496,16496)	18865 (-361694,399424)	
5/21/2020	20162	3271 (-26452,32994)	16496 (9311,23681)	11040 (-4069,26149)	21224 (18746,23703)	16496 (12239,20753)	16496 (16496,16496)	19341 (-495611,534293)	
5/22/2020	20796	3271 (-27156,33698)	16496 (8068,24924)	11161 (-4543,26866)	21882 (19450,24313)	16496 (11429,21563)	16496 (16496,16496)	19817 (-642269,681904)	
5/23/2020	21745	3271 (-27937,34479)	16496 (6208,26784)	11283 (-5099,27664)	22552 (20210,24894)	16496 (10521,22471)	16496 (16496,16496)	20293 (-800659,841246)	
5/24/2020	22271	3271 (-28664,35206)	16496 (5177,27815)	11404 (-5594,28403)	23236 (20939,25532)	16496 (9716,23276)	16496 (16496,16496)	20770 (-969975,1011515)	
5/25/2020	22750	3271 (-29342,35884)	16496 (4238,28754)	11526 (-6037,29088)	23932 (21634,26231)	16496 (8986,24006)	16496 (16496,16496)	21246 (-1149559,1192051)	
5/26/2020	23165	3271 (-29973,36514)	16496 (3425,29567)	11647 (-6429,29723)	24643 (22283,27002)	16496 (8323,24669)	16496 (16496,16496)	21722 (-1338857,1382302)	
5/27/2020	23851	3271 (-30621,37162)	16496 (2080,30912)	11768 (-6839,30376)	25366 (22950,27782)	16496 (7633,25359)	16496 (16496,16496)	22199 (-1537398,1581795)	
5/28/2020	24538	3271 (-31283,37824)	16496 (734,32258)	11890 (-7265,31044)	26104 (23631,28576)	16496 (6924,26068)	16496 (16496,16496)	22675 (-1744771,1790121)	
5/29/2020	25216	3271 (-31954,38496)	16496 (-595,33587)	12011 (-7700,31722)	26855 (24322,29387)	16496 (6203,26789)	16496 (16496,16496)	23151 (-1960617,2006919)	
5/30/2020	25773	3271 (-32615,39156)	16496 (-1687,34679)	12133 (-8123,32388)	27620 (25001,30239)	16496 (5500,27492)	16496 (16496,16496)	23627 (-2184617,2231872)	
5/31/2020	26473	3271 (-33288,39829)	16496 (-3059,36051)	12254 (-8559,33067)	28399 (25693,31105)	16496 (4780,28212)	16496 (16496,16496)	24104 (-2416484,2464692)	
6/1/2020	26940	3271 (-33938,40480)	16496 (-3974,36966)	12375 (-8970,33721)	29192 (26357,32027)	16496 (4093,28899)	16496 (16496,16496)	24580 (-2655963,2705123)	
6/2/2020	27549	3271 (-34589,41131)	16496 (-5168,38160)	12497 (-9382,34375)	30000 (27021,32978)	16496 (3405,29587)	16496 (16496,16496)	25056 (-2902818,2952930)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3087	17025	16960 (16051,17868)	17004 (16896,17111)	16702 (16070,17335)	17010 (16003,18016)	17010 (16899,17120)	8799 (-7325,24922)		
	17514	17436 (-52535,87406)	17570 (17389,17751)	17131 (16437,17825)	17523 (-173894,208940)	17583 (17392,17773)	9054 (-7301,25408)		
	18010	17912 (-137886,173710)	18150 (17914,18386)	17564 (16806,18323)	18036 (-409056,445129)	18163 (17907,18419)	9330 (-7247,25907)		
	18496	18388 (-241843,278620)	18714 (18417,19011)	17999 (17181,18817)	18550 (-695469,732569)	18719 (18389,19048)	9613 (-7176,26402)		
	19189	18865 (-361694,399424)	19275 (18901,19648)	18433 (17446,19420)	19063 (-1025589,1063716)	19263 (18841,19685)	9886 (-7202,26974)		
	20162	19341 (-495611,534293)	19846 (19385,20306)	18869 (17497,20241)	19577 (-1394387,1433540)	19816 (19289,20343)	10206 (-7309,27722)		
	20796	19817 (-642269,681904)	20428 (19876,20979)	19306 (17623,20989)	20090 (-1798209,1838389)	20376 (19738,21013)	10580 (-7316,28475)		
	21745	20293 (-800659,841246)	21013 (20367,21659)	19743 (17645,21841)	20603 (-2234264,2275470)	20934 (20182,21687)	10898 (-7452,29247)		
	22271	20770 (-969975,1011515)	21601 (20855,22346)	20181 (17777,22585)	21116 (-2700336,2742569)	21489 (20615,22364)	11235 (-7507,29978)		
	22750	21246 (-1149559,1192051)	22193 (21342,23044)	20620 (17985,23255)	21629 (-3194605,3237864)	22043 (21040,23047)	11454 (-7655,30564)		
	23165	21722 (-1338857,1382302)	22791 (21830,23752)	21060 (18257,23864)	22142 (-3715570,3759855)	22599 (21460,23738)	11727 (-7707,31160)		
	23851	22199 (-1537398,1581795)	23394 (22319,24470)	21502 (18506,24497)	22655 (-4261902,4307213)	23156 (21876,24435)	11936 (-7854,31726)		
	24538	22675 (-1744771,1790121)	24002 (22808,25197)	21943 (18738,25148)	23168 (-4832482,4878818)	23712 (22287,25137)	12268 (-7882,32417)		
	25216	23151 (-1960617,2006919)	24615 (23298,25932)	22386 (18960,25812)	23681 (-5426314,5473677)	24267 (22691,25844)	12609 (-7899,33118)		
	25773	23627 (-2184617,2231872)	25233 (23788,26677)	22831 (19202,26460)	24194 (-6042515,6090904)	24823 (23090,26556)	12963 (-7884,33810)		
	26473	24104 (-2416484,2464692)	25855 (24280,27430)	23276 (19429,27123)	24707 (-6680299,6729713)	25379 (23485,27273)	13252 (-7947,34451)		
	26940	24580 (-2655963,2705123)	26483 (24773,28192)	23721 (19687,27755)	25220 (-7338952,7389391)	25935 (23875,27994)	13568 (-7958,35094)		
	27549	25056 (-2902818,2952930)	27115 (25267,28963)	24166 (19946,28386)	25732 (-8017846,8069311)	26491 (24261,28721)	13848 (-8008,35704)		

**Table A.83**

Actual and Predicted Cases with 95% Confidence Intervals for Iran using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	118392	37902 (-119857,195662)	116635 (113191,120079)	106070 (81919,130221)	118244 (117955,118534)	110767 (95822,125712)
5/17/2020	120198	37902 (-121637,197442)	116635 (109652,123618)	107225 (82429,132022)	119263 (117952,120575)	110767 (93959,127575)
5/18/2020	122492	37902 (-123749,199554)	116635 (105155,128115)	108381 (82595,134167)	120242 (117481,123004)	110767 (91678,129856)
5/19/2020	124603	37902 (-125859,201664)	116635 (101018,132252)	109536 (82765,136307)	121180 (117060,125300)	110767 (89386,132148)
5/20/2020	126949	37902 (-128069,203874)	116635 (96420,136850)	110692 (82827,138556)	122075 (116434,127717)	110767 (86957,134577)
5/21/2020	129341	37902 (-130349,206154)	116635 (91731,141539)	111847 (82813,140881)	122927 (115657,130198)	110767 (84436,137098)
5/22/2020	131652	37902 (-132649,208454)	116635 (87202,146068)	113002 (82779,143225)	123735 (114807,132663)	110767 (81894,139640)
5/23/2020	133521	37902 (-134847,210652)	116635 (83538,149732)	114158 (82864,145451)	124497 (114063,134930)	110767 (79493,142041)
5/24/2020	135701	37902 (-137052,212857)	116635 (79266,154004)	115313 (82942,147685)	125212 (113224,137200)	110767 (77081,144453)
5/25/2020	137724	37902 (-139231,215035)	116635 (75301,157969)	116468 (83052,149885)	125879 (112343,139416)	110767 (74705,146829)
5/26/2020	139511	37902 (-141344,217149)	116635 (71798,161472)	117624 (83237,152011)	126498 (111474,141522)	110767 (72416,149118)
5/27/2020	141591	37902 (-143464,219269)	116635 (67721,165549)	118779 (83417,154142)	127067 (110501,143634)	110767 (70118,151416)
5/28/2020	143849	37902 (-145620,221425)	116635 (63296,169974)	119935 (83557,156312)	127586 (109379,145792)	110767 (67771,153763)
5/29/2020	146668	37902 (-147895,223700)	116635 (57770,175500)	121090 (83562,158618)	128052 (107980,148125)	110767 (65267,156267)
5/30/2020	148950	37902 (-150187,225992)	116635 (53298,179972)	122245 (83553,160937)	128465 (106477,150454)	110767 (62750,158784)
5/31/2020	151466	37902 (-152526,228331)	116635 (48366,184904)	123401 (83493,163308)	128825 (104817,152833)	110767 (60178,161356)
6/1/2020	154445	37902 (-154968,230773)	116635 (42527,190743)	124556 (83315,165797)	129129 (102916,155345)	110767 (57477,164057)
6/2/2020	157562	37902 (-157516,233321)	116635 (36418,196852)	125712 (83017,168406)	129377 (100765,157989)	110767 (54647,166887)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
SES	HLT	DT	ARIMA			
5/16/2020	118392	116635 (116635,116635)	118207 (115125,121289)	118205 (115128,121281)	118827 (118504,119151)	
5/17/2020	120198	116635 (116635,116635)	119896 (-715381,955174)	119891 (-712492,952273)	121151 (120438,121864)	
5/18/2020	122492	116635 (116635,116635)	121585 (-1743936,1987107)	121576 (-1737245,1980397)	123606 (122401,124810)	
5/19/2020	124603	116635 (116635,116635)	123274 (-2996756,3243304)	123261 (-2985188,3231710)	126153 (124341,127964)	
5/20/2020	126949	116635 (116635,116635)	124963 (-4441006,4690932)	124946 (-4423535,4673426)	128735 (126192,131279)	
5/21/2020	129341	116635 (116635,116635)	126652 (-6054591,6307894)	126630 (-6030211,6283470)	131299 (127899,134699)	
5/22/2020	131652	116635 (116635,116635)	128341 (-7821551,8078232)	128313 (-7789263,8045889)	133810 (129443,138177)	
5/23/2020	133521	116635 (116635,116635)	130029 (-9729699,9989758)	129996 (-9688503,9948495)	136263 (130842,141684)	
5/24/2020	135701	116635 (116635,116635)	131718 (-11769345,12032782)	131678 (-11718232,11981588)	138680 (132143,145218)	
5/25/2020	137724	116635 (116635,116635)	133407 (-13932549,14199363)	133360 (-13870499,14137219)	141100 (133404,148795)	
5/26/2020	139511	116635 (116635,116635)	135096 (-16212649,16482841)	135041 (-16138631,16408714)	143561 (134678,152444)	
5/27/2020	141591	116635 (116635,116635)	136785 (-18603957,18877526)	136722 (-18516925,18790369)	146092 (135995,156188)	
5/28/2020	143849	116635 (116635,116635)	138474 (-21101539,21378487)	138403 (-21000433,21277238)	148699 (137357,160042)	
5/29/2020	146668	116635 (116635,116635)	140163 (-23701066,23981391)	140082 (-23584808,23864973)	151372 (138742,164002)	
5/30/2020	148950	116635 (116635,116635)	141851 (-26398694,26682397)	141761 (-26266193,26549716)	154084 (140114,168055)	
5/31/2020	151466	116635 (116635,116635)	143540 (-29190986,29478067)	143440 (-29041132,29328013)	156808 (141440,172176)	
6/1/2020	154445	116635 (116635,116635)	145229 (-32074842,32365301)	145118 (-31906510,32196747)	159522 (142696,176348)	
6/2/2020	157562	116635 (116635,116635)	146918 (-35047447,35341283)	146796 (-34859495,35153087)	162217 (143877,180557)	

**Table A.83** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	118392	106743 (83910,129575)	118736 (114618,122854)	118818 (118490,119146)	60400 (-53264,174064)
5/17/2020	120198	106334 (81237,131431)	120837 (-8535134,8776809)	121122 (120396,121848)	61528 (-52803,175859)
5/18/2020	122492	106041 (78355,133726)	122939 (-19228345,19474222)	123541 (122309,124772)	62755 (-52501,178011)
5/19/2020	124603	105699 (75399,135999)	125039 (-32251908,32501987)	126032 (124177,127887)	64061 (-52057,180178)
5/20/2020	126949	105336 (72270,138402)	127140 (-47263691,47517971)	128533 (125929,131138)	65412 (-51619,182442)
5/21/2020	129341	104963 (69023,140902)	129240 (-64033336,64291816)	130988 (127511,134465)	66785 (-51194,184764)
5/22/2020	131652	104588 (65741,143435)	131341 (-82395970,82658652)	133362 (128904,137819)	68057 (-50897,187011)
5/23/2020	133521	104216 (62588,145843)	133441 (-102223156,102490037)	135652 (130128,141175)	69317 (-50519,189153)
5/24/2020	135701	103849 (59427,148272)	135540 (-123414928,123686008)	137883 (131232,144533)	70445 (-50314,191204)
5/25/2020	137724	103490 (56307,150674)	137640 (-145888822,146164102)	140097 (132279,147915)	71618 (-50050,193287)
5/26/2020	139511	103144 (53287,153001)	139739 (-169575208,169854687)	142337 (133320,151353)	72800 (-49722,195322)
5/27/2020	141591	102810 (50274,155346)	141839 (-194414780,194698457)	144629 (134386,154872)	74052 (-49322,197425)
5/28/2020	143849	102490 (47233,157746)	143937 (-220355903,220643777)	146982 (135478,158486)	75338 (-48908,199585)
5/29/2020	146668	102182 (44060,160304)	146036 (-247354300,247646373)	149381 (136573,162189)	76714 (-48495,201924)
5/30/2020	148950	101883 (40888,162877)	148135 (-275368876,275665146)	151798 (137633,165963)	78245 (-47900,204390)
5/31/2020	151466	101591 (37677,165506)	150233 (-304364407,304664873)	154204 (138623,169785)	79641 (-47468,206750)
6/1/2020	154445	101306 (34351,168260)	152331 (-334308758,334613420)	156575 (139518,173632)	81041 (-47114,209197)
6/2/2020	157562	101021 (30906,171136)	154429 (-365172387,365481245)	158904 (140316,177492)	82416 (-46877,211709)

**Table A.84**

Actual and Predicted Cases with 95% Confidence Intervals for Iraq using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	3260	769 (-4112,5651)	3193 (3062,3324)	2301 (422,4180)	3320 (3203,3436)	3143 (2914,3372)	3193 (3193,3193)	3280 (3109,3451)	
5/17/2020	3404	769 (-4255,5794)	3193 (2779,3607)	2327 (329,4325)	3399 (3316,3482)	3143 (2747,3539)	3193 (3193,3193)	3362 (981,5743)	
5/18/2020	3554	769 (-4404,5943)	3193 (2485,3901)	2353 (230,4476)	3480 (3372,3588)	3143 (2576,3710)	3193 (3193,3193)	3444 (-1747,8635)	
5/19/2020	3611	769 (-4506,6044)	3193 (2374,4012)	2379 (180,4579)	3561 (3456,3667)	3143 (2471,3815)	3193 (3193,3193)	3526 (-5070,12121)	
5/20/2020	3724	769 (-4613,6152)	3193 (2152,4234)	2405 (123,4687)	3644 (3527,3761)	3143 (2355,3931)	3193 (3193,3193)	3607 (-8903,16117)	
5/21/2020	3877	769 (-4737,6276)	3193 (1852,4534)	2431 (48,4814)	3728 (3568,3888)	3143 (2215,4071)	3193 (3193,3193)	3689 (-13187,20565)	
5/22/2020	3964	769 (-4851,6390)	3193 (1682,4704)	2457 (-15,4929)	3813 (3627,3999)	3143 (2090,4196)	3193 (3193,3193)	3771 (-17881,25423)	
5/23/2020	4272	769 (-5022,6560)	3193 (1078,5308)	2483 (-141,5107)	3899 (3587,4210)	3143 (1885,4401)	3193 (3193,3193)	3853 (-22953,30658)	
5/24/2020	4469	769 (-5201,6740)	3193 (692,5694)	2509 (-277,5295)	3986 (3554,4417)	3143 (1674,4612)	3193 (3193,3193)	3934 (-28377,36246)	
5/25/2020	4632	769 (-5380,6919)	3193 (373,6013)	2535 (-410,5480)	4074 (3538,4610)	3143 (1472,4814)	3193 (3193,3193)	4016 (-34132,42164)	
5/26/2020	4848	769 (-5570,7109)	3193 (-51,6437)	2561 (-555,5677)	4163 (3511,4815)	3143 (1258,5028)	3193 (3193,3193)	4098 (-40200,48396)	
5/27/2020	5135	769 (-5784,7322)	3193 (-613,6999)	2587 (-727,5901)	4253 (3454,5052)	3143 (1015,5271)	3193 (3193,3193)	4180 (-46566,54925)	
5/28/2020	5457	769 (-6023,7561)	3193 (-1244,7630)	2613 (-926,6152)	4344 (3367,5322)	3143 (743,5543)	3193 (3193,3193)	4261 (-53217,61740)	
5/29/2020	5873	769 (-6301,7839)	3193 (-2060,8446)	2639 (-1169,6447)	4436 (3231,5642)	3143 (423,5863)	3193 (3193,3193)	4343 (-60142,68828)	
5/30/2020	6179	769 (-6589,8128)	3193 (-2660,9046)	2665 (-1421,6751)	4530 (3097,5963)	3143 (99,6187)	3193 (3193,3193)	4425 (-67329,76179)	
5/31/2020	6439	769 (-6878,8417)	3193 (-3169,9555)	2691 (-1671,7053)	4624 (2976,6272)	3143 (-217,6503)	3193 (3193,3193)	4507 (-74770,83783)	
6/1/2020	6868	769 (-7196,8735)	3193 (-4010,10396)	2717 (-1953,7386)	4720 (2823,6617)	3143 (-567,6853)	3193 (3193,3193)	4588 (-82457,91634)	
6/2/2020	7387	769 (-7553,9092)	3193 (-5027,11413)	2743 (-2277,7762)	4817 (2624,7009)	3143 (-961,7247)	3193 (3193,3193)	4670 (-90382,99722)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3090	3260	3280 (3109,3451)	3278 (3249,3307)	3025 (2564,3486)	3273 (3116,3430)	3278 (3249,3307)	1686 (-1398,4771)		
	3404	3362 (981,5743)	3372 (3323,3422)	3060 (2483,3637)	3353 (-2089,8795)	3372 (3321,3422)	1725 (-1465,4914)		
	3554	3444 (-1747,8635)	3455 (3385,3525)	3094 (2392,3796)	3433 (-8590,15456)	3451 (3380,3523)	1772 (-1522,5066)		
	3611	3526 (-5070,12121)	3540 (3446,3634)	3124 (2352,3897)	3513 (-16504,23531)	3531 (3434,3629)	1831 (-1512,5175)		
	3724	3607 (-8903,16117)	3629 (3508,3750)	3153 (2299,4006)	3593 (-25625,32811)	3616 (3490,3743)	1874 (-1528,5276)		
	3877	3689 (-13187,20565)	3717 (3567,3867)	3179 (2221,4138)	3673 (-35816,43162)	3700 (3542,3857)	1913 (-1568,5393)		
	3964	3771 (-17881,25423)	3806 (3625,3986)	3205 (2155,4256)	3753 (-46977,54483)	3782 (3591,3972)	1958 (-1591,5506)		
	4272	3853 (-22953,30658)	3896 (3682,4109)	3230 (2011,4450)	3833 (-59030,66696)	3865 (3638,4091)	2008 (-1664,5679)		
	4469	3934 (-28377,36246)	3986 (3739,4234)	3255 (1858,4651)	3913 (-71915,79741)	3948 (3684,4212)	2087 (-1708,5882)		
	4632	4016 (-34132,42164)	4077 (3794,4361)	3279 (1711,4847)	3993 (-85581,93566)	4031 (3728,4334)	2140 (-1778,6058)		
	4848	4098 (-40200,48396)	4169 (3848,4490)	3303 (1552,5055)	4073 (-99986,108132)	4113 (3769,4458)	2199 (-1851,6249)		
	5135	4180 (-46566,54925)	4262 (3901,4622)	3327 (1363,5292)	4153 (-115095,123400)	4196 (3809,4583)	2229 (-1983,6441)		
	5457	4261 (-53217,61740)	4355 (3954,4756)	3351 (1144,5559)	4233 (-130875,139340)	4279 (3848,4711)	2291 (-2106,6689)		
	5873	4343 (-60142,68828)	4449 (4006,4892)	3376 (879,5873)	4312 (-147300,155924)	4362 (3885,4840)	2366 (-2253,6985)		
	6179	4425 (-67329,76179)	4544 (4058,5031)	3400 (607,6192)	4392 (-164344,173129)	4445 (3920,4970)	2449 (-2396,7293)		
	6439	4507 (-74770,83783)	4640 (4109,5171)	3424 (343,6505)	4472 (-181988,190932)	4528 (3954,5102)	2499 (-2573,7572)		
	6868	4588 (-82457,91634)	4736 (4159,5314)	3448 (46,6851)	4552 (-200209,209314)	4611 (3986,5236)	2537 (-2798,7871)		
	7387	4670 (-90382,99722)	4833 (4209,5458)	3473 (-296,7242)	4632 (-218992,228256)	4694 (4017,5370)	2587 (-3052,8226)		

**Table A.85**

Actual and Predicted Cases with 95% Confidence Intervals for Ireland using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	24048	6321 (-28424,41066)	23956 (23776,24136)	19662 (11066,28258)	29242 (19062,39422)	23956 (23776,24136)	23956 (23956,23956)	24184 (23737,24631)	
5/17/2020	24112	6321 (-28486,41129)	23956 (23650,24262)	19888 (11450,28327)	29955 (19120,40790)	23956 (23705,24207)	23956 (23956,23956)	24402 (8470,40334)	
5/18/2020	24200	6321 (-28565,41207)	23956 (23478,24434)	20114 (11817,28412)	30677 (19188,42165)	23956 (23612,24300)	23956 (23956,23956)	24619 (-10675,59913)	
5/19/2020	24251	6321 (-28629,41271)	23956 (23378,24534)	20341 (12197,28484)	31407 (19235,43579)	23956 (23541,24371)	23956 (23956,23956)	24837 (-33989,83663)	
5/20/2020	24315	6321 (-28693,41335)	23956 (23252,24660)	20567 (12576,28557)	32146 (19275,45016)	23956 (23469,24443)	23956 (23956,23956)	25055 (-60869,110978)	
5/21/2020	24391	6321 (-28760,41403)	23956 (23103,24809)	20793 (12951,28635)	32893 (19317,46469)	23956 (23392,24520)	23956 (23956,23956)	25272 (-90908,141452)	
5/22/2020	24506	6321 (-28841,41483)	23956 (22878,25034)	21019 (13313,28275)	33649 (19371,47927)	23956 (23293,24619)	23956 (23956,23956)	25490 (-123808,174787)	
5/23/2020	24582	6321 (-28920,41563)	23956 (22729,25183)	21245 (13675,28815)	34413 (19420,49406)	23956 (23199,24713)	23956 (23956,23956)	25707 (-159343,210757)	
5/24/2020	24639	6321 (-28994,41637)	23956 (22617,25295)	21471 (14040,28903)	35187 (19461,50913)	23956 (23115,24797)	23956 (23956,23956)	25925 (-197332,249182)	
5/25/2020	24698	6321 (-29065,41708)	23956 (22502,25410)	21697 (14406,28989)	35969 (19495,52442)	23956 (23035,24877)	23956 (23956,23956)	26142 (-237629,289914)	
5/26/2020	24735	6321 (-29130,41772)	23956 (22429,25483)	21923 (14776,29071)	36759 (19520,53998)	23956 (22964,24948)	23956 (23956,23956)	26360 (-280108,332828)	
5/27/2020	24803	6321 (-29195,41837)	23956 (22296,25616)	22150 (15143,29156)	37558 (19544,55573)	23956 (22892,25020)	23956 (23956,23956)	26578 (-324665,377820)	
5/28/2020	24841	6321 (-29256,41898)	23956 (22221,25691)	22376 (15512,29239)	38366 (19562,57171)	23956 (22827,25085)	23956 (23956,23956)	26795 (-371206,424796)	
5/29/2020	24876	6321 (-29313,41955)	23956 (22153,25759)	22602 (15882,29322)	39183 (19574,58792)	23956 (22766,25146)	23956 (23956,23956)	27013 (-419651,473677)	
5/30/2020	24929	6321 (-29369,42012)	23956 (22049,25863)	22828 (16249,29407)	40008 (19585,60432)	23956 (22705,25207)	23956 (23956,23956)	27230 (-469929,524390)	
5/31/2020	24990	6321 (-29426,42069)	23956 (21929,25983)	23054 (16614,29494)	40842 (19596,62088)	23956 (22643,25269)	23956 (23956,23956)	27448 (-521975,576871)	
6/1/2020	25062	6321 (-29485,42127)	23956 (21788,26124)	23280 (16975,29585)	41685 (19611,63759)	23956 (22578,25334)	23956 (23956,23956)	27666 (-575732,631063)	
6/2/2020	25066	6321 (-29538,42180)	23956 (21780,26132)	23506 (17337,29676)	42536 (19616,65457)	23956 (22522,25390)	23956 (23956,23956)	27883 (-631146,686913)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3091	24048	24168 (23753,24583)	24087 (23817,24357)	23721 (23080,24362)	24165 (23755,24575)	24083 (23813,24353)	12163 (-11131,35457)		
	24112	24370 (10577,38164)	24319 (23806,24832)	23804 (23181,24427)	24374 (-16679,65428)	24309 (23795,24822)	12268 (-10986,35522)		
	24200	24571 (-5830,54971)	24495 (23759,25232)	23883 (23260,24505)	24584 (-66841,116009)	24477 (23740,25215)	12295 (-10985,35576)		
	24251	24768 (-25668,75205)	24707 (23715,25698)	23954 (23341,24567)	24793 (-127916,177502)	24679 (23686,25672)	12394 (-10876,35664)		
	24315	24964 (-48381,98309)	24900 (23642,26159)	24019 (23413,24625)	25002 (-198329,24834)	24861 (23601,26122)	12484 (-10770,35738)		
	24391	25158 (-73585,123900)	25107 (23560,26653)	24079 (23471,24686)	25211 (-276995,327417)	25055 (23506,26604)	12587 (-10647,35822)		
	24506	25349 (-100998,151696)	25309 (23459,27159)	24133 (23507,24760)	25421 (-363128,413969)	25242 (23388,27096)	12686 (-10538,35911)		
	24582	25538 (-130401,181477)	25516 (23345,27688)	24183 (23535,24831)	25630 (-456125,507384)	25433 (23257,27609)	12801 (-10407,36009)		
	24639	25725 (-161617,213067)	25723 (23215,28232)	24227 (23560,24895)	25839 (-555528,607206)	25622 (23108,28136)	12906 (-10278,36091)		
	24698	25910 (-194500,246320)	25933 (23072,28794)	24268 (23581,24955)	26048 (-660951,713047)	25812 (22944,28679)	13008 (-10150,36165)		
	24735	26093 (-228925,281110)	26144 (22916,29372)	24307 (23605,25010)	26257 (-772065,824579)	26001 (22765,29237)	13104 (-10021,36229)		
	24803	26273 (-264783,317330)	26357 (22748,29966)	24344 (23623,25064)	26466 (-888602,941535)	26191 (22573,29809)	13204 (-9889,36297)		
	24841	26452 (-301981,354886)	26571 (22567,30576)	24377 (23640,25114)	26675 (-1010317,1063667)	26380 (22366,30394)	13313 (-9742,36368)		
	24876	26629 (-340435,393693)	26788 (22375,31200)	24408 (23656,25159)	26884 (-1136992,1190761)	26570 (22146,30993)	13418 (-9595,36430)		
	24929	26804 (-380070,433677)	27006 (22172,31839)	24436 (23668,25203)	27093 (-1268431,1322617)	26759 (21913,31605)	13526 (-9443,36495)		
	24990	26976 (-420817,474770)	27226 (21958,32493)	24462 (23675,25249)	27302 (-1404477,1459081)	26949 (21668,32230)	13634 (-9291,36559)		
	25062	27147 (-462616,516911)	27447 (21734,33160)	24486 (23675,25297)	27511 (-1544978,1600000)	27138 (21410,32866)	13748 (-9133,36630)		
	25066	27316 (-505411,560043)	27670 (21500,33841)	24508 (23678,25337)	27720 (-1689795,1745234)	27328 (21141,33515)	13866 (-8965,36697)		

**Table A.86**

Actual and Predicted Cases with 95% Confidence Intervals for Israel using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	16608	5560 (-16093,27214)	16589 (16552,16626)	16379 (15930,16828)	19017 (14295,23738)	16589 (16552,16626)	16589 (16589,16589)	16627 (16553,16701)	
5/17/2020	16617	5560 (-16102,27222)	16589 (16534,16644)	16562 (16236,16889)	19195 (14305,24085)	16589 (16542,16636)	16589 (16589,16589)	16659 (16216,17101)	
5/18/2020	16643	5560 (-16122,27242)	16589 (16483,16695)	16746 (16455,17036)	19366 (14323,24409)	16589 (16517,16661)	16589 (16589,16589)	16690 (15765,17616)	
5/19/2020	16659	5560 (-16139,27260)	16589 (16452,16726)	16929 (16564,17294)	19530 (14334,24725)	16589 (16496,16682)	16589 (16589,16589)	16722 (15215,18229)	
5/20/2020	16667	5560 (-16153,27274)	16589 (16436,16742)	17112 (16603,17621)	19686 (14338,25033)	16589 (16481,16697)	16589 (16589,16589)	16754 (14581,18928)	
5/21/2020	16683	5560 (-16168,27289)	16589 (16405,16773)	17296 (16620,17971)	19835 (14340,25329)	16589 (16465,16713)	16589 (16589,16589)	16786 (13870,19701)	
5/22/2020	16690	5560 (-16180,27301)	16589 (16391,16787)	17479 (16623,18335)	19975 (14336,25614)	16589 (16452,16726)	16589 (16589,16589)	16818 (13092,20544)	
5/23/2020	16712	5560 (-16195,27315)	16589 (16348,16830)	17662 (16626,18699)	20108 (14332,25884)	16589 (16435,16743)	16589 (16589,16589)	16850 (12250,21449)	
5/24/2020	16717	5560 (-16207,27328)	16589 (16338,16840)	17846 (16621,19070)	20232 (14322,26143)	16589 (16422,16756)	16589 (16589,16589)	16882 (11350,22413)	
5/25/2020	16734	5560 (-16220,27341)	16589 (16305,16873)	18029 (16617,19441)	20348 (14310,26386)	16589 (16407,16771)	16589 (16589,16589)	16913 (10394,23433)	
5/26/2020	16757	5560 (-16235,27356)	16589 (16260,16918)	18213 (16615,19810)	20456 (14298,26613)	16589 (16389,16789)	16589 (16589,16589)	16945 (9385,24505)	
5/27/2020	16793	5560 (-16254,27375)	16589 (16189,16989)	18396 (16618,20174)	20554 (14286,26822)	16589 (16365,16813)	16589 (16589,16589)	16977 (8327,25627)	
5/28/2020	16872	5560 (-16281,27402)	16589 (16034,17144)	18579 (16635,20524)	20644 (14282,27005)	16589 (16325,16853)	16589 (16589,16589)	17009 (7221,26797)	
5/29/2020	16987	5560 (-16321,27442)	16589 (15809,17369)	18763 (16671,20854)	20724 (14289,27159)	16589 (16260,16918)	16589 (16589,16589)	17041 (6069,28013)	
5/30/2020	17012	5560 (-16359,27480)	16589 (15760,17418)	18946 (16701,21191)	20795 (14290,27300)	16589 (16206,16972)	16589 (16589,16589)	17073 (4873,29273)	
5/31/2020	17071	5560 (-16400,27521)	16589 (15644,17534)	19129 (16733,21526)	20856 (14290,27422)	16589 (16149,17029)	16589 (16589,16589)	17104 (3634,30575)	
6/1/2020	17169	5560 (-16447,27568)	16589 (15452,17726)	19313 (16774,21851)	20907 (14294,27520)	16589 (16081,17097)	16589 (16589,16589)	17136 (2354,31919)	
6/2/2020	17285	5560 (-16503,27623)	16589 (15225,17953)	19496 (16826,22166)	20949 (14303,27594)	16589 (16000,17178)	16589 (16589,16589)	17168 (1034,33302)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Surte-Arima		
3092	16608	16621 (16558,16685)	16608 (16378,16838)	16382 (15940,16825)	16588 (16586,16590)	16608 (16378,16837)	8314 (-7942,24570)		
	16617	16649 (16315,16982)	16630 (16243,17018)	16368 (15901,16834)	16594 (16587,16602)	16629 (16242,17017)	8325 (-7929,24579)		
	16643	16675 (15990,17361)	16649 (16104,17193)	16356 (15856,16857)	16580 (16570,16589)	16647 (16103,17192)	8331 (-7936,24597)		
	16659	16702 (15597,17806)	16666 (15916,17416)	16345 (15814,16876)	16577 (16565,16589)	16664 (15914,17414)	8342 (-7933,24618)		
	16667	16728 (15148,18307)	16686 (15696,17676)	16334 (15777,16892)	16642 (16591,16693)	16683 (15693,17673)	8352 (-7928,24631)		
	16683	16753 (14651,18856)	16706 (15463,17949)	16324 (15739,16908)	16666 (16579,16753)	16702 (15459,17945)	8361 (-7924,24646)		
	16690	16778 (14111,19446)	16725 (15214,18237)	16314 (15706,16923)	16666 (16554,16779)	16720 (15208,18232)	8369 (-7919,24658)		
	16712	16803 (13533,20073)	16745 (14944,18546)	16305 (15670,16940)	16666 (16533,16798)	16738 (14937,18540)	8378 (-7917,24672)		
	16717	16827 (12920,20734)	16765 (14657,18874)	16297 (15638,16956)	16670 (16518,16822)	16757 (14648,18865)	8390 (-7907,24687)		
	16734	16851 (12277,21425)	16785 (14355,19215)	16289 (15606,16972)	16654 (16491,16818)	16775 (14345,19205)	8398 (-7903,24700)		
	16757	16874 (11604,22144)	16805 (14039,19572)	16282 (15572,16991)	16650 (16477,16823)	16794 (14027,19560)	8410 (-7897,24717)		
	16793	16897 (10906,22888)	16826 (13708,19944)	16275 (15535,17015)	16714 (16507,16920)	16812 (13694,19930)	8420 (-7895,24736)		
	16872	16920 (10183,23656)	16846 (13363,20330)	16269 (15486,17051)	16735 (16490,16981)	16830 (13347,20313)	8436 (-7896,24768)		
	16987	16942 (9438,24446)	16867 (13006,20729)	16263 (15419,17107)	16735 (16457,17013)	16849 (12987,20710)	8457 (-7904,24817)		
	17012	16964 (8672,25256)	16888 (12635,21141)	16258 (15357,17158)	16733 (16426,17039)	16867 (12615,21119)	8482 (-7902,24867)		
	17071	16985 (7886,26085)	16909 (12253,21565)	16253 (15293,17213)	16736 (16402,17070)	16885 (12229,21541)	8491 (-7920,24903)		
	17169	17007 (7082,26931)	16930 (11859,22002)	16248 (15219,17277)	16718 (16364,17072)	16904 (11832,21975)	8498 (-7948,24945)		
	17285	17027 (6261,27794)	16952 (11453,22451)	16244 (15134,17353)	16713 (16341,17084)	16922 (11423,22421)	8506 (-7983,24996)		

**Table A.87**

Actual and Predicted Cases with 95% Confidence Intervals for Italy using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	224760	81649 (-198848,362147)	223885 (222170,225600)	226467 (223122,229812)	232800 (217042,248557)	223885 (222170,225600)
5/17/2020	225435	81649 (-199511,362809)	223885 (220847,226923)	228921 (223542,234301)	233399 (217715,249082)	223885 (221418,226352)
5/18/2020	225886	81649 (-200027,363325)	223885 (219963,227807)	231376 (223767,238984)	233856 (218193,249518)	223885 (220854,226916)
5/19/2020	226699	81649 (-200684,363982)	223885 (218370,229400)	233830 (224225,243436)	234168 (218755,249581)	223885 (220078,227692)
5/20/2020	227364	81649 (-201341,364639)	223885 (217066,230704)	236285 (224668,247902)	234332 (219254,249411)	223885 (219314,228456)
5/21/2020	228006	81649 (-201990,365288)	223885 (215808,231962)	238739 (225093,252386)	234345 (219676,249015)	223885 (218567,229203)
5/22/2020	228658	81649 (-202637,365935)	223885 (214530,233240)	241194 (225514,256874)	234204 (220015,248394)	223885 (217823,229947)
5/23/2020	229327	81649 (-203287,366585)	223885 (213219,234551)	243649 (225939,261358)	233906 (220259,247553)	223885 (217075,230695)
5/24/2020	229858	81649 (-203910,367208)	223885 (212178,235592)	246103 (226319,265887)	233447 (220369,246526)	223885 (216372,231398)
5/25/2020	230158	81649 (-204466,367764)	223885 (211590,236180)	248558 (226595,270520)	232825 (220308,245342)	223885 (215766,232004)
5/26/2020	230555	81649 (-204993,368291)	223885 (20812,236958)	251012 (226833,275191)	232036 (220070,244003)	223885 (215198,232572)
5/27/2020	231139	81649 (-205258,368826)	223885 (209667,238103)	253467 (227094,279839)	231078 (219621,242535)	223885 (214610,233160)
5/28/2020	231732	81649 (-206071,369370)	223885 (208505,239265)	255921 (227374,284468)	229947 (218897,240997)	223885 (214006,233764)
5/29/2020	232248	81649 (-206610,369908)	223885 (207494,240276)	258376 (227651,289101)	228640 (217825,239455)	223885 (213405,234365)
5/30/2020	232664	81649 (-207132,370430)	223885 (206678,241092)	260830 (227902,293759)	227154 (216341,237968)	223885 (212829,234941)
5/31/2020	232997	81649 (-207630,370928)	223885 (206025,241745)	263285 (228117,298453)	225486 (214388,236585)	223885 (212286,235484)
6/1/2020	233197	81649 (-208091,371390)	223885 (205633,242137)	265739 (228278,303200)	223634 (211946,235321)	223885 (211793,235977)
6/2/2020	233515	81649 (-208537,371835)	223885 (205010,242760)	268194 (228419,307969)	221592 (208969,234216)	223885 (211320,236450)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SES	HLT	DT	ARIMA	
5/16/2020	224760	223885 (223885,223885)	225029 (222786,227272)	224971 (222842,227100)	224733 (223989,225477)	
5/17/2020	225435	223885 (223885,223885)	226096 (-158506,610698)	225985 (-120988,572957)	225557 (224062,227052)	
5/18/2020	225886	223885 (223885,223885)	227163 (-631218,1085543)	226991 (-545082,999064)	226302 (224042,228562)	
5/19/2020	226699	223885 (223885,223885)	228230 (-1206962,1663421)	227990 (-1059228,1515208)	226970 (223907,230032)	
5/20/2020	227364	223885 (223885,223885)	229296 (-1870671,2329264)	228981 (-1649223,2107186)	227611 (223635,231587)	
5/21/2020	228006	223885 (223885,223885)	230363 (-2612199,3072925)	229966 (-2305397,2765328)	228289 (223213,233365)	
5/22/2020	228658	223885 (223885,223885)	231430 (-3424214,3887074)	230943 (-3020687,3482572)	229040 (222651,235429)	
5/23/2020	229327	223885 (223885,223885)	232497 (-4301118,4766111)	231913 (-3789639,4253464)	229856 (221977,237736)	
5/24/2020	229858	223885 (223885,223885)	233563 (-5238458,5705585)	232876 (-4607872,5073623)	230696 (221223,240168)	
5/25/2020	230158	223885 (223885,223885)	234630 (-6232585,6701845)	233832 (-5471759,5939422)	231510 (220410,242610)	
5/26/2020	230555	223885 (223885,223885)	235697 (-7280440,7751833)	234781 (-6378230,6847791)	232276 (219540,245012)	
5/27/2020	231139	223885 (223885,223885)	236764 (-8379407,8852934)	235723 (-7324637,7796082)	233005 (218609,247401)	
5/28/2020	231732	223885 (223885,223885)	237830 (-9527220,10002880)	236658 (-8308663,8781979)	233732 (217614,249850)	
5/29/2020	232248	223885 (223885,223885)	238897 (-10721888,11199682)	237586 (-9328260,9803432)	234492 (216553,252431)	
5/30/2020	232664	223885 (223885,223885)	239964 (-11961646,12441573)	238508 (-10381593,10858608)	235299 (215427,255171)	
5/31/2020	232997	223885 (223885,223885)	241031 (-13244914,13726975)	239423 (-11467007,11945853)	236141 (214240,258042)	
6/1/2020	233197	223885 (223885,223885)	242097 (-14570267,15054461)	240331 (-12583002,13063664)	236990 (212994,260985)	
6/2/2020	233515	223885 (223885,223885)	243164 (-15936411,16422739)	241233 (-13728203,14210668)	237820 (211693,263947)	

(continued on next page)

**Table A.87 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		LSTM	HWA	SSM	Sutte-Arima	
3094	5/16/2020	224760	217569 (203474,231664)	224674 (223127,226222)	224575 (223757,225394)	112812 (-106605,332230)
	5/17/2020	225435	217260 (202170,232350)	225463 (-996194,1447120)	225254 (223417,227092)	113222 (-106456,332900)
	5/18/2020	225886	217031 (201149,232912)	226252 (-2504426,2956930)	226000 (222775,229225)	113541 (-106309,333392)
	5/19/2020	226699	216779 (199935,233622)	227042 (-4342446,4796530)	226776 (221861,231690)	113819 (-106381,334019)
	5/20/2020	227364	216519 (198705,234332)	227831 (-6461154,6916815)	227514 (220745,234283)	114129 (-106420,334678)
	5/21/2020	228006	216257 (197474,235041)	228620 (-8827695,9284934)	228217 (219478,236957)	114466 (-106415,335348)
	5/22/2020	228658	216000 (196243,235757)	229408 (-11418527,11877343)	228937 (218072,239802)	114874 (-106314,336062)
	5/23/2020	229327	215749 (195011,236487)	230197 (-14216348,14676743)	229687 (216510,242864)	115255 (-106233,336744)
	5/24/2020	229858	215505 (193820,237189)	230985 (-17206222,17668193)	230435 (214787,246082)	115675 (-106071,337422)
	5/25/2020	230158	215269 (192722,237816)	231774 (-20376887,20840434)	231161 (212925,249396)	116064 (-105871,337999)
	5/26/2020	230555	215043 (191672,238413)	232563 (-23719223,24184349)	231880 (210944,252816)	116388 (-105714,338490)
	5/27/2020	231139	214826 (190621,239031)	233351 (-27224521,27691224)	232614 (208850,256378)	116707 (-105577,338992)
	5/28/2020	231732	214619 (189572,239666)	234140 (-30885211,31353491)	233357 (206636,260077)	117080 (-105393,339553)
	5/29/2020	232248	214421 (188542,240301)	234928 (-34694777,35164633)	234092 (204301,263883)	117509 (-105138,340155)
	5/30/2020	232664	214234 (187549,240918)	235716 (-38647959,39119392)	234819 (201857,267781)	117932 (-104864,340728)
	5/31/2020	232997	214054 (186600,241508)	236504 (-42739193,43212200)	235548 (199313,271783)	118325 (-104594,341244)
	6/1/2020	233197	213881 (185708,242053)	237291 (-46964187,47438769)	236284 (196670,275898)	118706 (-104300,341712)
	6/2/2020	233515	213710 (184843,242578)	238080 (-51319329,51795488)	237021 (193925,280116)	119068 (-104011,342147)

**Table A.88**

Actual and Predicted Cases with 95% Confidence Intervals for Jamaica using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	517	110 (-687,907)	511 (499,523)	360 (52,668)	668 (372,965)	509 (493,525)	511 (511,511)	515 (507,524)
5/17/2020	520	110 (-690,910)	511 (493,529)	364 (57,671)	692 (374,1010)	509 (490,528)	511 (511,511)	519 (504,534)
5/18/2020	520	110 (-691,911)	511 (493,529)	368 (65,672)	717 (375,1058)	509 (489,529)	511 (511,511)	523 (500,545)
5/19/2020	520	110 (-691,912)	511 (493,529)	373 (72,673)	741 (374,1109)	509 (489,529)	511 (511,511)	527 (495,558)
5/20/2020	529	110 (-695,916)	511 (476,546)	377 (77,677)	767 (378,1156)	509 (484,534)	511 (511,511)	530 (488,572)
5/21/2020	534	110 (-699,920)	511 (466,556)	381 (81,681)	793 (382,1204)	509 (479,539)	511 (511,511)	534 (481,587)
5/22/2020	544	110 (-705,926)	511 (446,576)	385 (84,687)	819 (388,1251)	509 (471,547)	511 (511,511)	538 (473,603)
5/23/2020	550	110 (-711,932)	511 (435,587)	389 (86,693)	847 (393,1300)	509 (463,555)	511 (511,511)	541 (463,619)
5/24/2020	552	110 (-716,937)	511 (431,591)	394 (90,698)	874 (398,1351)	509 (458,560)	511 (511,511)	545 (454,636)
5/25/2020	556	110 (-721,942)	511 (423,599)	398 (93,702)	902 (402,1403)	509 (452,566)	511 (511,511)	549 (443,654)
5/26/2020	564	110 (-726,947)	511 (407,615)	402 (96,708)	931 (407,1455)	509 (446,572)	511 (511,511)	552 (432,673)
5/27/2020	569	110 (-732,952)	511 (397,625)	406 (100,713)	961 (412,1509)	509 (440,578)	511 (511,511)	556 (420,692)
5/28/2020	569	110 (-736,957)	511 (397,625)	411 (103,718)	991 (416,1566)	509 (435,583)	511 (511,511)	560 (407,712)
5/29/2020	575	110 (-741,962)	511 (386,636)	415 (107,722)	1021 (420,1623)	509 (430,588)	511 (511,511)	564 (394,733)
5/30/2020	581	110 (-746,967)	511 (374,648)	419 (111,727)	1053 (425,1681)	509 (424,594)	511 (511,511)	567 (381,754)
5/31/2020	586	110 (-751,972)	511 (364,658)	423 (114,732)	1085 (429,1740)	509 (419,599)	511 (511,511)	571 (366,776)
6/1/2020	588	110 (-755,976)	511 (360,662)	428 (118,737)	1117 (433,1801)	509 (414,604)	511 (511,511)	575 (352,798)
6/2/2020	590	110 (-760,980)	511 (356,666)	432 (122,741)	1150 (437,1863)	509 (409,609)	511 (511,511)	578 (336,820)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3095	517	514 (508,521)	514 (498,530)	471 (380,562)	513 (509,518)	514 (498,530)	258 (-250,766)	
	520	517 (506,528)	516 (493,539)	467 (369,565)	516 (508,524)	516 (493,539)	259 (-250,769)	
	520	520 (504,536)	517 (489,546)	463 (360,566)	518 (506,530)	517 (488,546)	260 (-249,770)	
	520	523 (501,544)	519 (482,555)	459 (352,566)	516 (503,529)	519 (482,555)	261 (-248,770)	
	529	525 (498,553)	520 (474,566)	456 (341,571)	520 (503,537)	520 (474,566)	261 (-252,773)	
	534	528 (494,562)	522 (466,579)	452 (329,576)	522 (500,544)	522 (465,578)	263 (-253,778)	
	544	531 (490,571)	524 (456,592)	449 (315,584)	522 (497,548)	523 (455,591)	264 (-256,785)	
	550	533 (485,581)	525 (446,605)	447 (302,591)	524 (494,555)	525 (445,605)	267 (-258,792)	
	552	535 (480,591)	527 (435,620)	444 (290,598)	527 (491,562)	526 (434,619)	267 (-262,796)	
	556	538 (474,601)	529 (423,635)	442 (280,604)	528 (487,569)	528 (422,634)	267 (-265,800)	
	564	540 (469,611)	531 (411,651)	440 (269,611)	526 (481,570)	529 (409,649)	267 (-270,804)	
	569	542 (463,622)	532 (398,667)	438 (258,618)	530 (480,579)	531 (396,666)	268 (-273,810)	
	569	544 (456,632)	534 (384,684)	436 (249,623)	532 (476,587)	533 (383,682)	270 (-275,815)	
	575	546 (450,643)	536 (370,701)	435 (240,629)	531 (471,592)	534 (368,700)	270 (-279,819)	
	581	548 (443,654)	537 (356,719)	433 (231,636)	533 (468,599)	536 (354,718)	271 (-283,824)	
	586	550 (436,664)	539 (341,738)	432 (222,642)	535 (464,607)	537 (338,736)	272 (-286,829)	
	588	552 (429,675)	541 (325,757)	431 (214,648)	536 (459,614)	539 (323,755)	273 (-288,834)	
	590	554 (422,686)	543 (309,777)	430 (207,654)	534 (452,616)	540 (306,774)	274 (-291,838)	

**Table A.89**

Actual and Predicted Cases with 95% Confidence Intervals for Japan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	16237	4475 (-18579,27529)	16203 (16136,16270)	13601 (8433,18768)	20065 (12562,27569)	15253 (13324,17182)	16203 (16203,16203)	16315 (16095,16535)	
5/17/2020	16285	4475 (-18627,27576)	16203 (16042,16364)	13755 (8692,18819)	20556 (12607,28504)	15253 (13277,17229)	16203 (16203,16203)	16419 (12576,20263)	
5/18/2020	16305	4475 (-18655,27605)	16203 (16003,16403)	13910 (8966,18854)	21052 (12627,29477)	15253 (13248,17258)	16203 (16203,16203)	16523 (8097,24950)	
5/19/2020	16367	4475 (-18700,27650)	16203 (15882,16524)	14065 (9225,18904)	21555 (12662,30447)	15253 (13202,17304)	16203 (16203,16203)	16628 (2643,30612)	
5/20/2020	16367	4475 (-18727,27676)	16203 (15882,16524)	14219 (9499,18940)	22064 (12672,31455)	15253 (13175,17331)	16203 (16203,16203)	16732 (-3647,37110)	
5/21/2020	16424	4475 (-18764,27713)	16203 (15770,16636)	14374 (9764,18985)	22579 (12692,32466)	15253 (13137,17369)	16203 (16203,16203)	16836 (-10677,44349)	
5/22/2020	16513	4475 (-18815,27764)	16203 (15595,16811)	14529 (10014,19043)	23101 (12727,33474)	15253 (13083,17423)	16203 (16203,16203)	16940 (-18378,52259)	
5/23/2020	16536	4475 (-18859,27808)	16203 (15550,16856)	14683 (10270,19097)	23628 (12751,34505)	15253 (13037,17469)	16203 (16203,16203)	17044 (-26698,60787)	
5/24/2020	16550	4475 (-18896,27846)	16203 (15523,16883)	14838 (10529,19147)	24163 (12765,35560)	15253 (12998,17508)	16203 (16203,16203)	17149 (-35595,69892)	
5/25/2020	16581	4475 (-18932,27882)	16203 (15462,16944)	14993 (10788,19198)	24703 (12776,36630)	15253 (12961,17545)	16203 (16203,16203)	17253 (-45033,79539)	
5/26/2020	16623	4475 (-18969,27919)	16203 (15380,17026)	15147 (11045,19250)	25250 (12788,37713)	15253 (12923,17583)	16203 (16203,16203)	17357 (-54984,89698)	
5/27/2020	16651	4475 (-19005,27954)	16203 (15325,17081)	15302 (11301,19304)	25804 (12797,38811)	15253 (12886,17620)	16203 (16203,16203)	17461 (-65423,100345)	
5/28/2020	16598	4475 (-19027,27976)	16203 (15429,16977)	15457 (11562,19351)	26364 (12786,39942)	15253 (12864,17642)	16203 (16203,16203)	17565 (-76329,111459)	
5/29/2020	16673	4475 (-19056,28005)	16203 (15282,17124)	15611 (11818,19405)	26930 (12786,41075)	15253 (12834,17672)	16203 (16203,16203)	17669 (-87681,123020)	
5/30/2020	16716	4475 (-19087,28036)	16203 (15198,17208)	15766 (12070,19463)	27503 (12788,42218)	15253 (12801,17705)	16203 (16203,16203)	17774 (-99465,135012)	
5/31/2020	16751	4475 (-19119,28068)	16203 (15129,17277)	15921 (12319,19523)	28082 (12791,43374)	15253 (12768,17738)	16203 (16203,16203)	17878 (-111663,147419)	
6/1/2020	16787	4475 (-19151,28100)	16203 (15058,17348)	16076 (12565,19586)	28668 (12795,44542)	15253 (12735,17771)	16203 (16203,16203)	17982 (-124264,160228)	
6/2/2020	16837	4475 (-19185,28134)	16203 (14960,17446)	16230 (12807,19654)	29260 (12801,45720)	15253 (12698,17808)	16203 (16203,16203)	18086 (-137255,173427)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3096	16237	16302 (16108,16496)	16300 (15992,16609)	15932 (15336,16529)	16312 (16099,16525)	16297 (15989,16606)	8189 (-7584,23963)		
	16285	16395 (13356,19433)	16398 (15905,16891)	15956 (15336,16577)	16384 (11903,20865)	16391 (15898,16884)	8231 (-7549,24010)		
	16305	16486 (9880,23091)	16500 (15789,17211)	15978 (15350,16606)	16447 (7075,25819)	16487 (15775,17198)	8277 (-7487,24042)		
	16367	16575 (5689,27462)	16600 (15691,17510)	15995 (15341,16650)	16437 (4343,28531)	16581 (15671,17491)	8317 (-7451,24085)		
	16367	16664 (902,32426)	16703 (15568,17838)	16009 (15345,16673)	16480 (660,32300)	16677 (15541,17814)	8373 (-7375,24121)		
	16424	16751 (-4398,37900)	16806 (15450,18161)	16021 (15334,16707)	16571 (-5649,38790)	16772 (15415,18129)	8416 (-7323,24156)		
	16513	16836 (-10150,43822)	16910 (15312,18508)	16030 (15300,16760)	16690 (-15082,48463)	16867 (15267,18468)	8475 (-7266,24216)		
	16536	16921 (-16304,50145)	17015 (15174,18855)	16038 (15273,16803)	16780 (-25598,59158)	16962 (15119,18805)	8532 (-7203,24266)		
	16550	17004 (-22823,56830)	17121 (15019,19222)	16045 (15251,16838)	16843 (-36142,69828)	17058 (14953,19162)	8589 (-7132,24309)		
	16581	17085 (-29673,63843)	17227 (14862,19592)	16051 (15230,16872)	16897 (-46626,80421)	17153 (14784,19521)	8635 (-7071,24340)		
	16623	17166 (-36827,71158)	17335 (14691,19979)	16056 (15205,16908)	16879 (-55145,88902)	17248 (14600,19896)	8679 (-7015,24372)		
	16651	17245 (-44261,78751)	17443 (14516,20370)	16062 (15181,16942)	16913 (-63605,97432)	17343 (14411,20276)	8736 (-6943,24415)		
	16598	17323 (-51955,86600)	17552 (14328,20776)	16067 (15172,16961)	16996 (-73320,107312)	17438 (14209,20668)	8793 (-6857,24443)		
	16673	17399 (-59889,94688)	17662 (14136,21188)	16071 (15153,16989)	17107 (-84956,119170)	17533 (14001,21066)	8834 (-6796,24463)		
	16716	17475 (-68047,102997)	17773 (13934,21613)	16075 (15131,17019)	17189 (-97539,131917)	17629 (13782,21475)	8895 (-6715,24505)		
	16751	17549 (-76415,111513)	17885 (13727,22044)	16079 (15108,17051)	17244 (-110289,144777)	17724 (13557,21891)	8953 (-6636,24543)		
	16787	17622 (-84977,120222)	17998 (13510,22487)	16083 (15083,17083)	17291 (-123010,157592)	17819 (13322,22317)	9025 (-6543,24592)		
	16837	17695 (-93722,129111)	18112 (13287,22936)	16086 (15054,17118)	17265 (-134149,168679)	17914 (13080,22749)	9075 (-6473,24623)		

**Table A.90**

Actual and Predicted Cases with 95% Confidence Intervals for Jordan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	607	191 (-624,1006)	596 (574,618)	538 (403,673)	565 (481,648)	582 (533,631)	596 (596,596)	607 (585,629)
5/17/2020	613	191 (-630,1012)	596 (563,629)	544 (409,679)	567 (480,654)	582 (527,637)	596 (596,596)	617 (560,675)
5/18/2020	629	191 (-642,1025)	596 (531,661)	550 (408,692)	568 (470,667)	582 (512,652)	596 (596,596)	628 (522,734)
5/19/2020	649	191 (-659,1041)	596 (492,700)	556 (402,709)	570 (454,685)	582 (493,671)	596 (596,596)	638 (474,803)
5/20/2020	672	191 (-678,1060)	596 (447,745)	562 (394,729)	571 (435,707)	582 (470,694)	596 (596,596)	649 (418,879)
5/21/2020	684	191 (-695,1077)	596 (424,768)	567 (388,747)	572 (419,725)	582 (451,713)	596 (596,596)	659 (355,963)
5/22/2020	700	191 (-711,1094)	596 (392,800)	573 (383,764)	572 (402,743)	582 (433,731)	596 (596,596)	670 (286,1053)
5/23/2020	704	191 (-725,1107)	596 (384,808)	579 (381,777)	572 (389,756)	582 (419,745)	596 (596,596)	680 (211,1149)
5/24/2020	708	191 (-736,1119)	596 (376,816)	585 (382,789)	572 (377,767)	582 (407,757)	596 (596,596)	691 (131,1251)
5/25/2020	711	191 (-746,1128)	596 (371,821)	591 (384,798)	571 (367,775)	582 (398,766)	596 (596,596)	701 (45,1357)
5/26/2020	718	191 (-755,1137)	596 (357,835)	597 (387,807)	570 (357,783)	582 (389,775)	596 (596,596)	711 (-46,1469)
5/27/2020	720	191 (-763,1145)	596 (353,839)	603 (391,814)	569 (348,790)	582 (381,783)	596 (596,596)	722 (-141,1585)
5/28/2020	728	191 (-771,1153)	596 (337,855)	609 (395,822)	567 (337,797)	582 (374,790)	596 (596,596)	732 (-241,1706)
5/29/2020	730	191 (-778,1160)	596 (333,859)	615 (400,829)	565 (327,803)	582 (367,797)	596 (596,596)	743 (-346,1831)
5/30/2020	734	191 (-784,1167)	596 (326,866)	620 (406,835)	562 (316,808)	582 (360,804)	596 (596,596)	753 (-454,1961)
5/31/2020	739	191 (-791,1173)	596 (316,876)	626 (411,842)	559 (305,813)	582 (354,810)	596 (596,596)	764 (-567,2094)
6/1/2020	746	191 (-797,1180)	596 (302,890)	632 (416,848)	556 (293,818)	582 (347,817)	596 (596,596)	774 (-683,2232)
6/2/2020	755	191 (-804,1186)	596 (284,908)	638 (422,855)	552 (280,823)	582 (340,824)	596 (596,596)	785 (-803,2373)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3097	607	606 (587,625)	604 (594,614)	570 (497,643)	599 (593,606)	603 (593,613)	305 (-286,897)	
	613	615 (567,664)	613 (596,630)	572 (496,649)	606 (569,644)	611 (593,628)	311 (-281,903)	
	629	624 (537,712)	622 (597,647)	575 (487,662)	611 (542,680)	618 (592,644)	315 (-284,915)	
	649	633 (500,767)	631 (598,665)	577 (473,681)	616 (511,721)	625 (590,661)	321 (-290,932)	
	672	642 (457,828)	641 (598,683)	579 (455,702)	619 (478,760)	633 (587,678)	327 (-297,952)	
	684	651 (409,893)	651 (600,702)	580 (440,720)	625 (440,811)	640 (585,695)	335 (-299,970)	
	700	659 (357,962)	661 (601,720)	582 (425,738)	629 (398,861)	647 (581,713)	340 (-306,985)	
	704	668 (301,1035)	671 (603,739)	583 (414,752)	631 (357,905)	654 (578,730)	344 (-309,997)	
	708	676 (241,1111)	681 (604,758)	584 (405,763)	636 (315,957)	661 (574,748)	346 (-314,1006)	
	711	684 (179,1190)	692 (607,777)	585 (398,772)	639 (271,1006)	668 (570,766)	350 (-315,1014)	
	718	692 (113,1271)	702 (609,796)	586 (392,780)	641 (227,1056)	675 (567,783)	353 (-316,1022)	
	720	700 (44,1355)	713 (612,814)	587 (387,788)	643 (184,1102)	682 (563,801)	359 (-314,1032)	
	728	707 (-26,1441)	724 (615,833)	588 (381,795)	647 (139,1155)	689 (559,818)	364 (-312,1040)	
	730	715 (-100,1529)	735 (619,852)	589 (376,802)	649 (93,1206)	695 (555,836)	371 (-307,1048)	
	734	722 (-175,1619)	747 (623,871)	590 (372,808)	650 (48,1252)	702 (551,853)	375 (-304,1055)	
	739	729 (-252,1711)	758 (627,889)	591 (367,814)	653 (4,1302)	709 (547,871)	381 (-300,1062)	
	746	736 (-331,1804)	769 (631,908)	592 (363,820)	655 (-41,1350)	715 (543,888)	387 (-296,1069)	
	755	743 (-412,1899)	781 (636,926)	592 (358,827)	656 (-86,1398)	722 (539,905)	393 (-291,1077)	

**Table A.91**

Actual and Predicted Cases with 95% Confidence Intervals for Kazakhstan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	5850	1033 (-8407,10474)	5689 (5373,6005)	3405 (-1388,8197)	6600 (5130,8070)	5689 (5373,6005)	5689 (5689,5689)	5829 (5555,6103)	
5/17/2020	6157	1033 (-8713,10779)	5689 (4772,6606)	3445 (-1616,8506)	6848 (5435,8262)	5689 (5003,6375)	5689 (5689,5689)	5965 (-240,12171)	
5/18/2020	6751	1033 (-9222,11289)	5689 (3607,7771)	3485 (-2058,9029)	7102 (5881,8322)	5689 (4363,7015)	5689 (5689,5689)	6101 (-7568,19770)	
5/19/2020	6751	1033 (-9468,11535)	5689 (3607,7771)	3525 (-2223,9274)	7362 (6147,8577)	5689 (4139,7239)	5689 (5689,5689)	6238 (-16491,28966)	
5/20/2020	6969	1033 (-9704,11771)	5689 (3180,8198)	3566 (-2378,9510)	7628 (6397,8858)	5689 (3906,7472)	5689 (5689,5689)	6374 (-26782,39529)	
5/21/2020	7234	1033 (-9953,12020)	5689 (2661,8717)	3606 (-2548,9760)	7900 (6657,9143)	5689 (3645,7733)	5689 (5689,5689)	6510 (-38283,51303)	
5/22/2020	7919	1033 (-10345,12412)	5689 (1318,10060)	3646 (-2872,10164)	8178 (7011,9345)	5689 (3177,8201)	5689 (5689,5689)	6646 (-50882,64175)	
5/23/2020	7919	1033 (-10631,12698)	5689 (1318,10060)	3686 (-3079,10452)	8463 (7308,9617)	5689 (2877,8501)	5689 (5689,5689)	6783 (-64493,78058)	
5/24/2020	8531	1033 (-11005,13072)	5689 (119,11259)	3726 (-3383,10836)	8754 (7655,9852)	5689 (2452,8926)	5689 (5689,5689)	6919 (-79045,92883)	
5/25/2020	8969	1033 (-11402,13469)	5689 (-740,12118)	3767 (-3709,11242)	9051 (8008,10094)	5689 (2006,9372)	5689 (5689,5689)	7055 (-94483,108593)	
5/26/2020	8969	1033 (-11717,13784)	5689 (-740,12118)	3807 (-3946,11560)	9355 (8334,10375)	5689 (1678,9700)	5689 (5689,5689)	7191 (-110758,125141)	
5/27/2020	9304	1033 (-12040,14107)	5689 (-1396,12774)	3847 (-4193,11887)	9665 (8667,10663)	5689 (1338,10040)	5689 (5689,5689)	7327 (-127831,142486)	
5/28/2020	9576	1033 (-12358,14425)	5689 (-1930,13308)	3887 (-4433,12207)	9982 (8998,10966)	5689 (1005,10373)	5689 (5689,5689)	7464 (-145666,160593)	
5/29/2020	9932	1033 (-12687,14754)	5689 (-2627,14005)	3927 (-4685,12540)	10306 (9337,11274)	5689 (658,10720)	5689 (5689,5689)	7600 (-164232,179432)	
5/30/2020	10382	1033 (-13041,15108)	5689 (-3509,14887)	3968 (-4964,12899)	10636 (9692,11580)	5689 (279,11099)	5689 (5689,5689)	7736 (-183501,198973)	
5/31/2020	10858	1033 (-13419,15486)	5689 (-4442,15820)	4008 (-5268,13284)	10973 (10057,11889)	5689 (-129,11507)	5689 (5689,5689)	7872 (-203449,219194)	
6/1/2020	11308	1033 (-13814,15881)	5689 (-5324,16702)	4048 (-5590,13686)	11317 (10429,12206)	5689 (-556,11934)	5689 (5689,5689)	8009 (-224054,240072)	
6/2/2020	11571	1033 (-14195,16262)	5689 (-5840,17218)	4088 (-5896,14072)	11668 (10804,12533)	5689 (-960,12338)	5689 (5689,5689)	8145 (-245296,261586)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3098	5850	5829 (5555,6103)	5827 (5764,5890)	5007 (3355,6659)	5821 (5562,6080)	5820 (5756,5884)	2983 (-2637,8603)		
	6157	5965 (-240,12171)	5967 (5865,6069)	4989 (2994,6985)	5953 (-3320,15226)	5952 (5847,6056)	3057 (-2796,8909)		
	6751	6101 (-7568,19770)	6108 (5968,6249)	4970 (2378,7562)	6086 (-14414,26585)	6083 (5938,6229)	3154 (-3124,9431)		
	6751	6238 (-16491,28966)	6251 (6072,6430)	4944 (2085,7803)	6218 (-27916,40352)	6215 (6027,6403)	3309 (-3089,9707)		
	6969	6374 (-26782,39529)	6395 (6175,6614)	4914 (1787,8042)	6350 (-43479,56179)	6346 (6114,6579)	3353 (-3188,9895)		
	7234	6510 (-38283,51303)	6540 (6278,6801)	4883 (1464,8302)	6482 (-60868,73832)	6478 (6199,6757)	3410 (-3299,10120)		
	7919	6646 (-50882,64175)	6686 (6380,6992)	4851 (954,8748)	6614 (-79911,93139)	6610 (6282,6938)	3425 (-3623,10473)		
	7919	6783 (-64493,78058)	6833 (6482,7185)	4819 (588,9050)	6746 (-100476,113968)	6741 (6362,7120)	3618 (-3617,10853)		
	8531	6919 (-79045,92883)	6982 (6583,7381)	4788 (109,9467)	6878 (-122458,136215)	6873 (6440,7306)	3655 (-3873,11184)		
	8969	7055 (-94483,108593)	7132 (6684,7581)	4758 (-391,9908)	7010 (-145775,159796)	7004 (6516,7493)	3791 (-4039,11621)		
	8969	7191 (-110758,125141)	7284 (6784,7783)	4730 (-782,10242)	7142 (-170353,184638)	7136 (6590,7682)	3822 (-4239,11884)		
	9304	7327 (-127831,142486)	7436 (6884,7989)	4704 (-1181,10588)	7275 (-196130,210679)	7267 (6661,7873)	3899 (-4403,12201)		
	9576	7464 (-145666,160593)	7590 (6983,8197)	4679 (-1570,10928)	7407 (-223054,237867)	7399 (6731,8067)	3927 (-4620,12474)		
	9932	7600 (-164232,179432)	7745 (7082,8408)	4656 (-1969,11281)	7539 (-251077,266154)	7530 (6799,8262)	3975 (-4832,12783)		
	10382	7736 (-183501,198973)	7901 (7181,8622)	4634 (-2396,11665)	7671 (-280158,295499)	7662 (6865,8459)	4114 (-4967,13195)		
	10858	7872 (-203449,219194)	8059 (7279,8838)	4614 (-2849,12078)	7803 (-310259,325864)	7794 (6929,8658)	4212 (-5164,13589)		
	11308	8009 (-224054,240072)	8218 (7377,9058)	4596 (-3317,12508)	7935 (-341348,357217)	7925 (6992,8858)	4327 (-5356,14010)		
	11571	8145 (-245296,261586)	8378 (7475,9280)	4578 (-3762,12919)	8067 (-373394,389527)	8057 (7053,9060)	4423 (-5549,14396)		

**Table A.92**

Actual and Predicted Cases with 95% Confidence Intervals for Kenya using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	830	146 (-1195,1487)	781 (685,877)	468 (-243,1178)	837 (823,852)	781 (685,877)	781 (781,781)	804 (759,849)	
5/17/2020	887	146 (-1252,1544)	781 (573,989)	473 (-289,1236)	866 (835,897)	781 (619,943)	781 (781,781)	827 (621,1032)	
5/18/2020	912	146 (-1287,1579)	781 (524,1038)	479 (-314,1271)	895 (864,927)	781 (582,980)	781 (781,781)	850 (431,1269)	
5/19/2020	963	146 (-1331,1623)	781 (424,1138)	484 (-348,1316)	925 (880,971)	781 (533,1029)	781 (781,781)	873 (197,1548)	
5/20/2020	1029	146 (-1385,1677)	781 (295,1267)	489 (-392,1371)	956 (880,1032)	781 (471,1091)	781 (781,781)	895 (-73,1864)	
5/21/2020	1109	146 (-1450,1742)	781 (138,1424)	495 (-448,1438)	987 (868,1107)	781 (395,1167)	781 (781,781)	918 (-376,2213)	
5/22/2020	1161	146 (-1512,1804)	781 (36,1526)	500 (-500,1501)	1019 (867,1172)	781 (326,1236)	781 (781,781)	941 (-709,2591)	
5/23/2020	1192	146 (-1566,1858)	781 (-25,1587)	506 (-544,1556)	1052 (880,1224)	781 (269,1293)	781 (781,781)	964 (-1070,2997)	
5/24/2020	1214	146 (-1612,1904)	781 (-68,1630)	511 (-580,1602)	1086 (903,1268)	781 (221,1341)	781 (781,781)	987 (-1456,3429)	
5/25/2020	1286	146 (-1666,1958)	781 (-209,1771)	517 (-623,1656)	1120 (918,1321)	781 (165,1397)	781 (781,781)	1010 (-1866,3885)	
5/26/2020	1348	146 (-1722,2014)	781 (-330,1892)	522 (-669,1713)	1154 (930,1378)	781 (105,1457)	781 (781,781)	1032 (-2299,4364)	
5/27/2020	1471	146 (-1793,2085)	781 (-571,2133)	528 (-732,1787)	1190 (923,1457)	781 (25,1537)	781 (781,781)	1055 (-2753,4864)	
5/28/2020	1618	146 (-1881,2173)	781 (-860,2422)	533 (-813,1879)	1226 (892,1559)	781 (-76,1638)	781 (781,781)	1078 (-3229,5385)	
5/29/2020	1745	146 (-1980,2272)	781 (-1108,2670)	538 (-904,1981)	1263 (854,1671)	781 (-187,1749)	781 (781,781)	1101 (-3724,5926)	
5/30/2020	1888	146 (-2089,2381)	781 (-1389,2951)	544 (-1007,2095)	1300 (806,1795)	781 (-309,1871)	781 (781,781)	1124 (-4239,6487)	
5/31/2020	1962	146 (-2194,2486)	781 (-1534,3096)	549 (-1104,2203)	1338 (770,1906)	781 (-423,1985)	781 (781,781)	1147 (-4772,7066)	
6/1/2020	2021	146 (-2293,2585)	781 (-1649,3211)	555 (-1194,2304)	1377 (747,2008)	781 (-527,2089)	781 (781,781)	1170 (-5323,7663)	
6/2/2020	2093	146 (-2389,2681)	781 (-1791,3353)	560 (-1281,2402)	1417 (730,2105)	781 (-627,2189)	781 (781,781)	1192 (-5892,8277)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3099	830	804 (759,849)	805 (795,814)	779 (680,879)	803 (760,847)	804 (795,814)	414 (-403,1230)		
	887	827 (621,1032)	829 (810,847)	800 (660,940)	825 (223,1428)	827 (808,846)	430 (-427,1287)		
	912	850 (431,1269)	853 (826,880)	821 (667,975)	847 (-458,2153)	850 (822,878)	449 (-426,1323)		
	963	873 (197,1548)	878 (842,913)	842 (663,1020)	870 (-1287,3026)	873 (836,910)	461 (-442,1364)		
	1029	895 (-73,1864)	902 (859,945)	863 (647,1079)	892 (-2241,4025)	896 (850,942)	474 (-469,1417)		
	1109	918 (-376,2213)	927 (877,978)	884 (617,1151)	914 (-3308,5136)	918 (863,974)	488 (-506,1482)		
	1161	941 (-709,2591)	953 (894,1011)	905 (593,1217)	936 (-4477,6349)	941 (876,1007)	510 (-528,1549)		
	1192	964 (-1070,2997)	978 (912,1044)	926 (581,1271)	958 (-5740,7656)	964 (888,1040)	523 (-553,1600)		
	1214	987 (-1456,3429)	1004 (930,1077)	948 (579,1317)	980 (-7090,9051)	987 (900,1074)	530 (-579,1639)		
	1286	1010 (-1866,3885)	1030 (948,1111)	970 (569,1371)	1003 (-8523,10528)	1010 (911,1108)	533 (-618,1684)		
	1348	1032 (-2299,4364)	1056 (967,1145)	992 (556,1428)	1025 (-10033,12082)	1033 (923,1143)	549 (-646,1744)		
	1471	1055 (-2753,4864)	1082 (985,1179)	1015 (523,1506)	1047 (-11617,13711)	1055 (933,1178)	568 (-685,1821)		
	1618	1078 (-3229,5385)	1109 (1004,1214)	1037 (470,1605)	1069 (-13272,15410)	1078 (944,1213)	599 (-726,1924)		
	1745	1101 (-3724,5926)	1136 (1022,1249)	1061 (407,1715)	1091 (-14995,17177)	1101 (954,1248)	625 (-780,2031)		
	1888	1124 (-4239,6487)	1163 (1041,1284)	1084 (333,1836)	1113 (-16783,19010)	1124 (963,1285)	650 (-845,2145)		
	1962	1147 (-4772,7066)	1190 (1060,1320)	1108 (269,1948)	1135 (-18634,20905)	1147 (973,1321)	667 (-913,2248)		
	2021	1170 (-5323,7663)	1217 (1078,1356)	1133 (215,2050)	1158 (-20547,22862)	1170 (982,1358)	668 (-995,2331)		
	2093	1192 (-5892,8277)	1245 (1097,1393)	1157 (167,2148)	1180 (-22518,24877)	1192 (990,1395)	670 (-1075,2414)		

**Table A.93**

Actual and Predicted Cases with 95% Confidence Intervals for Korea South using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	11050	6397 (-2722,15517)	11037 (11012,11062)	13981 (8236,19726)	8837 (4500,13174)	11037 (11012,11062)	11037 (11037,11037)	11061 (11014,11108)	
5/17/2020	11065	6397 (-2737,15531)	11037 (10982,11092)	14110 (8252,19967)	8574 (3957,13192)	11037 (10994,11080)	11037 (11037,11037)	11084 (10865,11304)	
5/18/2020	11078	6397 (-2750,15545)	11037 (10957,11117)	14238 (8267,20210)	8298 (3387,13208)	11037 (10979,11095)	11037 (11037,11037)	11108 (10660,11556)	
5/19/2020	11110	6397 (-2772,15567)	11037 (10894,11180)	14367 (8290,20444)	8008 (2780,13235)	11037 (10950,11124)	11037 (11037,11037)	11131 (10409,11853)	
5/20/2020	11122	6397 (-2791,15585)	11037 (10870,11204)	14495 (8308,20683)	7704 (2151,13257)	11037 (10929,11145)	11037 (11037,11037)	11154 (10118,12191)	
5/21/2020	11142	6397 (-2809,15604)	11037 (10831,11243)	14624 (8326,20922)	7386 (1493,13279)	11037 (10907,11167)	11037 (11037,11037)	11178 (9792,12563)	
5/22/2020	11165	6397 (-2829,15624)	11037 (10786,11288)	14752 (8344,21160)	7054 (805,13303)	11037 (10884,11190)	11037 (11037,11037)	11201 (9435,12968)	
5/23/2020	11190	6397 (-2850,15645)	11037 (10737,11337)	14881 (8364,21398)	6707 (88,13327)	11037 (10859,11215)	11037 (11037,11037)	11224 (9048,13401)	
5/24/2020	11206	6397 (-2870,15665)	11037 (10706,11368)	15009 (8382,21637)	6346 (-655,13348)	11037 (10836,11238)	11037 (11037,11037)	11248 (8633,13863)	
5/25/2020	11225	6397 (-2890,15684)	11037 (10669,11405)	15138 (8399,21877)	5971 (-1427,13369)	11037 (10814,11260)	11037 (11037,11037)	11271 (8193,14350)	
5/26/2020	11265	6397 (-2913,15708)	11037 (10590,11484)	15266 (8420,22113)	5580 (-2233,13393)	11037 (10785,11289)	11037 (11037,11037)	11294 (7728,14861)	
5/27/2020	11344	6397 (-2946,15740)	11037 (10435,11639)	15395 (8451,22339)	5174 (-3080,13429)	11037 (10740,11334)	11037 (11037,11037)	11318 (7240,15396)	
5/28/2020	11402	6397 (-2982,15777)	11037 (10322,11752)	15523 (8485,22562)	4753 (-3963,13469)	11037 (10689,11385)	11037 (11037,11037)	11341 (6729,15953)	
5/29/2020	11441	6397 (-3019,15814)	11037 (10245,11829)	15652 (8520,22784)	4316 (-4874,13507)	11037 (10641,11433)	11037 (11037,11037)	11364 (6197,16532)	
5/30/2020	11468	6397 (-3055,15850)	11037 (10192,11882)	15781 (8553,23008)	3864 (-5813,13541)	11037 (10596,11478)	11037 (11037,11037)	11388 (5645,17131)	
5/31/2020	11503	6397 (-3091,15885)	11037 (10124,11950)	15909 (8586,23232)	3396 (-6781,13573)	11037 (10553,11521)	11037 (11037,11037)	11411 (5072,17750)	
6/1/2020	11541	6397 (-3127,15921)	11037 (10049,12025)	16038 (8618,23457)	2911 (-7780,13603)	11037 (10510,11564)	11037 (11037,11037)	11435 (4481,18388)	
6/2/2020	11590	6397 (-3164,15959)	11037 (9953,12121)	16166 (8652,23680)	2411 (-8812,13633)	11037 (10465,11609)	11037 (11037,11037)	11458 (3870,19045)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Surtte-Arima		
3100	11050	11057 (11018,11096)	11071 (10939,11204)	11172 (10933,11410)	11057 (11018,11095)	11057 (10920,11194)	5548 (-5236,16332)		
	11065	11076 (10919,11234)	11105 (10839,11372)	11200 (10948,11451)	11075 (10466,11685)	11077 (10794,11360)	5563 (-5222,16347)		
	11078	11095 (10783,11407)	11129 (10689,11569)	11227 (10961,11493)	11093 (9787,12399)	11096 (10638,11554)	5572 (-5214,16359)		
	11110	11113 (10620,11605)	11147 (10480,11815)	11255 (10984,11525)	11109 (9005,13213)	11116 (10445,11788)	5581 (-5219,16380)		
	11122	11130 (10436,11824)	11172 (10236,12109)	11281 (11002,11560)	1121 (8204,14038)	11136 (10237,12035)	5596 (-5210,16402)		
	11142	11146 (10234,12059)	11204 (9981,12427)	11306 (11020,11593)	11135 (7318,14953)	11156 (10004,12307)	5611 (-5200,16423)		
	11165	11162 (10017,12308)	11235 (9713,12756)	11331 (11038,11623)	11150 (6351,15948)	11175 (9749,12602)	5628 (-5189,16445)		
	11190	11178 (9787,12568)	11261 (9421,13100)	11354 (11058,11650)	11163 (5333,16992)	11195 (9480,12910)	5640 (-5185,16465)		
	11206	11192 (9546,12838)	11285 (9102,13469)	11376 (11075,11676)	11175 (4266,18085)	11215 (9190,13239)	5654 (-5177,16485)		
	11225	11206 (9296,13117)	11313 (8762,13865)	11396 (11092,11701)	11188 (3156,19219)	11235 (8885,13584)	5667 (-5170,16505)		
	11265	11220 (9037,13403)	11345 (8409,14280)	11416 (11112,11720)	11199 (2025,20373)	11254 (8565,13943)	5682 (-5165,16529)		
	11344	11233 (8772,13695)	11375 (8043,14708)	11434 (11139,11729)	11206 (917,21495)	11274 (8228,14320)	5700 (-5165,16565)		
	11402	11246 (8500,13992)	11404 (7658,15149)	11452 (11167,11736)	11216 (-207,22638)	11294 (7878,14709)	5725 (-5160,16610)		
	11441	11258 (8223,14293)	11432 (7255,15609)	11468 (11193,11742)	11226 (-1356,23808)	11313 (7514,15113)	5746 (-5160,16651)		
	11468	11270 (7941,14598)	11463 (6837,16088)	11483 (11217,11748)	11235 (-2517,24987)	11333 (7135,15531)	5761 (-5164,16685)		
	11503	11281 (7656,14906)	11494 (6407,16582)	11497 (11240,11754)	11244 (-3695,26183)	11353 (6745,15960)	5768 (-5177,16712)		
	11541	11292 (7366,15217)	11526 (5963,17089)	11510 (11260,11760)	11253 (-4886,27392)	11372 (6342,16403)	5780 (-5185,16745)		
	11590	11302 (7074,15530)	11557 (5505,17608)	11522 (11277,11767)	11260 (-6079,28600)	11392 (5927,16858)	5795 (-5192,16783)		

**Table A.94**

Actual and Predicted Cases with 95% Confidence Intervals for Kosovo using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	944	233 (-1162,1627)	944 (944,944)	738 (335,1142)	1170 (727,1612)	944 (944,944)	944 (944,944)	957 (931,984)	
5/17/2020	955	233 (-1173,1638)	944 (922,966)	747 (341,1153)	1202 (738,1666)	944 (929,959)	944 (944,944)	969 (895,1042)	
5/18/2020	955	233 (-1176,1641)	944 (922,966)	755 (354,1156)	1235 (741,1728)	944 (926,962)	944 (944,944)	980 (842,1118)	
5/19/2020	989	233 (-1195,1660)	944 (856,1032)	764 (352,1175)	1268 (761,1775)	944 (897,991)	944 (944,944)	991 (777,1206)	
5/20/2020	989	233 (-1206,1671)	944 (856,1032)	772 (358,1187)	1302 (772,1832)	944 (887,1001)	944 (944,944)	1003 (701,1304)	
5/21/2020	1003	233 (-1218,1683)	944 (828,1060)	781 (363,1199)	1336 (783,1889)	944 (873,1015)	944 (944,944)	1014 (616,1412)	
5/22/2020	1004	233 (-1227,1692)	944 (826,1062)	790 (371,1208)	1371 (792,1950)	944 (865,1023)	944 (944,944)	1025 (523,1528)	
5/23/2020	1025	233 (-1239,1704)	944 (785,1103)	798 (377,1220)	1406 (803,2009)	944 (851,1037)	944 (944,944)	1037 (421,1652)	
5/24/2020	1032	233 (-1250,1715)	944 (772,1116)	807 (383,1230)	1442 (814,2070)	944 (839,1049)	944 (944,944)	1048 (313,1783)	
5/25/2020	1038	233 (-1260,1725)	944 (760,1128)	815 (390,1240)	1478 (823,2134)	944 (829,1059)	944 (944,944)	1059 (197,1922)	
5/26/2020	1038	233 (-1268,1733)	944 (760,1128)	824 (399,1248)	1515 (829,2201)	944 (821,1067)	944 (944,944)	1071 (75,2067)	
5/27/2020	1047	233 (-1276,1741)	944 (742,1146)	832 (408,1257)	1553 (836,2269)	944 (813,1075)	944 (944,944)	1082 (-53,2218)	
5/28/2020	1048	233 (-1283,1748)	944 (740,1148)	841 (418,1264)	1591 (842,2339)	944 (806,1082)	944 (944,944)	1093 (-188,2375)	
5/29/2020	1048	233 (-1289,1754)	944 (740,1148)	850 (429,1270)	1629 (846,2412)	944 (800,1088)	944 (944,944)	1105 (-328,2537)	
5/30/2020	1064	233 (-1297,1762)	944 (709,1179)	858 (439,1278)	1668 (852,2484)	944 (792,1096)	944 (944,944)	1116 (-474,2706)	
5/31/2020	1064	233 (-1303,1768)	944 (709,1179)	867 (449,1284)	1708 (857,2558)	944 (786,1102)	944 (944,944)	1127 (-625,2879)	
6/1/2020	1064	233 (-1309,1774)	944 (709,1179)	875 (460,1290)	1748 (861,2635)	944 (780,1108)	944 (944,944)	1139 (-781,3058)	
6/2/2020	1064	233 (-1314,1779)	944 (709,1179)	884 (472,1295)	1789 (864,2713)	944 (775,1113)	944 (944,944)	1150 (-942,3242)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3101	944	956 (932,980)	959 (931,988)	880 (756,1005)	957 (931,983)	959 (930,988)	484 (-418,1386)		
	955	966 (904,1029)	972 (932,1012)	877 (738,1016)	967 (883,1052)	971 (931,1012)	490 (-416,1397)		
	955	976 (862,1090)	985 (931,1038)	875 (729,1020)	974 (829,1118)	983 (930,1037)	494 (-411,1399)		
	989	986 (811,1161)	997 (930,1065)	872 (701,1042)	987 (742,1232)	995 (927,1063)	501 (-418,1419)		
	989	995 (753,1238)	1010 (927,1093)	869 (684,1054)	992 (658,1326)	1007 (924,1090)	513 (-409,1434)		
	1003	1005 (687,1322)	1023 (924,1122)	867 (666,1068)	1005 (552,1458)	1019 (920,1119)	517 (-409,1444)		
	1004	1014 (617,1411)	1036 (920,1153)	864 (651,1077)	1015 (435,1594)	1031 (915,1148)	526 (-402,1454)		
	1025	1023 (541,1505)	1049 (915,1184)	862 (633,1091)	1023 (312,1734)	1043 (908,1178)	527 (-407,1461)		
	1032	1032 (460,1603)	1063 (909,1216)	860 (617,1103)	1031 (184,1878)	1055 (901,1209)	537 (-401,1476)		
	1038	1040 (376,1705)	1076 (903,1249)	858 (602,1115)	1036 (59,2013)	1067 (894,1241)	543 (-398,1484)		
	1038	1049 (287,1810)	1090 (896,1284)	857 (590,1123)	1048 (-77,2172)	1079 (885,1274)	551 (-392,1493)		
	1047	1057 (196,1918)	1103 (888,1319)	855 (577,1133)	1051 (-213,2314)	1092 (875,1308)	554 (-391,1499)		
	1048	1065 (101,2029)	1117 (880,1354)	854 (567,1140)	1062 (-356,2481)	1104 (865,1342)	561 (-384,1507)		
	1048	1073 (3,2143)	1131 (871,1391)	852 (557,1147)	1070 (-508,2648)	1116 (854,1377)	567 (-378,1512)		
	1064	1081 (-98,2259)	1145 (861,1429)	851 (546,1156)	1077 (-662,2816)	1128 (843,1413)	574 (-372,1520)		
	1064	1088 (-201,2377)	1159 (851,1467)	850 (537,1163)	1084 (-819,2987)	1140 (831,1449)	582 (-364,1528)		
	1064	1096 (-306,2497)	1173 (841,1506)	849 (528,1169)	1087 (-974,3147)	1152 (818,1486)	589 (-356,1534)		
	1064	1103 (-413,2619)	1187 (829,1546)	848 (521,1175)	1097 (-1132,3326)	1164 (804,1524)	596 (-347,1540)		

**Table A.95**

Actual and Predicted Cases with 95% Confidence Intervals for Kuwait using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	13802	1500 (-22611,25611)	12860 (11014,14706)	5084 (-12004,22172)	11727 (7660,15794)	12860 (11014,14706)	12860 (12860,12860)	13565 (12183,14948)	
5/17/2020	14850	1500 (-23659,26659)	12860 (8960,16760)	5144 (-12937,23226)	12255 (7650,16860)	12860 (9809,15911)	12860 (12860,12860)	14318 (-153239,181875)	
5/18/2020	15691	1500 (-24573,27574)	12860 (7311,18409)	5205 (-13736,24146)	12797 (7811,17783)	12860 (8802,16918)	12860 (12860,12860)	15070 (-358599,388740)	
5/19/2020	16764	1500 (-25585,28586)	12860 (5208,20512)	5266 (-14635,25167)	13355 (7895,18814)	12860 (7665,18055)	12860 (12860,12860)	15823 (-608734,640380)	
5/20/2020	17568	1500 (-26522,29523)	12860 (3632,22088)	5327 (-15457,26110)	13927 (8093,19761)	12860 (6645,19075)	12860 (12860,12860)	16575 (-897104,930255)	
5/21/2020	18609	1500 (-27513,30514)	12860 (1592,24128)	5387 (-16336,27110)	14515 (8262,20767)	12860 (5556,20164)	12860 (12860,12860)	17328 (-1219302,1253958)	
5/22/2020	19564	1500 (-28510,31511)	12860 (-280,26000)	5448 (-17220,28116)	15118 (8458,21778)	12860 (4470,21250)	12860 (12860,12860)	18080 (-1572143,1608304)	
5/23/2020	20464	1500 (-29495,32496)	12860 (-2044,27764)	5509 (-18092,29110)	15737 (8698,22775)	12860 (3407,22313)	12860 (12860,12860)	18833 (-1953193,1990859)	
5/24/2020	21302	1500 (-30458,33459)	12860 (-3686,29406)	5570 (-18941,30080)	16371 (8995,23748)	12860 (2379,23341)	12860 (12860,12860)	19585 (-2360518,2399689)	
5/25/2020	21967	1500 (-31365,34366)	12860 (-4990,30710)	5630 (-19731,30992)	17022 (9382,24662)	12860 (1426,24294)	12860 (12860,12860)	20338 (-2792532,2833208)	
5/26/2020	22575	1500 (-32219,35220)	12860 (-6181,31901)	5691 (-20468,31850)	17689 (9853,25525)	12860 (539,25181)	12860 (12860,12860)	21091 (-3247904,3290085)	
5/27/2020	23267	1500 (-33053,36054)	12860 (-7538,33258)	5752 (-21183,32687)	18372 (10375,26369)	12860 (-324,26044)	12860 (12860,12860)	21843 (-3725498,3769184)	
5/28/2020	24112	1500 (-33900,36901)	12860 (-9194,34914)	5813 (-21912,33537)	19072 (10915,27230)	12860 (-1207,26927)	12860 (12860,12860)	22596 (-4224329,4269520)	
5/29/2020	25184	1500 (-34798,37799)	12860 (-11295,37015)	5873 (-22693,34440)	19789 (11436,28142)	12860 (-2154,27874)	12860 (12860,12860)	23348 (-4743531,4790228)	
5/30/2020	26192	1500 (-35727,38728)	12860 (-13271,38991)	5934 (-23507,35375)	20523 (11959,29088)	12860 (-3137,28857)	12860 (12860,12860)	24101 (-5282338,5330539)	
5/31/2020	27043	1500 (-36656,39657)	12860 (-14939,40659)	5995 (-24320,36309)	21274 (12513,30035)	12860 (-4117,29837)	12860 (12860,12860)	24853 (-5840062,5889768)	
6/1/2020	27762	1500 (-37565,40566)	12860 (-16348,42068)	6055 (-25111,37222)	22043 (13119,30966)	12860 (-5069,30789)	12860 (12860,12860)	25606 (-6416083,6467295)	
6/2/2020	28649	1500 (-38483,41484)	12860 (-18086,43806)	6116 (-25911,38144)	22829 (13749,31908)	12860 (-6029,31749)	12860 (12860,12860)	26358 (-7009840,7062557)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3102	13802	13565 (12183,14948)	13747 (13631,13863)	10368 (3638,17098)	13730 (12024,15436)	13672 (13557,13788)	7320 (-5384,20025)		
	14850	14318 (-153239,181875)	14665 (14461,14869)	10580 (2987,18174)	14646 (-834453,863744)	14678 (14477,14878)	7812 (-5448,21073)		
	15691	15070 (-358599,388740)	15563 (15185,15941)	10712 (2334,19090)	15491 (-1823854,1854836)	15388 (15057,15719)	8278 (-5419,21975)		
	16764	15823 (-608734,640380)	16493 (15960,17025)	10766 (1428,20104)	16398 (-3064593,3097388)	16470 (16002,16938)	8734 (-5501,22969)		
	17568	16575 (-897104,930255)	17415 (16685,18145)	10763 (500,21026)	17281 (-4489721,4524283)	17134 (16511,17757)	9217 (-5469,23903)		
	18609	17328 (-1219302,1253958)	18351 (17414,19289)	10717 (-582,22015)	18164 (-6079719,6116047)	18229 (17432,19027)	9642 (-5564,24847)		
	19564	18080 (-1572143,1608304)	19296 (18136,20456)	10639 (-1735,23014)	19072 (-7833874,7872017)	18913 (17939,19886)	10148 (-5563,25860)		
	20464	18833 (-1953193,1990859)	20244 (18840,21649)	10540 (-2924,24004)	19940 (-9714708,9754589)	19958 (18781,21136)	10601 (-5607,26809)		
	21302	19585 (-2360518,2399689)	21206 (19549,22863)	10427 (-4120,24974)	20855 (-11740264,11781974)	20717 (19342,22093)	11098 (-5574,27770)		
	21967	20338 (-2792532,2833208)	22171 (20242,24100)	10305 (-5274,25884)	21700 (-13864187,13907586)	21668 (20066,23271)	11544 (-5540,28629)		
	22575	21091 (-3247904,3290085)	23147 (20936,25357)	10177 (-6386,26739)	22606 (-16114644,16159856)	22533 (20711,24355)	11982 (-5470,29433)		
	23267	21843 (-3725498,3769184)	24129 (21623,26635)	10046 (-7488,27579)	23488 (-18472690,18519666)	23375 (21307,25444)	12422 (-5377,30221)		
	24112	22596 (-4224329,4269520)	25119 (22305,27932)	9912 (-8617,28442)	24371 (-20933948,20982689)	24344 (22034,26654)	12892 (-5265,31048)		
	25184	23348 (-4743531,4790228)	26118 (22986,29250)	9782 (-9812,29376)	25278 (-23504725,23555281)	25095 (22524,27666)	13422 (-5127,31971)		
	26192	24101 (-5282338,5330539)	27123 (23660,30586)	9652 (-11046,30350)	26146 (-26163883,26216176)	26135 (23300,28970)	14004 (-4947,32956)		
	27043	24853 (-5840062,5889768)	28137 (24334,31941)	9526 (-12276,31327)	27060 (-28927474,28981595)	26839 (23730,29948)	14566 (-4776,33908)		
	27762	25606 (-6416083,6467295)	29159 (25004,33314)	9404 (-13476,32284)	27904 (-31763895,31819704)	27900 (24506,31293)	15077 (-4632,34787)		
	28649	26358 (-7009840,7062557)	30189 (25672,34705)	9290 (-14677,33256)	28810 (-34695865,34753485)	28610 (24929,32291)	15531 (-4559,35621)		

**Table A.96**

Actual and Predicted Cases with 95% Confidence Intervals for Kyrgyzstan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1117	241 (-1475,1958)	1111 (1099,1123)	765 (74,1455)	1248 (991,1506)	1111 (1099,1123)	1111 (1111,1111)	1136 (1087,1184)	
5/17/2020	1138	241 (-1496,1978)	1111 (1058,1164)	774 (71,1476)	1285 (1012,1559)	1111 (1073,1149)	1111 (1111,1111)	1162 (916,1407)	
5/18/2020	1216	241 (-1556,2038)	1111 (905,1317)	782 (28,1537)	1323 (1069,1577)	1111 (988,1234)	1111 (1111,1111)	1188 (682,1693)	
5/19/2020	1243	241 (-1599,2081)	1111 (852,1370)	791 (2,1581)	1361 (1112,1609)	1111 (943,1279)	1111 (1111,1111)	1214 (395,2032)	
5/20/2020	1270	241 (-1635,2118)	1111 (799,1423)	800 (-17,1618)	1399 (1150,1649)	1111 (906,1316)	1111 (1111,1111)	1240 (63,2416)	
5/21/2020	1313	241 (-1675,2157)	1111 (715,1507)	809 (-39,1657)	1439 (1190,1688)	1111 (864,1358)	1111 (1111,1111)	1266 (-309,2841)	
5/22/2020	1350	241 (-1714,2196)	1111 (643,1579)	818 (-61,1697)	1479 (1229,1728)	1111 (822,1400)	1111 (1111,1111)	1292 (-718,3301)	
5/23/2020	1365	241 (-1746,2229)	1111 (613,1609)	827 (-76,1729)	1520 (1263,1776)	1111 (788,1434)	1111 (1111,1111)	1318 (-1161,3796)	
5/24/2020	1403	241 (-1780,2263)	1111 (539,1683)	836 (-93,1764)	1561 (1298,1824)	1111 (752,1470)	1111 (1111,1111)	1344 (-1635,4322)	
5/25/2020	1433	241 (-1814,2296)	1111 (480,1742)	845 (-109,1798)	1603 (1332,1874)	1111 (716,1506)	1111 (1111,1111)	1369 (-2138,4877)	
5/26/2020	1468	241 (-1848,2331)	1111 (411,1811)	853 (-125,1832)	1646 (1367,1925)	1111 (679,1543)	1111 (1111,1111)	1395 (-2670,5461)	
5/27/2020	1520	241 (-1886,2368)	1111 (309,1913)	862 (-146,1870)	1690 (1406,1974)	1111 (637,1585)	1111 (1111,1111)	1421 (-3228,6071)	
5/28/2020	1594	241 (-1931,2413)	1111 (164,2058)	871 (-174,1916)	1734 (1451,2017)	1111 (586,1636)	1111 (1111,1111)	1447 (-3812,6707)	
5/29/2020	1662	241 (-1980,2463)	1111 (31,2191)	880 (-207,1967)	1779 (1499,2059)	1111 (528,1694)	1111 (1111,1111)	1473 (-4421,7367)	
5/30/2020	1722	241 (-2032,2514)	1111 (-87,2309)	889 (-243,2021)	1825 (1549,2100)	1111 (469,1753)	1111 (1111,1111)	1499 (-5053,8051)	
5/31/2020	1748	241 (-2080,2563)	1111 (-138,2360)	898 (-275,2070)	1871 (1598,2144)	1111 (415,1807)	1111 (1111,1111)	1525 (-5707,8758)	
6/1/2020	1817	241 (-2132,2615)	1111 (-273,2495)	907 (-310,2124)	1918 (1649,2187)	1111 (357,1865)	1111 (1111,1111)	1551 (-6384,9487)	
6/2/2020	1845	241 (-2182,2664)	1111 (-328,2550)	916 (-343,2174)	1966 (1698,2234)	1111 (304,1918)	1111 (1111,1111)	1577 (-7082,10237)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3103	1117	1136 (1087,1184)	1137 (1117,1158)	1043 (899,1188)	1134 (1089,1179)	1136 (1115,1157)	581 (-469,1631)		
	1138	1162 (916,1407)	1165 (1136,1193)	1050 (891,1209)	1166 (842,1489)	1162 (1133,1191)	595 (-463,1652)		
	1216	1188 (682,1693)	1193 (1156,1229)	1057 (835,1279)	1195 (522,1868)	1188 (1151,1226)	606 (-500,1711)		
	1243	1214 (395,2032)	1220 (1175,1266)	1062 (801,1324)	1221 (161,2280)	1215 (1168,1261)	628 (-503,1760)		
	1270	1240 (63,2416)	1249 (1194,1303)	1068 (774,1361)	1246 (-248,2741)	1241 (1185,1298)	646 (-504,1796)		
	1313	1266 (-309,2841)	1277 (1213,1341)	1072 (742,1402)	1271 (-696,3238)	1267 (1200,1334)	661 (-511,1834)		
	1350	1292 (-718,3301)	1306 (1232,1380)	1076 (709,1443)	1297 (-1186,3780)	1294 (1216,1371)	669 (-528,1866)		
	1365	1318 (-1161,3796)	1335 (1251,1419)	1080 (684,1476)	1322 (-1711,4355)	1320 (1231,1409)	686 (-529,1900)		
	1403	1344 (-1635,4322)	1364 (1269,1459)	1083 (656,1511)	1354 (-2295,5004)	1346 (1245,1447)	698 (-536,1932)		
	1433	1369 (-2138,4877)	1394 (1287,1500)	1087 (628,1546)	1384 (-2930,5697)	1372 (1259,1486)	712 (-541,1965)		
	1468	1395 (-2670,5461)	1423 (1306,1541)	1090 (598,1581)	1409 (-3591,6409)	1399 (1273,1525)	726 (-547,1999)		
	1520	1421 (-3228,6071)	1453 (1324,1583)	1093 (564,1622)	1435 (-4278,7147)	1425 (1286,1564)	744 (-551,2039)		
	1594	1447 (-3812,6707)	1483 (1341,1625)	1095 (519,1671)	1460 (-4987,7906)	1451 (1298,1604)	762 (-563,2086)		
	1662	1473 (-4421,7367)	1514 (1359,1669)	1098 (469,1727)	1486 (-5723,8694)	1477 (1310,1645)	784 (-572,2141)		
	1722	1499 (-5053,8051)	1545 (1377,1712)	1101 (417,1785)	1511 (-6481,9502)	1504 (1322,1685)	805 (-585,2195)		
	1748	1525 (-5707,8758)	1576 (1394,1757)	1103 (369,1837)	1542 (-7281,10366)	1530 (1334,1726)	822 (-598,2243)		
	1817	1551 (-6384,9487)	1607 (1412,1802)	1106 (317,1894)	1572 (-8119,11263)	1556 (1345,1768)	829 (-626,2285)		
	1845	1577 (-7082,10237)	1638 (1429,1847)	1108 (270,1946)	1597 (-8980,12174)	1583 (1355,1810)	845 (-643,2334)		

**Table A.97**

Actual and Predicted Cases with 95% Confidence Intervals for Laos using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	19	7 (-16,30)	19 (19,19)	21 (17,25)	20 (18,23)	19 (19,19)	19 (19,19)	19 (19,19)
5/17/2020	19	7 (-16,30)	19 (19,19)	21 (17,25)	20 (18,22)	19 (19,19)	19 (19,19)	19 (19,19)
5/18/2020	19	7 (-16,30)	19 (19,19)	21 (17,26)	20 (18,22)	19 (19,19)	19 (19,19)	19 (19,19)
5/19/2020	19	7 (-16,30)	19 (19,19)	22 (17,26)	20 (18,22)	19 (19,19)	19 (19,19)	19 (19,19)
5/20/2020	19	7 (-16,30)	19 (19,19)	22 (17,27)	20 (18,22)	19 (19,19)	19 (19,19)	19 (19,19)
5/21/2020	19	7 (-16,30)	19 (19,19)	22 (17,27)	20 (18,21)	19 (19,19)	19 (19,19)	19 (19,19)
5/22/2020	19	7 (-16,30)	19 (19,19)	22 (17,28)	19 (18,21)	19 (19,19)	19 (19,19)	19 (19,19)
5/23/2020	19	7 (-16,30)	19 (19,19)	23 (17,28)	19 (17,21)	19 (19,19)	19 (19,19)	19 (19,19)
5/24/2020	19	7 (-16,30)	19 (19,19)	23 (17,28)	19 (17,20)	19 (19,19)	19 (19,19)	19 (19,19)
5/25/2020	19	7 (-16,30)	19 (19,19)	23 (17,29)	19 (17,20)	19 (19,19)	19 (19,19)	19 (19,19)
5/26/2020	19	7 (-16,30)	19 (19,19)	23 (17,29)	18 (17,20)	19 (19,19)	19 (19,19)	19 (19,19)
5/27/2020	19	7 (-16,30)	19 (19,19)	23 (17,30)	18 (16,19)	19 (19,19)	19 (19,19)	19 (19,19)
5/28/2020	19	7 (-16,30)	19 (19,19)	24 (17,30)	18 (16,19)	19 (19,19)	19 (19,19)	19 (19,19)
5/29/2020	19	7 (-16,30)	19 (19,19)	24 (17,31)	17 (15,19)	19 (19,19)	19 (19,19)	19 (19,19)
5/30/2020	19	7 (-16,30)	19 (19,19)	24 (17,31)	17 (15,19)	19 (19,19)	19 (19,19)	19 (19,19)
5/31/2020	19	7 (-16,30)	19 (19,19)	24 (17,32)	16 (14,19)	19 (19,19)	19 (19,19)	19 (19,19)
6/1/2020	19	7 (-16,30)	19 (19,19)	25 (17,32)	16 (13,19)	19 (19,19)	19 (19,19)	19 (19,19)
6/2/2020	19	7 (-16,30)	19 (19,19)	25 (17,33)	16 (12,19)	19 (19,19)	19 (19,19)	19 (19,19)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	19	19 (19,19)	19 (18,20)	19 (19,20)	19 (19,19)	19 (18,20)	10 (-9,28)	
5/17/2020	19	19 (19,19)	19 (18,21)	19 (19,20)	19 (19,19)	19 (18,20)	10 (-9,28)	
5/18/2020	19	19 (19,19)	19 (17,21)	19 (19,20)	19 (19,19)	19 (17,21)	10 (-9,28)	
5/19/2020	19	19 (19,19)	20 (17,22)	19 (19,20)	19 (19,20)	19 (16,22)	10 (-8,28)	
5/20/2020	19	19 (19,19)	20 (17,23)	19 (19,20)	19 (19,20)	19 (16,22)	10 (-8,28)	
5/21/2020	19	19 (19,19)	20 (16,24)	19 (19,20)	19 (19,20)	19 (15,23)	10 (-8,28)	
5/22/2020	19	19 (19,19)	20 (16,25)	19 (19,20)	19 (19,20)	19 (15,24)	10 (-8,28)	
5/23/2020	19	19 (19,19)	21 (16,25)	19 (19,20)	19 (19,20)	19 (14,24)	10 (-8,28)	
5/24/2020	19	19 (19,19)	21 (16,26)	19 (19,20)	19 (19,20)	19 (14,25)	10 (-7,28)	
5/25/2020	19	19 (19,19)	21 (16,27)	19 (19,20)	19 (19,20)	19 (13,26)	11 (-7,28)	
5/26/2020	19	19 (19,19)	21 (15,27)	19 (19,20)	19 (19,20)	19 (13,26)	11 (-7,28)	
5/27/2020	19	19 (19,19)	22 (15,28)	19 (19,20)	19 (19,20)	19 (12,27)	11 (-7,28)	
5/28/2020	19	19 (19,19)	22 (15,29)	19 (19,20)	19 (19,20)	19 (11,28)	11 (-6,28)	
5/29/2020	19	19 (19,19)	22 (15,29)	19 (19,20)	19 (19,20)	19 (11,28)	11 (-6,28)	
5/30/2020	19	19 (19,19)	23 (15,30)	19 (19,20)	19 (19,20)	20 (10,29)	11 (-6,28)	
5/31/2020	19	19 (19,19)	23 (15,31)	19 (19,20)	19 (19,20)	20 (10,30)	11 (-5,28)	
6/1/2020	19	19 (19,19)	23 (15,31)	19 (19,20)	19 (18,20)	20 (9,30)	12 (-5,28)	
6/2/2020	19	19 (19,19)	23 (15,32)	19 (19,20)	19 (19,20)	20 (8,31)	12 (-5,28)	

**Table A.98**

Actual and Predicted Cases with 95% Confidence Intervals for Latvia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	997	324 (-996,1643)	970 (917,1023)	928 (794,1063)	1030 (966,1094)	970 (917,1023)	970 (970,970)	977 (963,990)
5/17/2020	1008	324 (-1007,1654)	970 (896,1044)	939 (803,1074)	1037 (976,1098)	970 (905,1035)	970 (970,970)	984 (955,1013)
5/18/2020	1009	324 (-1011,1658)	970 (894,1046)	949 (819,1079)	1044 (980,1108)	970 (901,1039)	970 (970,970)	991 (940,1042)
5/19/2020	1012	324 (-1015,1662)	970 (888,1052)	959 (835,1083)	1051 (984,1117)	970 (898,1042)	970 (970,970)	998 (922,1074)
5/20/2020	1016	324 (-1018,1666)	970 (880,1060)	969 (851,1087)	1057 (987,1126)	970 (894,1046)	970 (970,970)	1005 (901,1110)
5/21/2020	1025	324 (-1024,1671)	970 (862,1078)	980 (866,1093)	1062 (992,1132)	970 (888,1052)	970 (970,970)	1013 (876,1149)
5/22/2020	1030	324 (-1029,1677)	970 (852,1088)	990 (880,1099)	1067 (997,1138)	970 (882,1058)	970 (970,970)	1020 (849,1191)
5/23/2020	1046	324 (-1037,1685)	970 (821,1119)	1000 (893,1107)	1072 (1003,1140)	970 (872,1068)	970 (970,970)	1027 (819,1235)
5/24/2020	1047	324 (-1044,1691)	970 (819,1121)	1010 (906,1114)	1076 (1009,1143)	970 (865,1075)	970 (970,970)	1034 (787,1281)
5/25/2020	1049	324 (-1049,1697)	970 (815,1125)	1021 (920,1121)	1079 (1013,1145)	970 (859,1081)	970 (970,970)	1041 (753,1330)
5/26/2020	1053	324 (-1054,1702)	970 (807,1133)	1031 (934,1127)	1082 (1016,1147)	970 (853,1087)	970 (970,970)	1049 (717,1380)
5/27/2020	1057	324 (-1059,1707)	970 (799,1141)	1041 (948,1134)	1084 (1020,1149)	970 (848,1092)	970 (970,970)	1056 (679,1433)
5/28/2020	1061	324 (-1064,1712)	970 (792,1148)	1051 (962,1141)	1086 (1023,1149)	970 (843,1097)	970 (970,970)	1063 (638,1487)
5/29/2020	1064	324 (-1069,1716)	970 (786,1154)	1062 (976,1148)	1087 (1025,1150)	970 (838,1102)	970 (970,970)	1070 (596,1544)
5/30/2020	1065	324 (-1073,1720)	970 (784,1156)	1072 (989,1155)	1088 (1027,1149)	970 (834,1106)	970 (970,970)	1077 (553,1602)
5/31/2020	1066	324 (-1077,1724)	970 (782,1158)	1082 (1001,1163)	1088 (1028,1148)	970 (830,1110)	970 (970,970)	1084 (507,1662)
6/1/2020	1066	324 (-1080,1727)	970 (782,1158)	1092 (1013,1172)	1087 (1028,1147)	970 (826,1114)	970 (970,970)	1092 (460,1723)
6/2/2020	1071	324 (-1083,1731)	970 (772,1168)	1103 (1024,1181)	1086 (1028,1144)	970 (823,1117)	970 (970,970)	1099 (411,1786)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3105	997	976 (964,989)	974 (962,987)	909 (736,1082)	976 (964,988)	974 (961,987)	491 (-502,1483)	
	1008	983 (957,1009)	985 (965,1004)	904 (715,1093)	983 (940,1026)	984 (965,1004)	500 (-494,1494)	
	1009	990 (945,1034)	989 (962,1016)	900 (702,1098)	989 (908,1071)	988 (961,1016)	502 (-492,1496)	
	1012	996 (930,1062)	999 (961,1036)	895 (689,1101)	993 (874,1112)	998 (960,1035)	506 (-488,1499)	
	1016	1002 (912,1092)	1004 (958,1051)	891 (677,1105)	1001 (831,1170)	1003 (956,1050)	505 (-491,1500)	
	1025	1009 (892,1125)	1013 (955,1071)	887 (662,1112)	1005 (784,1227)	1011 (953,1069)	508 (-491,1506)	
	1030	1015 (870,1160)	1020 (950,1089)	883 (648,1118)	1013 (728,1298)	1017 (948,1086)	512 (-488,1513)	
	1046	1021 (846,1196)	1027 (946,1109)	879 (631,1127)	1019 (668,1370)	1025 (943,1106)	517 (-489,1522)	
	1047	1027 (820,1234)	1035 (941,1129)	876 (616,1135)	1025 (603,1448)	1031 (937,1126)	522 (-485,1530)	
	1049	1033 (793,1274)	1043 (935,1151)	872 (603,1142)	1031 (535,1527)	1038 (930,1146)	525 (-485,1535)	
	1053	1039 (764,1315)	1050 (928,1172)	869 (590,1148)	1034 (468,1599)	1045 (923,1167)	528 (-483,1540)	
	1057	1045 (734,1357)	1058 (921,1195)	866 (578,1154)	1041 (399,1683)	1052 (915,1189)	530 (-483,1543)	
	1061	1051 (702,1400)	1066 (914,1218)	863 (567,1160)	1045 (326,1763)	1059 (907,1211)	535 (-480,1549)	
	1064	1057 (669,1444)	1074 (906,1241)	861 (556,1166)	1052 (250,1853)	1066 (898,1234)	539 (-477,1555)	
	1065	1063 (636,1490)	1082 (898,1266)	858 (546,1171)	1057 (170,1943)	1073 (889,1257)	543 (-474,1559)	
	1066	1068 (600,1536)	1090 (889,1290)	856 (536,1176)	1063 (88,2037)	1080 (879,1281)	546 (-470,1563)	
	1066	1074 (564,1583)	1098 (880,1316)	854 (528,1180)	1067 (4,2131)	1087 (869,1305)	550 (-466,1566)	
	1071	1079 (527,1632)	1106 (871,1342)	852 (519,1185)	1069 (-80,2219)	1094 (858,1330)	553 (-463,1569)	

**Table A.99**

Actual and Predicted Cases with 95% Confidence Intervals for Lebanon using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	902	315 (-837,1466)	891 (869,913)	859 (776,943)	844 (731,957)	878 (831,925)	891 (891,891)	904 (878,930)
5/17/2020	911	315 (-845,1475)	891 (852,930)	869 (785,952)	844 (721,967)	878 (821,935)	891 (891,891)	915 (843,988)
5/18/2020	931	315 (-862,1491)	891 (813,969)	878 (787,969)	843 (702,984)	878 (802,954)	891 (891,891)	927 (792,1062)
5/19/2020	954	315 (-881,1511)	891 (768,1014)	887 (785,989)	842 (677,1006)	878 (779,977)	891 (891,891)	938 (728,1148)
5/20/2020	961	315 (-896,1525)	891 (754,1028)	896 (789,1004)	839 (658,1021)	878 (763,993)	891 (891,891)	949 (655,1244)
5/21/2020	1024	315 (-928,1557)	891 (630,1152)	906 (769,1042)	837 (613,1060)	878 (721,1035)	891 (891,891)	961 (572,1350)
5/22/2020	1086	315 (-970,1599)	891 (509,1273)	915 (736,1094)	833 (554,1112)	886 (679,1093)	891 (891,891)	972 (480,1463)
5/23/2020	1097	315 (-1003,1633)	891 (487,1295)	924 (718,1130)	829 (509,1149)	886 (643,1129)	891 (891,891)	983 (382,1585)
5/24/2020	1114	315 (-1033,1663)	891 (454,1328)	933 (706,1161)	824 (468,1181)	886 (613,1159)	891 (891,891)	995 (275,1714)
5/25/2020	1119	315 (-1058,1687)	891 (444,1338)	942 (701,1184)	819 (433,1205)	886 (589,1183)	891 (891,891)	1006 (163,1849)
5/26/2020	1140	315 (-1082,1711)	891 (403,1379)	952 (696,1208)	813 (397,1228)	886 (566,1206)	891 (891,891)	1017 (43,1991)
5/27/2020	1161	315 (-1106,1735)	891 (362,1420)	961 (691,1231)	806 (360,1252)	886 (542,1230)	891 (891,891)	1028 (-82,2139)
5/28/2020	1168	315 (-1127,1756)	891 (348,1434)	970 (689,1251)	798 (325,1271)	886 (522,1250)	891 (891,891)	1040 (-213,2293)
5/29/2020	1172	315 (-1145,1774)	891 (340,1442)	979 (691,1268)	790 (292,1288)	886 (504,1268)	891 (891,891)	1051 (-350,2452)
5/30/2020	1191	315 (-1164,1793)	891 (303,1479)	989 (691,1286)	781 (256,1305)	886 (486,1286)	891 (891,891)	1062 (-492,2617)
5/31/2020	1220	315 (-1184,1813)	891 (246,1536)	998 (690,1306)	771 (217,1324)	886 (466,1306)	891 (891,891)	1074 (-640,2787)
6/1/2020	1233	315 (-1203,1832)	891 (221,1561)	1007 (690,1324)	760 (178,1342)	886 (446,1326)	891 (891,891)	1085 (-792,2962)
6/2/2020	1242	315 (-1221,1851)	891 (203,1579)	1016 (691,1342)	748 (139,1358)	891 (434,1348)	891 (891,891)	1096 (-950,3142)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3106	902	903 (879,927)	896 (881,912)	858 (773,944)	896 (886,906)	896 (881,912)	452 (-431,1334)	
	911	913 (851,975)	901 (877,925)	861 (769,953)	904 (856,952)	901 (877,925)	455 (-434,1343)	
	931	923 (810,1037)	906 (869,942)	864 (757,971)	905 (835,975)	905 (869,942)	457 (-445,1359)	
	954	933 (758,1108)	910 (859,961)	866 (739,992)	909 (808,1010)	910 (859,961)	462 (-456,1380)	
	961	943 (700,1186)	915 (847,982)	867 (727,1007)	913 (777,1050)	914 (847,982)	466 (-463,1395)	
	1024	953 (634,1271)	920 (834,1005)	868 (690,1047)	918 (740,1095)	919 (833,1004)	468 (-489,1426)	
	1086	962 (562,1362)	924 (819,1029)	869 (639,1100)	921 (700,1142)	923 (818,1028)	478 (-516,1472)	
	1097	971 (485,1457)	929 (803,1055)	871 (604,1137)	924 (660,1187)	928 (801,1054)	487 (-534,1509)	
	1114	980 (404,1557)	934 (785,1082)	871 (574,1169)	930 (613,1248)	932 (783,1081)	490 (-556,1536)	
	1119	989 (318,1661)	939 (767,1111)	872 (552,1193)	930 (567,1292)	936 (764,1109)	485 (-583,1552)	
	1140	998 (227,1769)	944 (747,1140)	873 (529,1217)	933 (524,1342)	941 (744,1138)	477 (-613,1568)	
	1161	1007 (133,1881)	949 (726,1171)	874 (507,1241)	936 (479,1392)	945 (723,1168)	482 (-631,1594)	
	1168	1016 (36,1995)	954 (704,1203)	875 (487,1262)	939 (432,1445)	950 (700,1199)	485 (-647,1616)	
	1172	1024 (-65,2113)	959 (681,1236)	875 (471,1279)	941 (385,1498)	954 (677,1232)	488 (-660,1635)	
	1191	1032 (-169,2234)	964 (658,1270)	876 (454,1298)	943 (337,1548)	959 (652,1265)	487 (-677,1652)	
	1220	1041 (-275,2357)	969 (633,1305)	876 (435,1318)	948 (286,1610)	963 (627,1299)	489 (-694,1673)	
	1233	1049 (-385,2482)	974 (607,1340)	877 (416,1338)	947 (236,1658)	968 (601,1334)	496 (-704,1696)	
	1242	1057 (-496,2609)	979 (581,1377)	877 (399,1356)	949 (188,1710)	972 (574,1370)	500 (-716,1715)	

**Table A.100**

Actual and Predicted Cases with 95% Confidence Intervals for Lesotho using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1	0 (-2,2)	1 (1,1)	0 (-2,2)	0 (-1,2)	1 (1,1)	1 (1,1)	1 (1,2)
5/17/2020	1	0 (-2,2)	1 (1,1)	0 (-2,2)	0 (-1,2)	1 (1,1)	1 (1,1)	1 (1,2)
5/18/2020	1	0 (-2,2)	1 (1,1)	0 (-2,2)	0 (-1,2)	1 (1,1)	1 (1,1)	1 (1,2)
5/19/2020	1	0 (-2,2)	1 (1,1)	0 (-2,2)	0 (-1,2)	1 (1,1)	1 (1,1)	2 (1,2)
5/20/2020	1	0 (-2,2)	1 (1,1)	0 (-2,2)	1 (-1,2)	1 (1,1)	1 (1,1)	2 (1,2)
5/21/2020	1	0 (-2,2)	1 (1,1)	0 (-2,2)	1 (0,2)	1 (1,1)	1 (1,1)	2 (1,3)
5/22/2020	2	0 (-2,2)	1 (-1,3)	0 (-2,2)	1 (-1,2)	1 (0,2)	1 (1,1)	2 (1,3)
5/23/2020	2	0 (-3,3)	1 (-1,3)	0 (-2,3)	1 (-1,2)	1 (0,2)	1 (1,1)	2 (1,3)
5/24/2020	2	0 (-3,3)	1 (-1,3)	0 (-2,3)	1 (-1,2)	1 (0,2)	1 (1,1)	2 (1,3)
5/25/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (0,2)	1 (1,1)	2 (1,3)
5/26/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (0,2)	1 (1,1)	3 (2,4)
5/27/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (0,2)	1 (1,1)	3 (2,4)
5/28/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (0,2)	1 (1,1)	3 (2,4)
5/29/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (0,2)	1 (1,1)	3 (2,4)
5/30/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (-1,3)	1 (1,1)	3 (2,4)
5/31/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (-1,3)	1 (1,1)	3 (2,5)
6/1/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (-1,3)	1 (1,1)	3 (2,5)
6/2/2020	2	0 (-3,3)	1 (-1,3)	0 (-3,3)	1 (-1,3)	1 (-1,3)	1 (1,1)	4 (2,5)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	1	1 (1,1)	1 (1,1)	2 (0,4)	1 (1,1)	1 (1,1)	1 (1,1)	
5/17/2020	1	1 (1,1)	1 (1,1)	5 (-1,12)	1 (1,1)	1 (1,1)	1 (0,1)	
5/18/2020	1	1 (1,1)	1 (1,1)	19 (-2,40)	1 (1,1)	1 (1,2)	1 (0,1)	
5/19/2020	1	1 (1,1)	1 (1,1)	69 (0,139)	1 (1,1)	1 (1,2)	1 (0,1)	
5/20/2020	1	1 (1,1)	1 (1,2)	247 (23,472)	1 (1,1)	1 (1,2)	1 (0,1)	
5/21/2020	1	1 (1,1)	1 (1,2)	881 (148,1615)	1 (1,1)	1 (1,2)	1 (0,1)	
5/22/2020	2	1 (1,1)	1 (1,2)	3138 (718,5559)	1 (1,1)	1 (1,2)	1 (-1,2)	
5/23/2020	2	1 (1,1)	1 (1,2)	11174 (3108,19241)	1 (1,1)	1 (1,2)	1 (-1,2)	
5/24/2020	2	1 (1,1)	1 (1,2)	39788 (12705,66872)	1 (1,1)	2 (1,2)	1 (-1,2)	
5/25/2020	2	1 (1,1)	1 (1,2)	141679 (50185,233174)	1 (1,1)	2 (1,2)	1 (-1,2)	
5/26/2020	2	1 (1,1)	1 (1,2)	504504 (193862,815147)	1 (1,1)	2 (1,2)	1 (-1,2)	
5/27/2020	2	1 (1,1)	1 (1,2)	1796507 (737420,2855594)	1 (1,1)	2 (1,3)	1 (-1,3)	
5/28/2020	2	1 (1,1)	1 (1,2)	6397285 (2773874,10020695)	1 (1,1)	2 (1,3)	1 (-1,3)	
5/29/2020	2	1 (1,2)	2 (1,2)	22780538 (10347036,35214040)	1 (1,1)	2 (1,3)	1 (-1,3)	
5/30/2020	2	1 (1,2)	2 (1,2)	81120992 (38346874,123895110)	1 (1,1)	2 (1,3)	1 (-1,3)	
5/31/2020	2	1 (1,2)	2 (1,2)	288870304 (141389219,436351389)	1 (1,1)	2 (1,3)	1 (-1,3)	
6/1/2020	2	1 (1,2)	2 (1,2)	1028532224 (519094420,1537970028)	1 (1,1)	2 (1,3)	1 (-1,3)	
6/2/2020	2	1 (1,2)	2 (1,2)	3662510848 (1899572575,5425449121)	1 (1,1)	2 (1,3)	1 (-1,3)	

**Table A.101**

Actual and Predicted Cases with 95% Confidence Intervals for Liberia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	223	43 (-310,396)	219 (211,227)	141 (-19,301)	265 (182,349)	199 (152,246)	219 (219,219)	223 (215,231)
5/17/2020	226	43 (-313,399)	219 (205,233)	143 (-18,304)	275 (185,365)	199 (149,249)	219 (219,219)	227 (213,240)
5/18/2020	229	43 (-316,402)	219 (199,239)	145 (-18,307)	285 (188,381)	199 (146,252)	219 (219,219)	231 (210,252)
5/19/2020	233	43 (-320,405)	219 (192,246)	146 (-18,311)	295 (191,398)	199 (142,256)	219 (219,219)	235 (205,264)
5/20/2020	238	43 (-324,409)	219 (182,256)	148 (-19,315)	305 (195,414)	199 (138,260)	219 (219,219)	238 (199,277)
5/21/2020	240	43 (-327,413)	219 (178,260)	150 (-19,318)	315 (199,432)	199 (134,264)	219 (219,219)	242 (193,292)
5/22/2020	249	43 (-332,418)	219 (160,278)	151 (-21,323)	326 (204,448)	199 (128,270)	219 (219,219)	246 (185,307)
5/23/2020	255	43 (-337,423)	219 (148,290)	153 (-23,329)	337 (209,464)	199 (122,276)	219 (219,219)	250 (177,323)
5/24/2020	265	43 (-344,430)	219 (129,309)	155 (-26,335)	348 (216,480)	199 (115,283)	219 (219,219)	254 (168,339)
5/25/2020	265	43 (-349,435)	219 (129,309)	156 (-28,341)	359 (221,497)	199 (109,289)	219 (219,219)	258 (159,357)
5/26/2020	266	43 (-353,439)	219 (127,311)	158 (-29,345)	371 (225,516)	199 (105,293)	219 (219,219)	262 (149,375)
5/27/2020	266	43 (-357,443)	219 (127,311)	160 (-29,348)	383 (229,537)	199 (101,297)	219 (219,219)	265 (138,393)
5/28/2020	269	43 (-360,446)	219 (121,317)	161 (-29,352)	395 (232,558)	199 (98,300)	219 (219,219)	269 (126,412)
5/29/2020	273	43 (-364,450)	219 (113,325)	163 (-29,356)	407 (235,579)	199 (94,304)	219 (219,219)	273 (114,432)
5/30/2020	280	43 (-368,454)	219 (99,339)	165 (-30,360)	419 (239,600)	199 (89,309)	219 (219,219)	277 (102,452)
5/31/2020	288	43 (-373,459)	219 (84,354)	166 (-32,364)	432 (244,621)	199 (84,314)	219 (219,219)	281 (89,473)
6/1/2020	296	43 (-378,464)	219 (68,370)	168 (-33,369)	445 (249,641)	199 (79,319)	219 (219,219)	285 (75,494)
6/2/2020	311	43 (-385,470)	219 (39,399)	170 (-37,376)	458 (256,661)	199 (71,327)	219 (219,219)	289 (61,516)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	223	223 (215,230)	224 (217,231)	197 (146,248)	223 (215,231)	223 (216,230)	113 (-102,328)	
5/17/2020	226	227 (214,239)	228 (219,237)	196 (141,251)	227 (214,239)	227 (218,236)	116 (-100,331)	
5/18/2020	229	230 (211,250)	233 (222,243)	195 (136,254)	231 (212,250)	231 (220,242)	118 (-98,334)	
5/19/2020	233	234 (207,261)	237 (224,250)	193 (128,258)	234 (209,260)	235 (222,248)	120 (-97,338)	
5/20/2020	238	237 (201,273)	241 (226,257)	191 (120,262)	238 (205,271)	239 (223,255)	122 (-97,342)	
5/21/2020	240	241 (196,287)	246 (228,264)	189 (112,266)	240 (200,281)	243 (225,261)	125 (-95,345)	
5/22/2020	249	245 (189,300)	251 (231,271)	187 (102,271)	246 (195,296)	247 (226,268)	127 (-96,350)	
5/23/2020	255	248 (182,315)	255 (233,278)	185 (92,278)	249 (189,309)	251 (227,274)	130 (-96,356)	
5/24/2020	265	252 (174,330)	260 (235,285)	183 (80,286)	252 (182,323)	255 (228,281)	133 (-97,363)	
5/25/2020	265	255 (166,345)	264 (237,292)	181 (71,291)	257 (175,338)	259 (229,288)	136 (-96,369)	
5/26/2020	266	259 (157,361)	269 (239,300)	179 (62,296)	260 (167,353)	262 (230,295)	137 (-97,371)	
5/27/2020	266	262 (147,377)	274 (241,307)	178 (55,300)	263 (158,368)	266 (231,302)	139 (-96,374)	
5/28/2020	269	266 (137,394)	279 (242,315)	176 (48,304)	266 (149,382)	270 (232,309)	140 (-97,376)	
5/29/2020	273	269 (127,411)	284 (244,323)	175 (41,309)	271 (141,401)	274 (232,316)	142 (-96,381)	
5/30/2020	280	273 (116,429)	288 (246,331)	174 (33,314)	274 (131,417)	278 (233,324)	145 (-95,385)	
5/31/2020	288	276 (105,447)	293 (248,339)	172 (25,319)	277 (121,433)	282 (233,331)	149 (-93,391)	
6/1/2020	296	279 (93,466)	298 (249,347)	171 (17,326)	281 (111,451)	286 (234,338)	152 (-92,397)	
6/2/2020	311	283 (81,484)	303 (251,356)	170 (7,334)	284 (100,469)	290 (234,346)	156 (-93,404)	

**Table A.102**

Actual and Predicted Cases with 95% Confidence Intervals for Libya using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	65	19 (-72,109)	64 (62,66)	59 (46,71)	82 (49,114)	64 (62,66)	64 (64,64)	64 (64,64)
5/17/2020	65	19 (-72,109)	64 (62,66)	59 (47,71)	83 (49,117)	64 (62,66)	64 (64,64)	64 (64,64)
5/18/2020	65	19 (-72,109)	64 (62,66)	60 (49,71)	85 (49,121)	64 (62,66)	64 (64,64)	64 (64,64)
5/19/2020	68	19 (-73,111)	64 (56,72)	61 (48,73)	87 (51,122)	64 (60,68)	64 (64,64)	64 (64,65)
5/20/2020	69	19 (-74,112)	64 (54,74)	61 (48,74)	88 (52,124)	64 (58,70)	64 (64,64)	64 (64,65)
5/21/2020	71	19 (-76,114)	64 (50,78)	62 (48,76)	90 (53,126)	64 (56,72)	64 (64,64)	64 (64,65)
5/22/2020	72	19 (-77,115)	64 (48,80)	63 (48,77)	92 (55,128)	64 (55,73)	64 (64,64)	64 (64,65)
5/23/2020	75	19 (-79,117)	64 (42,86)	63 (47,79)	93 (57,130)	64 (52,76)	64 (64,64)	64 (64,65)
5/24/2020	75	19 (-81,118)	64 (42,86)	64 (47,81)	95 (58,132)	64 (51,77)	64 (64,64)	65 (64,65)
5/25/2020	75	19 (-82,119)	64 (42,86)	65 (48,82)	97 (59,134)	64 (50,78)	64 (64,64)	65 (64,65)
5/26/2020	77	19 (-83,121)	64 (39,89)	65 (48,83)	98 (60,136)	64 (48,80)	64 (64,64)	65 (64,65)
5/27/2020	99	19 (-89,126)	64 (-5,133)	66 (41,91)	100 (64,136)	64 (39,89)	64 (64,64)	65 (64,65)
5/28/2020	105	19 (-95,132)	64 (-16,144)	67 (35,99)	102 (67,137)	64 (31,97)	64 (64,64)	65 (64,65)
5/29/2020	118	19 (-102,140)	64 (-42,170)	67 (27,108)	103 (69,138)	64 (22,106)	64 (64,64)	65 (64,65)
5/30/2020	130	19 (-111,149)	64 (-65,193)	68 (18,118)	105 (70,141)	64 (11,117)	64 (64,64)	65 (64,65)
5/31/2020	156	19 (-124,161)	64 (-116,244)	69 (4,133)	107 (65,149)	64 (-4,132)	64 (64,64)	65 (64,65)
6/1/2020	168	19 (-136,174)	64 (-140,268)	69 (-9,148)	109 (59,158)	64 (-19,147)	64 (64,64)	65 (64,66)
6/2/2020	182	19 (-150,188)	64 (-167,295)	70 (-22,162)	110 (52,169)	64 (-33,161)	64 (64,64)	65 (64,66)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	65	64 (64,64)	64 (61,68)	64 (63,66)	64 (64,64)	64 (61,68)	32 (-32,97)	
5/17/2020	65	64 (64,64)	65 (59,70)	64 (63,66)	64 (64,64)	65 (59,70)	33 (-31,97)	
5/18/2020	65	64 (64,64)	64 (58,73)	64 (63,66)	64 (64,64)	65 (57,73)	33 (-31,96)	
5/19/2020	68	64 (64,64)	66 (56,75)	64 (60,68)	64 (64,64)	65 (56,75)	33 (-32,98)	
5/20/2020	69	64 (64,64)	66 (55,77)	64 (59,70)	64 (64,64)	66 (55,77)	34 (-32,99)	
5/21/2020	71	64 (64,64)	67 (54,79)	64 (57,72)	64 (64,64)	66 (54,79)	34 (-33,101)	
5/22/2020	72	64 (64,64)	67 (53,81)	64 (56,73)	64 (64,65)	67 (52,81)	35 (-33,103)	
5/23/2020	75	64 (64,64)	67 (52,83)	64 (53,75)	64 (64,65)	67 (51,83)	34 (-35,104)	
5/24/2020	75	64 (64,64)	68 (51,85)	64 (52,77)	64 (64,65)	67 (50,84)	35 (-36,106)	
5/25/2020	75	64 (64,64)	68 (50,87)	64 (51,78)	64 (64,65)	68 (49,86)	35 (-37,106)	
5/26/2020	77	64 (64,64)	69 (49,89)	64 (49,79)	64 (64,65)	68 (48,88)	35 (-38,107)	
5/27/2020	99	64 (64,64)	69 (47,91)	64 (40,89)	64 (64,65)	68 (46,91)	35 (-43,113)	
5/28/2020	105	64 (64,64)	70 (46,93)	64 (32,96)	64 (64,65)	69 (45,93)	39 (-44,123)	
5/29/2020	118	64 (64,64)	70 (45,96)	64 (23,106)	64 (64,65)	69 (44,95)	41 (-49,131)	
5/30/2020	130	64 (64,64)	71 (44,98)	64 (12,117)	64 (64,65)	69 (42,97)	43 (-54,140)	
5/31/2020	156	64 (64,64)	71 (43,100)	64 (-3,132)	65 (64,65)	70 (41,99)	41 (-69,151)	
6/1/2020	168	64 (64,64)	72 (41,102)	64 (-18,146)	65 (64,65)	70 (39,101)	45 (-76,167)	
6/2/2020	182	64 (64,64)	72 (40,104)	64 (-32,161)	65 (64,65)	71 (38,103)	45 (-89,179)	

**Table A.103**

Actual and Predicted Cases with 95% Confidence Intervals for Liechtenstein using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	82	37 (-50,125)	82 (82,82)	99 (66,131)	72 (52,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/17/2020	82	37 (-50,125)	82 (82,82)	100 (66,133)	70 (48,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/18/2020	82	37 (-50,125)	82 (82,82)	101 (66,135)	68 (44,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/19/2020	82	37 (-50,125)	82 (82,82)	102 (66,137)	66 (39,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/20/2020	82	37 (-50,125)	82 (82,82)	103 (66,139)	63 (35,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/21/2020	82	37 (-50,125)	82 (82,82)	104 (66,141)	61 (29,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/22/2020	82	37 (-50,125)	82 (82,82)	105 (66,144)	58 (24,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/23/2020	82	37 (-50,125)	82 (82,82)	106 (66,146)	55 (18,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/24/2020	82	37 (-50,125)	82 (82,82)	107 (66,148)	52 (12,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/25/2020	82	37 (-50,125)	82 (82,82)	108 (66,150)	49 (6,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/26/2020	82	37 (-50,125)	82 (82,82)	109 (66,152)	46 (-1,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/27/2020	82	37 (-50,125)	82 (82,82)	110 (66,154)	42 (-7,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/28/2020	82	37 (-50,125)	82 (82,82)	111 (66,156)	39 (-15,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/29/2020	82	37 (-50,125)	82 (82,82)	112 (66,159)	35 (-22,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/30/2020	82	37 (-50,125)	82 (82,82)	113 (66,161)	31 (-30,92)	82 (82,82)	82 (82,82)	82 (82,82)
5/31/2020	82	37 (-50,125)	82 (82,82)	114 (65,163)	27 (-38,92)	82 (82,82)	82 (82,82)	82 (82,82)
6/1/2020	82	37 (-50,125)	82 (82,82)	115 (65,165)	22 (-46,91)	82 (82,82)	82 (82,82)	82 (82,82)
6/2/2020	82	37 (-50,125)	82 (82,82)	116 (65,167)	18 (-55,91)	82 (82,82)	82 (82,82)	82 (82,82)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	82	82 (82,82)	82 (77,87)	84 (80,88)	82 (82,82)	82 (77,87)	41 (-39,121)	
5/17/2020	82	82 (82,82)	82 (75,89)	84 (80,89)	81 (81,82)	82 (75,89)	41 (-39,121)	
5/18/2020	82	82 (82,82)	82 (73,91)	85 (80,90)	82 (82,82)	82 (73,91)	41 (-39,121)	
5/19/2020	82	82 (82,82)	82 (71,93)	85 (80,90)	82 (82,82)	82 (71,93)	41 (-39,121)	
5/20/2020	82	82 (82,82)	82 (68,96)	85 (80,91)	83 (82,83)	82 (68,96)	41 (-39,121)	
5/21/2020	82	82 (82,82)	82 (66,98)	86 (80,92)	83 (82,83)	82 (66,98)	41 (-39,121)	
5/22/2020	82	82 (82,82)	82 (63,101)	86 (80,92)	82 (82,82)	82 (63,101)	41 (-39,121)	
5/23/2020	82	82 (82,82)	82 (60,104)	86 (80,93)	82 (82,82)	82 (60,103)	41 (-39,121)	
5/24/2020	82	82 (82,82)	82 (58,106)	87 (80,93)	82 (81,82)	82 (58,106)	41 (-39,121)	
5/25/2020	82	82 (82,82)	82 (55,109)	87 (80,94)	82 (82,82)	82 (55,109)	41 (-39,121)	
5/26/2020	82	82 (82,82)	82 (52,112)	87 (80,95)	82 (82,82)	82 (52,112)	41 (-39,121)	
5/27/2020	82	82 (82,82)	82 (49,115)	87 (80,95)	83 (82,83)	82 (49,115)	41 (-39,121)	
5/28/2020	82	82 (82,82)	82 (45,119)	87 (79,95)	83 (82,83)	82 (45,119)	41 (-39,121)	
5/29/2020	82	82 (82,82)	82 (42,122)	88 (79,96)	82 (82,82)	82 (42,122)	41 (-39,121)	
5/30/2020	82	82 (82,82)	82 (39,125)	88 (79,96)	82 (82,83)	82 (39,125)	41 (-39,121)	
5/31/2020	82	82 (82,82)	82 (35,129)	88 (79,97)	82 (81,82)	82 (35,129)	41 (-39,121)	
6/1/2020	82	82 (82,82)	82 (31,133)	88 (79,97)	82 (82,83)	82 (31,133)	41 (-39,121)	
6/2/2020	82	82 (82,82)	82 (28,136)	88 (79,97)	82 (82,83)	82 (28,136)	41 (-39,121)	

**Table A.104**

Actual and Predicted Cases with 95% Confidence Intervals for Lithuania using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1534	512 (-1491,2515)	1523 (1501,1545)	1493 (1412,1573)	1660 (1413,1907)	1523 (1501,1545)	1523 (1523,1523)	1523 (1514,1552)	
5/17/2020	1541	512 (-1497,2522)	1523 (1488,1558)	1510 (1438,1581)	1671 (1420,1921)	1523 (1494,1552)	1523 (1523,1523)	1543 (1493,1592)	
5/18/2020	1547	512 (-1504,2528)	1523 (1476,1570)	1526 (1463,1589)	1681 (1426,1935)	1523 (1487,1559)	1523 (1523,1523)	1553 (1462,1644)	
5/19/2020	1562	512 (-1514,2539)	1523 (1447,1599)	1543 (1485,1601)	1690 (1436,1943)	1523 (1474,1572)	1523 (1523,1523)	1563 (1422,1704)	
5/20/2020	1577	512 (-1526,2551)	1523 (1417,1629)	1559 (1505,1613)	1698 (1448,1948)	1523 (1458,1588)	1523 (1523,1523)	1573 (1376,1770)	
5/21/2020	1593	512 (-1540,2564)	1523 (1386,1660)	1576 (1525,1627)	1705 (1460,1951)	1523 (1442,1604)	1523 (1523,1523)	1583 (1324,1842)	
5/22/2020	1604	512 (-1553,2577)	1523 (1364,1682)	1593 (1545,1641)	1712 (1471,1952)	1523 (1427,1619)	1523 (1523,1523)	1593 (1266,1920)	
5/23/2020	1616	512 (-1565,2590)	1523 (1341,1705)	1609 (1564,1654)	1717 (1481,1953)	1523 (1412,1634)	1523 (1523,1523)	1603 (1204,2002)	
5/24/2020	1623	512 (-1577,2601)	1523 (1327,1719)	1626 (1583,1669)	1722 (1490,1953)	1523 (1400,1646)	1523 (1523,1523)	1613 (1136,2090)	
5/25/2020	1635	512 (-1588,2612)	1523 (1303,1743)	1642 (1602,1683)	1725 (1499,1952)	1523 (1387,1659)	1523 (1523,1523)	1623 (1065,2181)	
5/26/2020	1639	512 (-1598,2623)	1523 (1296,1750)	1659 (1618,1700)	1728 (1506,1950)	1523 (1376,1670)	1523 (1523,1523)	1633 (989,2277)	
5/27/2020	1647	512 (-1608,2632)	1523 (1280,1766)	1676 (1634,1718)	1730 (1512,1948)	1523 (1366,1680)	1523 (1523,1523)	1643 (909,2377)	
5/28/2020	1656	512 (-1618,2642)	1523 (1262,1784)	1692 (1647,1737)	1730 (1517,1944)	1523 (1356,1690)	1523 (1523,1523)	1653 (825,2481)	
5/29/2020	1662	512 (-1627,2651)	1523 (1251,1795)	1709 (1659,1759)	1730 (1521,1938)	1523 (1346,1700)	1523 (1523,1523)	1663 (738,2589)	
5/30/2020	1670	512 (-1636,2660)	1523 (1235,1811)	1726 (1670,1781)	1728 (1525,1932)	1523 (1337,1709)	1523 (1523,1523)	1673 (647,2700)	
5/31/2020	1675	512 (-1644,2668)	1523 (1225,1821)	1742 (1679,1806)	1726 (1527,1924)	1523 (1328,1718)	1523 (1523,1523)	1683 (552,2814)	
6/1/2020	1678	512 (-1652,2676)	1523 (1219,1827)	1759 (1686,1831)	1722 (1528,1916)	1523 (1320,1726)	1523 (1523,1523)	1693 (455,2932)	
6/2/2020	1682	512 (-1659,2684)	1523 (1211,1835)	1775 (1693,1858)	1717 (1528,1906)	1523 (1312,1734)	1523 (1523,1523)	1703 (354,3053)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3111	1534	1532 (1515,1548)	1534 (1499,1568)	1496 (1422,1570)	1537 (1509,1566)	1533 (1499,1567)	772 (-721,2265)		
	1541	1540 (1499,1582)	1544 (1489,1599)	1498 (1418,1577)	1552 (1363,1741)	1544 (1489,1599)	777 (-718,2272)		
	1547	1549 (1476,1623)	1555 (1478,1632)	1499 (1415,1584)	1558 (1245,1870)	1554 (1477,1631)	783 (-714,2279)		
	1562	1558 (1446,1669)	1566 (1465,1667)	1501 (1406,1595)	1556 (1168,1944)	1564 (1464,1665)	787 (-715,2289)		
	1577	1566 (1412,1720)	1577 (1451,1703)	1502 (1395,1609)	1565 (1056,2074)	1575 (1448,1701)	793 (-716,2302)		
	1593	1574 (1374,1775)	1588 (1435,1741)	1503 (1382,1625)	1573 (913,2234)	1585 (1432,1738)	800 (-716,2317)		
	1604	1582 (1332,1832)	1599 (1418,1781)	1504 (1369,1639)	1581 (749,2413)	1595 (1413,1778)	807 (-716,2330)		
	1616	1590 (1287,1893)	1611 (1399,1823)	1505 (1357,1653)	1593 (544,2643)	1606 (1394,1818)	812 (-717,2342)		
	1623	1598 (1239,1956)	1622 (1379,1866)	1506 (1347,1665)	1606 (300,2912)	1616 (1372,1860)	818 (-718,2353)		
	1635	1605 (1189,2021)	1634 (1357,1910)	1507 (1336,1677)	1609 (70,3148)	1627 (1350,1903)	822 (-719,2363)		
	1639	1612 (1137,2088)	1645 (1335,1956)	1507 (1327,1687)	1605 (-117,3328)	1637 (1326,1948)	828 (-718,2373)		
	1647	1620 (1082,2157)	1657 (1311,2003)	1508 (1318,1697)	1612 (-308,3533)	1647 (1301,1994)	832 (-718,2382)		
	1656	1627 (1025,2228)	1669 (1286,2052)	1508 (1309,1708)	1619 (-510,3747)	1658 (1274,2041)	838 (-716,2392)		
	1662	1633 (967,2300)	1681 (1260,2102)	1509 (1301,1717)	1624 (-720,3969)	1668 (1246,2090)	844 (-714,2401)		
	1670	1640 (907,2373)	1693 (1232,2153)	1509 (1292,1726)	1635 (-954,4224)	1678 (1217,2139)	850 (-711,2411)		
	1675	1647 (845,2448)	1705 (1204,2205)	1510 (1285,1735)	1646 (-1215,4506)	1689 (1187,2190)	856 (-708,2420)		
	1678	1653 (782,2524)	1717 (1175,2259)	1510 (1278,1742)	1647 (-1468,4763)	1699 (1156,2242)	862 (-704,2428)		
	1682	1659 (718,2600)	1729 (1145,2314)	1510 (1271,1750)	1642 (-1688,4972)	1710 (1124,2295)	867 (-700,2435)		

**Table A.105**

Actual and Predicted Cases with 95% Confidence Intervals for Luxembourg using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	3930	1517 (-3211,6246)	3923 (3909,3937)	4246 (3627,4865)	3971 (3890,4052)	3923 (3909,3937)	3923 (3923,3923)	3932 (3915,3949)	
5/17/2020	3945	1517 (-3226,6261)	3923 (3880,3966)	4292 (3642,4942)	3947 (3890,4004)	3923 (3891,3955)	3923 (3923,3923)	3941 (3899,3982)	
5/18/2020	3947	1517 (-3232,6267)	3923 (3876,3970)	4338 (3647,5030)	3918 (3862,3975)	3923 (3885,3961)	3923 (3923,3923)	3949 (3875,4024)	
5/19/2020	3958	1517 (-3241,6276)	3923 (3854,3992)	4384 (3654,5115)	3886 (3800,3972)	3923 (3876,3970)	3923 (3923,3923)	3958 (3844,4072)	
5/20/2020	3971	1517 (-3251,6286)	3923 (3829,4017)	4431 (3663,5198)	3849 (3717,3981)	3923 (3863,3983)	3923 (3923,3923)	3967 (3808,4126)	
5/21/2020	3980	1517 (-3261,6296)	3923 (3811,4035)	4477 (3671,5282)	3808 (3625,3991)	3923 (3852,3994)	3923 (3923,3923)	3976 (3767,4184)	
5/22/2020	3981	1517 (-3268,6303)	3923 (3809,4037)	4523 (3676,5370)	3762 (3528,3997)	3923 (3844,4002)	3923 (3923,3923)	3984 (3723,4246)	
5/23/2020	3990	1517 (-3276,6310)	3923 (3792,4054)	4569 (3681,5458)	3712 (3420,4004)	3923 (3836,4010)	3923 (3923,3923)	3993 (3674,4312)	
5/24/2020	3992	1517 (-3282,6317)	3923 (3788,4058)	4616 (3684,5547)	3658 (3306,4009)	3923 (3829,4017)	3923 (3923,3923)	4002 (3621,4382)	
5/25/2020	3993	1517 (-3287,6322)	3923 (3786,4060)	4662 (3686,5638)	3598 (3185,4012)	3923 (3824,4022)	3923 (3923,3923)	4011 (3565,4456)	
5/26/2020	3995	1517 (-3292,6327)	3923 (3782,4064)	4708 (3687,5730)	3534 (3055,4013)	3923 (3820,4026)	3923 (3923,3923)	4019 (3506,4533)	
5/27/2020	4001	1517 (-3297,6332)	3923 (3770,4076)	4754 (3687,5821)	3465 (2916,4015)	3923 (3815,4031)	3923 (3923,3923)	4028 (3444,4612)	
5/28/2020	4008	1517 (-3302,6337)	3923 (3756,4090)	4801 (3689,5913)	3392 (2766,4017)	3923 (3809,4037)	3923 (3923,3923)	4037 (3378,4695)	
5/29/2020	4012	1517 (-3307,6342)	3923 (3749,4097)	4847 (3690,6004)	3313 (2608,4018)	3923 (3804,4042)	3923 (3923,3923)	4046 (3310,4781)	
5/30/2020	4016	1517 (-3312,6347)	3923 (3741,4105)	4893 (3690,6096)	3229 (2440,4018)	3923 (3799,4047)	3923 (3923,3923)	4054 (3239,4870)	
5/31/2020	4018	1517 (-3317,6351)	3923 (3737,4109)	4939 (3690,6189)	3140 (2264,4017)	3923 (3794,4052)	3923 (3923,3923)	4063 (3165,4961)	
6/1/2020	4019	1517 (-3321,6355)	3923 (3735,4111)	4986 (3690,6282)	3046 (2078,4014)	3923 (3790,4056)	3923 (3923,3923)	4072 (3089,5055)	
6/2/2020	4020	1517 (-3324,6359)	3923 (3733,4113)	5032 (3688,6375)	2947 (1883,4010)	3923 (3786,4060)	3923 (3923,3923)	4081 (3010,5151)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3112	3930	3931 (3916,3945)	3932 (3876,3988)	3528 (2741,4316)	3931 (3915,3948)	3932 (3876,3988)	1971 (-1869,5811)		
	3945	3938 (3905,3971)	3943 (3836,4049)	3483 (2635,4331)	3928 (3910,3946)	3942 (3836,4048)	1976 (-1874,5826)		
	3947	3945 (3888,4003)	3952 (3802,4102)	3445 (2549,4341)	3927 (3903,3951)	3951 (3801,4101)	1981 (-1870,5832)		
	3958	3953 (3867,4039)	3961 (3755,4167)	3409 (2465,4353)	3957 (3750,4165)	3960 (3754,4166)	1985 (-1871,5840)		
	3971	3960 (3842,4078)	3971 (3699,4244)	3376 (2384,4369)	3969 (3611,4327)	3970 (3697,4242)	1990 (-1870,5851)		
	3980	3967 (3814,4120)	3981 (3641,4322)	3346 (2308,4384)	3970 (3502,4439)	3979 (3638,4320)	1995 (-1871,5861)		
	3981	3973 (3783,4164)	3991 (3578,4404)	3319 (2240,4398)	3974 (3402,4547)	3988 (3575,4402)	2001 (-1867,5869)		
	3990	3980 (3750,4210)	4001 (3509,4494)	3294 (2175,4413)	3980 (3298,4662)	3998 (3505,4490)	2004 (-1866,5875)		
	3992	3987 (3716,4258)	4011 (3436,4587)	3272 (2117,4427)	3974 (3217,4731)	4007 (3431,4583)	2009 (-1864,5881)		
	3993	3993 (3679,4307)	4021 (3359,4684)	3251 (2063,4440)	3971 (3155,4787)	4016 (3354,4679)	2013 (-1861,5886)		
	3995	3999 (3640,4358)	4032 (3278,4785)	3233 (2014,4452)	3999 (3037,4960)	4026 (3272,4779)	2018 (-1856,5892)		
	4001	4005 (3600,4410)	4042 (3193,4891)	3217 (1968,4465)	4008 (2886,5130)	4035 (3186,4884)	2022 (-1852,5896)		
	4008	4011 (3559,4463)	4053 (3105,5000)	3202 (1925,4479)	4008 (2748,5268)	4044 (3096,4992)	2028 (-1847,5902)		
	4012	4017 (3516,4518)	4063 (3013,5113)	3189 (1885,4493)	4009 (2620,5399)	4054 (3003,5104)	2034 (-1841,5909)		
	4016	4022 (3472,4573)	4074 (2918,5230)	3177 (1848,4507)	4013 (2493,5533)	4063 (2907,5219)	2040 (-1835,5914)		
	4018	4028 (3427,4629)	4084 (2819,5349)	3167 (1813,4520)	4006 (2386,5625)	4072 (2807,5337)	2045 (-1830,5919)		
	4019	4033 (3381,4686)	4095 (2718,5472)	3157 (1782,4532)	4001 (2299,5702)	4082 (2704,5459)	2049 (-1824,5923)		
	4020	4039 (3334,4744)	4106 (2613,5599)	3148 (1752,4544)	4027 (2181,5873)	4091 (2598,5584)	2054 (-1818,5927)		

**Table A.106**

Actual and Predicted Cases with 95% Confidence Intervals for Madagascar using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	283	53 (-397,504)	238 (150,326)	161 (-79,400)	226 (115,337)	193 (17,369)	238 (238,238)	246 (230,263)
5/17/2020	304	53 (-418,525)	238 (109,367)	163 (-97,422)	231 (104,359)	193 (-5,391)	238 (238,238)	255 (215,296)
5/18/2020	322	53 (-438,544)	238 (73,403)	164 (-112,441)	236 (94,379)	193 (-25,411)	238 (238,238)	264 (191,338)
5/19/2020	326	53 (-449,555)	238 (66,410)	166 (-120,453)	242 (93,390)	193 (-36,422)	238 (238,238)	274 (161,386)
5/20/2020	371	53 (-475,582)	238 (-23,499)	168 (-144,480)	247 (75,418)	193 (-65,451)	238 (238,238)	283 (126,439)
5/21/2020	405	53 (-505,612)	238 (-89,565)	170 (-171,511)	252 (53,451)	193 (-97,483)	238 (238,238)	292 (86,497)
5/22/2020	448	53 (-541,647)	238 (-174,650)	172 (-205,548)	257 (25,489)	193 (-135,521)	238 (238,238)	301 (42,559)
5/23/2020	488	53 (-579,685)	238 (-252,728)	173 (-241,588)	263 (-5,530)	193 (-176,562)	238 (238,238)	310 (-6,625)
5/24/2020	527	53 (-619,725)	238 (-328,804)	175 (-278,628)	268 (-36,572)	193 (-218,604)	238 (238,238)	319 (-57,695)
5/25/2020	542	53 (-652,759)	238 (-358,834)	177 (-309,663)	273 (-59,606)	193 (-253,639)	238 (238,238)	328 (-112,768)
5/26/2020	586	53 (-690,796)	238 (-444,920)	179 (-343,701)	279 (-87,644)	193 (-291,677)	238 (238,238)	337 (-171,844)
5/27/2020	612	53 (-725,831)	238 (-495,971)	181 (-375,737)	284 (-112,680)	193 (-328,714)	238 (238,238)	346 (-232,923)
5/28/2020	656	53 (-763,870)	238 (-581,1057)	183 (-410,776)	290 (-140,719)	193 (-367,753)	238 (238,238)	355 (-297,1006)
5/29/2020	698	53 (-803,909)	238 (-664,1140)	184 (-447,816)	295 (-169,760)	193 (-408,794)	238 (238,238)	364 (-364,1091)
5/30/2020	758	53 (-848,954)	238 (-781,1257)	186 (-489,862)	301 (-204,806)	193 (-454,840)	238 (238,238)	373 (-434,1179)
5/31/2020	771	53 (-887,994)	238 (-807,1283)	188 (-525,902)	307 (-232,846)	193 (-495,881)	238 (238,238)	382 (-507,1270)
6/1/2020	826	53 (-930,1037)	238 (-914,1390)	190 (-566,945)	313 (-264,890)	193 (-539,925)	238 (238,238)	391 (-582,1363)
6/2/2020	845	53 (-970,1077)	238 (-952,1428)	192 (-602,985)	318 (-293,930)	193 (-579,965)	238 (238,238)	400 (-660,1459)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	283	246 (230,263)	241 (232,251)	209 (64,354)	245 (231,258)	245 (235,254)	130 (-171,430)	
5/17/2020	304	255 (215,296)	244 (228,260)	211 (46,376)	252 (225,279)	251 (237,266)	134 (-182,451)	
5/18/2020	322	264 (191,338)	246 (225,266)	213 (30,396)	259 (216,302)	258 (239,277)	136 (-197,469)	
5/19/2020	326	274 (161,386)	248 (223,272)	214 (22,407)	266 (205,327)	264 (242,287)	139 (-203,481)	
5/20/2020	371	283 (126,439)	250 (222,278)	215 (-5,435)	273 (192,353)	271 (244,297)	132 (-238,503)	
5/21/2020	405	292 (86,497)	252 (221,283)	216 (-35,467)	280 (177,382)	277 (246,308)	138 (-262,538)	
5/22/2020	448	301 (42,559)	254 (221,288)	217 (-72,506)	286 (161,412)	283 (249,318)	142 (-293,576)	
5/23/2020	488	310 (-6,625)	256 (220,292)	217 (-112,546)	293 (143,444)	290 (251,328)	150 (-320,619)	
5/24/2020	527	319 (-57,695)	258 (220,297)	218 (-153,588)	300 (124,477)	296 (253,338)	150 (-357,656)	
5/25/2020	542	328 (-112,768)	260 (220,301)	218 (-187,623)	307 (103,511)	302 (255,348)	151 (-387,689)	
5/26/2020	586	337 (-171,844)	263 (220,305)	218 (-224,661)	314 (81,547)	308 (257,358)	148 (-427,722)	
5/27/2020	612	346 (-232,923)	265 (220,309)	219 (-260,698)	321 (58,584)	314 (259,368)	149 (-460,759)	
5/28/2020	656	355 (-297,1006)	267 (220,313)	219 (-298,737)	328 (33,622)	320 (260,379)	148 (-499,795)	
5/29/2020	698	364 (-364,1091)	269 (221,317)	220 (-339,778)	335 (8,662)	325 (262,389)	154 (-532,840)	
5/30/2020	758	373 (-434,1179)	271 (221,321)	220 (-384,824)	342 (-19,702)	331 (263,399)	155 (-575,884)	
5/31/2020	771	382 (-507,1270)	273 (221,325)	220 (-424,865)	349 (-46,744)	337 (265,409)	162 (-605,929)	
6/1/2020	826	391 (-582,1363)	275 (222,328)	221 (-467,909)	356 (-75,786)	342 (266,419)	157 (-652,966)	
6/2/2020	845	400 (-660,1459)	277 (222,332)	221 (-506,949)	363 (-105,830)	348 (267,429)	161 (-687,1008)	

**Table A.107**

Actual and Predicted Cases with 95% Confidence Intervals for Malawi using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	65	11 (-95,117)	63 (59,67)	37 (-19,92)	71 (59,84)	63 (59,67)	63 (63,63)	65 (61,70)
5/17/2020	70	11 (-100,122)	63 (49,77)	37 (-23,97)	74 (64,85)	63 (53,73)	63 (63,63)	67 (60,74)
5/18/2020	70	11 (-101,123)	63 (49,77)	38 (-24,99)	77 (65,88)	63 (52,74)	63 (63,63)	69 (60,78)
5/19/2020	70	11 (-102,124)	63 (49,77)	38 (-24,100)	80 (66,93)	63 (51,75)	63 (63,63)	71 (59,83)
5/20/2020	71	11 (-103,125)	63 (47,79)	38 (-24,101)	83 (67,99)	63 (50,76)	63 (63,63)	73 (58,87)
5/21/2020	72	11 (-104,126)	63 (45,81)	39 (-24,101)	85 (67,104)	63 (49,77)	63 (63,63)	74 (56,92)
5/22/2020	82	11 (-108,130)	63 (26,100)	39 (-27,105)	88 (71,106)	63 (44,82)	63 (63,63)	76 (55,97)
5/23/2020	82	11 (-110,133)	63 (26,100)	40 (-29,108)	92 (74,109)	63 (41,85)	63 (63,63)	78 (53,103)
5/24/2020	83	11 (-113,135)	63 (24,102)	40 (-30,110)	95 (76,113)	63 (38,88)	63 (63,63)	80 (51,108)
5/25/2020	101	11 (-119,141)	63 (-11,137)	41 (-36,117)	98 (80,115)	63 (30,96)	63 (63,63)	82 (49,114)
5/26/2020	101	11 (-124,146)	63 (-11,137)	41 (-40,122)	101 (85,118)	63 (24,102)	63 (63,63)	83 (47,120)
5/27/2020	101	11 (-128,150)	63 (-11,137)	41 (-43,126)	105 (89,121)	63 (20,106)	63 (63,63)	85 (44,126)
5/28/2020	203	11 (-158,180)	63 (-211,337)	42 (-78,161)	108 (54,162)	63 (-24,150)	63 (63,63)	87 (42,132)
5/29/2020	273	11 (-202,224)	63 (-349,475)	42 (-125,209)	111 (12,211)	63 (-75,201)	63 (63,63)	89 (39,138)
5/30/2020	279	11 (-236,258)	63 (-360,486)	43 (-158,244)	115 (-12,242)	63 (-109,235)	63 (63,63)	91 (36,145)
5/31/2020	284	11 (-263,285)	63 (-370,496)	43 (-184,271)	119 (-28,266)	63 (-136,262)	63 (63,63)	92 (33,151)
6/1/2020	336	11 (-296,318)	63 (-472,598)	44 (-217,304)	122 (-53,298)	63 (-170,296)	63 (63,63)	94 (30,158)
6/2/2020	358	11 (-328,350)	63 (-515,641)	44 (-248,336)	126 (-75,327)	63 (-201,327)	63 (63,63)	96 (27,165)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	65	65 (61,69)	65 (61,68)	56 (38,74)	65 (61,70)	65 (62,68)	33 (-29,95)	
5/17/2020	70	66 (61,72)	66 (62,71)	56 (33,79)	66 (60,72)	67 (62,72)	34 (-33,100)	
5/18/2020	70	68 (60,75)	68 (62,74)	56 (31,81)	68 (60,75)	69 (63,74)	35 (-32,103)	
5/19/2020	70	69 (60,79)	70 (63,76)	55 (30,81)	69 (60,78)	70 (64,77)	36 (-31,103)	
5/20/2020	71	71 (59,82)	71 (64,79)	55 (28,82)	71 (60,82)	72 (64,80)	37 (-31,104)	
5/21/2020	72	72 (58,86)	73 (66,81)	55 (26,83)	72 (60,84)	74 (65,82)	37 (-31,104)	
5/22/2020	82	73 (57,89)	75 (67,83)	54 (21,88)	73 (60,87)	75 (66,85)	38 (-33,108)	
5/23/2020	82	74 (56,93)	77 (68,86)	54 (17,91)	76 (61,91)	77 (67,88)	41 (-31,113)	
5/24/2020	83	76 (55,96)	79 (69,88)	53 (13,93)	76 (60,93)	79 (67,90)	41 (-32,114)	
5/25/2020	101	77 (54,100)	81 (71,91)	53 (5,101)	78 (60,96)	81 (68,93)	42 (-36,121)	
5/26/2020	101	78 (52,104)	82 (72,93)	52 (-2,107)	79 (60,98)	82 (69,96)	45 (-37,126)	
5/27/2020	101	79 (51,107)	84 (73,95)	52 (-7,111)	81 (60,102)	84 (70,99)	46 (-39,130)	
5/28/2020	203	80 (49,111)	86 (75,98)	52 (-48,151)	83 (60,105)	86 (70,101)	46 (-71,164)	
5/29/2020	273	81 (48,114)	88 (76,100)	51 (-99,202)	84 (60,107)	87 (71,104)	67 (-90,223)	
5/30/2020	279	82 (46,118)	90 (78,102)	51 (-135,237)	86 (61,111)	89 (72,107)	81 (-100,262)	
5/31/2020	284	83 (44,122)	92 (79,105)	51 (-163,264)	87 (60,113)	91 (72,110)	83 (-118,284)	
6/1/2020	336	84 (42,125)	94 (81,107)	50 (-197,298)	88 (60,117)	93 (73,113)	62 (-172,297)	
6/2/2020	358	85 (41,129)	96 (83,110)	50 (-229,329)	89 (60,119)	94 (73,115)	59 (-207,326)	

**Table A.108**

Actual and Predicted Cases with 95% Confidence Intervals for Malaysia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	6872	2358 (-6491,11206)	6855 (6822,6888)	6670 (6274,7066)	7232 (6527,7937)	6779 (6597,6961)	6855 (6855,6855)	6904 (6808,6999)	
5/17/2020	6894	2358 (-6512,11227)	6855 (6779,6931)	6743 (6393,7093)	7274 (6549,7999)	6779 (6574,6984)	6855 (6855,6855)	6949 (6174,7724)	
5/18/2020	6941	2358 (-6550,11265)	6855 (6686,7024)	6816 (6497,7135)	7313 (6586,8039)	6779 (6531,7027)	6855 (6855,6855)	6995 (5340,8649)	
5/19/2020	6978	2358 (-6588,11303)	6855 (6614,7096)	6889 (6600,7179)	7348 (6622,8074)	6779 (6489,7069)	6855 (6855,6855)	7040 (4323,9757)	
5/20/2020	7009	2358 (-6622,11337)	6855 (6553,7157)	6962 (6700,7224)	7379 (6653,8105)	6779 (6450,7108)	6855 (6855,6855)	7086 (3149,11022)	
5/21/2020	7059	2358 (-6662,11377)	6855 (6455,7255)	7035 (6795,7275)	7407 (6688,8125)	6779 (6405,7153)	6855 (6855,6855)	7131 (1837,12426)	
5/22/2020	7137	2358 (-6712,11428)	6855 (6302,7408)	7108 (6885,7332)	7431 (6731,8131)	6779 (6342,7216)	6855 (6855,6855)	7177 (397,13956)	
5/23/2020	7185	2358 (-6762,11477)	6855 (6208,7502)	7181 (6973,7390)	7450 (6770,8130)	6779 (6283,7275)	6855 (6855,6855)	7222 (-1158,15603)	
5/24/2020	7245	2358 (-6814,11530)	6855 (6091,7619)	7255 (7058,7452)	7466 (6809,8123)	6779 (6221,7337)	6855 (6855,6855)	7268 (-2823,17358)	
5/25/2020	7417	2358 (-6892,11607)	6855 (5753,7957)	7328 (7133,7523)	7478 (6853,8103)	6779 (6118,7440)	6855 (6855,6855)	7313 (-4589,19216)	
5/26/2020	7604	2358 (-6990,11705)	6855 (5387,8323)	7401 (7180,7622)	7485 (6886,8085)	6779 (5982,7576)	6855 (6855,6855)	7359 (-6453,21170)	
5/27/2020	7619	2358 (-7074,11790)	6855 (5358,8352)	7474 (7247,7701)	7489 (6910,8067)	6779 (5880,7678)	6855 (6855,6855)	7404 (-8408,23217)	
5/28/2020	7629	2358 (-7147,11862)	6855 (5338,8372)	7547 (7324,7770)	7487 (6926,8049)	6779 (5800,7758)	6855 (6855,6855)	7450 (-10451,25351)	
5/29/2020	7732	2358 (-7224,11939)	6855 (5136,8574)	7620 (7397,7843)	7482 (6925,8039)	6779 (5711,7847)	6855 (6855,6855)	7495 (-12579,27570)	
5/30/2020	7762	2358 (-7295,12010)	6855 (5077,8633)	7693 (7475,7911)	7472 (6914,8029)	6779 (5634,7924)	6855 (6855,6855)	7541 (-14788,29870)	
5/31/2020	7819	2358 (-7364,12079)	6855 (4966,8744)	7766 (7554,7979)	7457 (6889,8025)	6779 (5559,7999)	6855 (6855,6855)	7586 (-17076,32249)	
6/1/2020	7857	2358 (-7429,12144)	6855 (4891,8819)	7839 (7633,8046)	7437 (6851,8024)	6779 (5489,8069)	6855 (6855,6855)	7632 (-19440,34704)	
6/2/2020	7877	2358 (-7489,12204)	6855 (4852,8858)	7912 (7711,8114)	7413 (6805,8022)	6779 (5427,8131)	6855 (6855,6855)	7677 (-21877,37232)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3115	6872	6901 (6811,6990)	6894 (6836,6951)	6524 (5842,7206)	6893 (6819,6967)	6893 (6835,6951)	3466 (-3211,10142)		
	6894	6944 (6251,7636)	6932 (6831,7034)	6504 (5781,7228)	6938 (5179,8698)	6930 (6829,7032)	3482 (-3201,10164)		
	6941	6986 (5517,8456)	6971 (6821,7122)	6488 (5706,7270)	6975 (3387,10564)	6968 (6818,7119)	3498 (-3206,10202)		
	6978	7028 (4626,9431)	7011 (6806,7215)	6471 (5630,7311)	7003 (1528,12477)	7006 (6801,7211)	3520 (-3203,10243)		
	7009	7070 (3603,10537)	7050 (6787,7314)	6453 (5557,7349)	7035 (-598,14667)	7044 (6779,7308)	3543 (-3194,10280)		
	7059	7112 (2465,11758)	7090 (6763,7418)	6435 (5476,7393)	7069 (-3006,17144)	7081 (6753,7409)	3564 (-3191,10320)		
	7137	7153 (1224,13081)	7131 (6735,7526)	6417 (5382,7452)	7103 (-5674,19881)	7119 (6723,7515)	3585 (-3200,10371)		
	7185	7193 (-110,14497)	7172 (6704,7639)	6400 (5289,7511)	7138 (-8564,22839)	7157 (6688,7625)	3612 (-3201,10426)		
	7245	7234 (-1531,15998)	7213 (6669,7756)	6383 (5194,7572)	7180 (-11817,26177)	7194 (6650,7739)	3636 (-3207,10478)		
	725/2020	7274 (-3030,17578)	7254 (6631,7877)	6368 (5065,7670)	7214 (-15226,29654)	7232 (6608,7857)	3658 (-3239,10555)		
	7604	7313 (-4604,19231)	7296 (6589,8002)	6353 (4908,7798)	7238 (-18613,33089)	7270 (6562,7978)	3695 (-3275,10665)		
	7619	7353 (-6247,20952)	7338 (6545,8131)	6339 (4777,7901)	7267 (-22086,36619)	7307 (6513,8102)	3740 (-3285,10764)		
	7629	7392 (-7954,22738)	7380 (6498,8263)	6326 (4667,7985)	7298 (-25687,40282)	7345 (6461,8230)	3753 (-3317,10824)		
	7732	7431 (-9723,24584)	7423 (6447,8399)	6313 (4550,8076)	7329 (-29426,44085)	7383 (6405,8360)	3747 (-3379,10873)		
	7762	7469 (-11550,26488)	7466 (6395,8538)	6302 (4445,8158)	7361 (-33294,48015)	7420 (6347,8494)	3755 (-3422,10931)		
	7819	7507 (-13432,28446)	7510 (6339,8680)	6290 (4343,8238)	7400 (-37404,52204)	7458 (6285,8631)	3779 (-3447,11004)		
	7857	7545 (-15366,30455)	7553 (6281,8825)	6280 (4247,8312)	7431 (-41623,56485)	7496 (6221,8771)	3808 (-3461,11078)		
	7877	7582 (-17350,32514)	7597 (6221,8974)	6269 (4159,8380)	7452 (-45813,60717)	7534 (6154,8913)	3820 (-3489,11128)		

**Table A.109**

Actual and Predicted Cases with 95% Confidence Intervals for Maldives using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	1078	121 (-1756,1997)	1031 (939,1123)	426 (-852,1704)	1098 (1058,1138)	1031 (939,1123)	1031 (1031,1031)	1071 (992,1150)
5/17/2020	1094	121 (-1772,2013)	1031 (908,1154)	431 (-858,1720)	1152 (1067,1237)	1031 (922,1140)	1031 (1031,1031)	1112 (524,1701)
5/18/2020	1106	121 (-1785,2026)	1031 (884,1178)	436 (-860,1733)	1207 (1073,1340)	1031 (908,1154)	1031 (1031,1031)	1154 (-97,2404)
5/19/2020	1143	121 (-1810,2051)	1031 (811,1251)	441 (-875,1758)	1263 (1098,1429)	1031 (878,1184)	1031 (1031,1031)	1195 (-854,3244)
5/20/2020	1186	121 (-1843,2084)	1031 (727,1335)	447 (-898,1791)	1322 (1132,1511)	1031 (838,1224)	1031 (1031,1031)	1236 (-1730,4202)
5/21/2020	1216	121 (-1874,2116)	1031 (668,1394)	452 (-919,1823)	1381 (1164,1599)	1031 (801,1261)	1031 (1031,1031)	1278 (-2709,5264)
5/22/2020	1274	121 (-1915,2156)	1031 (555,1507)	457 (-949,1863)	1443 (1205,1680)	1031 (752,1310)	1031 (1031,1031)	1319 (-3783,6421)
5/23/2020	1313	121 (-1955,2196)	1031 (478,1584)	462 (-979,1904)	1506 (1247,1765)	1031 (705,1357)	1031 (1031,1031)	1360 (-4945,7665)
5/24/2020	1371	121 (-2000,2241)	1031 (365,1697)	467 (-1014,1949)	1571 (1294,1848)	1031 (652,1410)	1031 (1031,1031)	1401 (-6188,8991)
5/25/2020	1395	121 (-2040,2282)	1031 (318,1744)	473 (-1045,1990)	1637 (1335,1940)	1031 (606,1456)	1031 (1031,1031)	1443 (-7508,10394)
5/26/2020	1438	121 (-2082,2323)	1031 (233,1829)	478 (-1077,2032)	1706 (1376,2035)	1031 (560,1502)	1031 (1031,1031)	1484 (-8901,11868)
5/27/2020	1457	121 (-2120,2361)	1031 (196,1866)	483 (-1104,2070)	1776 (1413,2139)	1031 (520,1542)	1031 (1031,1031)	1525 (-10362,13413)
5/28/2020	1513	121 (-2161,2402)	1031 (86,1976)	488 (-1135,2111)	1847 (1454,2241)	1031 (474,1588)	1031 (1031,1031)	1566 (-11890,15023)
5/29/2020	1591	121 (-2209,2450)	1031 (-67,2129)	493 (-1173,2160)	1921 (1504,2338)	1031 (420,1642)	1031 (1031,1031)	1608 (-13481,16696)
5/30/2020	1672	121 (-2263,2504)	1031 (-225,2287)	498 (-1218,2214)	1996 (1562,2431)	1031 (357,1705)	1031 (1031,1031)	1649 (-15133,18431)
5/31/2020	1773	121 (-2325,2566)	1031 (-423,2485)	504 (-1271,2278)	2074 (1628,2519)	1031 (284,1778)	1031 (1031,1031)	1690 (-16843,20224)
6/1/2020	1829	121 (-2388,2629)	1031 (-533,2595)	509 (-1323,2341)	2153 (1693,2612)	1031 (213,1849)	1031 (1031,1031)	1732 (-18611,22074)
6/2/2020	1841	121 (-2443,2684)	1031 (-557,2619)	514 (-1369,2397)	2233 (1752,2715)	1031 (152,1910)	1031 (1031,1031)	1773 (-20434,23980)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Surte-Arima	
3116	1078	1071 (992,1150)	1075 (1038,1111)	949 (697,1201)	1072 (991,1153)	1072 (1035,1109)	559 (-458,1576)	
	1094	1112 (524,1701)	1119 (1064,1174)	964 (711,1217)	1114 (500,1727)	1114 (1058,1170)	580 (-432,1592)	
	1106	1154 (-97,2404)	1164 (1092,1236)	977 (723,1230)	1155 (-136,2445)	1155 (1081,1229)	601 (-404,1606)	
	1143	1195 (-854,3244)	1209 (1120,1297)	987 (719,1255)	1196 (-909,3301)	1197 (1105,1288)	617 (-394,1628)	
	1186	1236 (-1730,4202)	1254 (1149,1360)	996 (704,1287)	1237 (-1800,4275)	1238 (1128,1348)	638 (-386,1662)	
	1216	1278 (-2709,5264)	1300 (1177,1422)	1003 (687,1319)	1279 (-2797,5354)	1279 (1150,1408)	666 (-368,1699)	
	1274	1319 (-3783,6421)	1346 (1206,1486)	1009 (657,1362)	1320 (-3889,6529)	1321 (1173,1469)	692 (-358,1741)	
	1313	1360 (-4945,7665)	1393 (1235,1551)	1015 (626,1404)	1361 (-5070,7792)	1362 (1194,1531)	719 (-346,1783)	
	1371	1401 (-6188,8991)	1440 (1264,1616)	1020 (587,1452)	1402 (-6332,9137)	1404 (1215,1593)	742 (-343,1826)	
	1395	1443 (-7508,10394)	1487 (1292,1683)	1024 (553,1494)	1444 (-7673,10560)	1445 (1235,1655)	770 (-329,1870)	
	1438	1484 (-8901,11868)	1535 (1321,1750)	1028 (518,1538)	1485 (-9086,12056)	1487 (1255,1719)	788 (-328,1905)	
	1457	1525 (-10362,13413)	1584 (1349,1818)	1032 (488,1576)	1526 (-10570,13622)	1528 (1274,1783)	813 (-316,1942)	
	1513	1566 (-11890,15023)	1632 (1378,1887)	1035 (452,1619)	1567 (-12120,15254)	1570 (1292,1847)	831 (-316,1977)	
	1591	1608 (-13481,16696)	1681 (1406,1957)	1039 (406,1671)	1609 (-13734,16951)	1611 (1310,1912)	861 (-309,2030)	
	1672	1649 (-15133,18431)	1731 (1434,2028)	1042 (353,1731)	1650 (-15410,18709)	1652 (1327,1978)	892 (-305,2088)	
	1773	1690 (-16843,20224)	1781 (1462,2100)	1045 (288,1802)	1691 (-17145,20527)	1694 (1344,2044)	927 (-303,2158)	
	1829	1732 (-18611,22074)	1831 (1490,2172)	1048 (225,1871)	1732 (-18937,22402)	1735 (1360,2111)	960 (-303,2223)	
	1841	1773 (-20434,23980)	1882 (1518,2246)	1051 (172,1930)	1773 (-20786,24333)	1777 (1375,2178)	982 (-309,2272)	

**Table A.110**

Actual and Predicted Cases with 95% Confidence Intervals for Mali using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	835	139 (-1226,1504)	806 (749,863)	465 (-259,1190)	944 (730,1159)	806 (749,863)	806 (806,806)	826 (787,864)	
5/17/2020	860	139 (-1251,1528)	806 (700,912)	471 (-273,1215)	981 (755,1208)	806 (721,891)	806 (806,806)	847 (683,1011)	
5/18/2020	874	139 (-1268,1546)	806 (673,939)	477 (-279,1232)	1020 (772,1267)	806 (702,910)	806 (806,806)	868 (536,1200)	
5/19/2020	901	139 (-1291,1568)	806 (620,992)	482 (-290,1255)	1058 (794,1323)	806 (677,935)	806 (806,806)	889 (355,1422)	
5/20/2020	931	139 (-1316,1594)	806 (561,1051)	488 (-305,1280)	1098 (820,1377)	806 (647,965)	806 (806,806)	910 (146,1673)	
5/21/2020	947	139 (-1339,1616)	806 (530,1082)	493 (-317,1303)	1139 (842,1436)	806 (622,990)	806 (806,806)	931 (-88,1950)	
5/22/2020	969	139 (-1361,1638)	806 (487,1125)	499 (-328,1325)	1181 (864,1498)	806 (597,1015)	806 (806,806)	952 (-346,2251)	
5/23/2020	1015	139 (-1390,1667)	806 (396,1216)	504 (-346,1355)	1224 (894,1553)	806 (563,1049)	806 (806,806)	973 (-626,2572)	
5/24/2020	1030	139 (-1416,1693)	806 (367,1245)	510 (-361,1381)	1268 (920,1615)	806 (534,1078)	806 (806,806)	994 (-926,2914)	
5/25/2020	1059	139 (-1443,1720)	806 (310,1302)	515 (-377,1408)	1312 (947,1677)	806 (504,1108)	806 (806,806)	1015 (-1244,3275)	
5/26/2020	1077	139 (-1468,1745)	806 (275,1337)	521 (-391,1433)	1358 (972,1744)	806 (477,1135)	806 (806,806)	1036 (-1580,3653)	
5/27/2020	1116	139 (-1496,1773)	806 (198,1414)	526 (-408,1461)	1405 (1001,1809)	806 (445,1167)	806 (806,806)	1057 (-1934,4049)	
5/28/2020	1194	139 (-1533,1810)	806 (46,1566)	532 (-436,1499)	1453 (1040,1865)	806 (400,1212)	806 (806,806)	1079 (-2303,4461)	
5/29/2020	1226	139 (-1570,1847)	806 (-17,1629)	537 (-462,1537)	1502 (1079,1925)	806 (357,1255)	806 (806,806)	1100 (-2689,4888)	
5/30/2020	1250	139 (-1605,1883)	806 (-64,1676)	543 (-487,1573)	1551 (1115,1988)	806 (318,1294)	806 (806,806)	1121 (-3089,5331)	
5/31/2020	1265	139 (-1638,1915)	806 (-94,1706)	549 (-509,1606)	1602 (1149,2056)	806 (282,1330)	806 (806,806)	1142 (-3504,5788)	
6/1/2020	1315	139 (-1673,1951)	806 (-192,1804)	554 (-533,1642)	1654 (1186,2123)	806 (243,1369)	806 (806,806)	1163 (-3933,6259)	
6/2/2020	1351	139 (-1709,1986)	806 (-262,1874)	560 (-559,1678)	1708 (1223,2192)	806 (204,1408)	806 (806,806)	1184 (-4376,6744)	

## Predicted Cases (95% Confidence Interval)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	835	826 (787,864)	820 (808,832)	795 (715,874)	824 (789,858)	819 (807,832)	423 (-385,1231)
5/17/2020	860	847 (683,1011)	846 (832,860)	811 (724,899)	844 (668,1020)	845 (830,859)	436 (-383,1255)
5/18/2020	874	868 (536,1200)	873 (855,891)	827 (738,916)	865 (482,1248)	871 (854,889)	450 (-373,1273)
5/19/2020	901	889 (355,1422)	899 (875,922)	844 (748,939)	888 (243,1534)	896 (873,920)	461 (-372,1294)
5/20/2020	931	910 (146,1673)	924 (895,954)	860 (755,966)	913 (-48,1874)	921 (891,952)	473 (-373,1320)
5/21/2020	947	931 (-88,1950)	950 (914,987)	876 (764,988)	934 (-366,2233)	947 (909,984)	487 (-369,1343)
5/22/2020	969	952 (-346,2251)	977 (933,1021)	892 (774,1010)	954 (-706,2615)	972 (926,1017)	501 (-364,1366)
5/23/2020	1015	973 (-626,2572)	1003 (951,1056)	908 (776,1041)	980 (-1089,3049)	997 (942,1051)	513 (-367,1394)
5/24/2020	1030	994 (-926,2914)	1030 (969,1092)	924 (781,1067)	1000 (-1493,3493)	1022 (958,1086)	529 (-363,1422)
5/25/2020	1059	1015 (-1244,3275)	1057 (986,1128)	940 (786,1095)	1022 (-1918,3961)	1047 (973,1121)	543 (-362,1448)
5/26/2020	1077	1036 (-1580,3653)	1085 (1004,1166)	956 (792,1120)	1044 (-2370,4459)	1072 (988,1156)	558 (-358,1473)
5/27/2020	1116	1057 (-1934,4049)	1112 (1021,1203)	972 (795,1149)	1069 (-2853,4991)	1097 (1003,1192)	566 (-364,1497)
5/28/2020	1194	1079 (-2303,4461)	1140 (1038,1242)	988 (785,1191)	1090 (-3355,5535)	1122 (1016,1229)	584 (-369,1538)
5/29/2020	1226	1100 (-2689,4888)	1168 (1054,1281)	1004 (776,1232)	1110 (-3872,6093)	1148 (1030,1265)	607 (-367,1581)
5/30/2020	1250	1121 (-3089,5331)	1196 (1071,1321)	1020 (771,1269)	1136 (-4417,6690)	1173 (1043,1303)	623 (-370,1617)
5/31/2020	1265	1142 (-3504,5788)	1224 (1087,1361)	1037 (771,1302)	1156 (-4979,7291)	1198 (1055,1340)	635 (-375,1645)
6/1/2020	1315	1163 (-3933,6259)	1253 (1104,1402)	1053 (767,1339)	1178 (-5556,7911)	1223 (1068,1378)	638 (-393,1670)
6/2/2020	1351	1184 (-4376,6744)	1282 (1120,1443)	1069 (762,1376)	1201 (-6152,8554)	1248 (1079,1417)	656 (-397,1708)

**Table A.111**

Actual and Predicted Cases with 95% Confidence Intervals for Malta using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	546	176 (-550,902)	532 (505,559)	505 (425,585)	557 (535,579)	508 (434,582)	532 (532,532)	537 (527,546)
5/17/2020	553	176 (-557,908)	532 (491,573)	511 (430,592)	561 (542,580)	508 (426,590)	532 (532,532)	543 (523,563)
5/18/2020	558	176 (-563,914)	532 (481,583)	516 (435,598)	564 (547,581)	508 (421,595)	532 (532,532)	549 (516,583)
5/19/2020	569	176 (-571,922)	532 (459,605)	522 (438,606)	567 (552,582)	508 (412,604)	532 (532,532)	556 (506,605)
5/20/2020	584	176 (-582,933)	532 (430,634)	528 (438,618)	570 (552,588)	508 (399,617)	532 (532,532)	562 (494,629)
5/21/2020	599	176 (-595,946)	532 (401,663)	533 (436,631)	573 (546,599)	508 (385,631)	532 (532,532)	568 (481,656)
5/22/2020	600	176 (-604,955)	532 (399,665)	539 (438,640)	575 (544,606)	508 (375,641)	532 (532,532)	574 (465,683)
5/23/2020	609	176 (-613,964)	532 (381,683)	544 (440,649)	577 (540,613)	508 (365,651)	532 (532,532)	581 (448,713)
5/24/2020	610	176 (-620,971)	532 (379,685)	550 (444,656)	578 (538,619)	508 (358,658)	532 (532,532)	587 (430,744)
5/25/2020	611	176 (-626,977)	532 (377,687)	556 (449,662)	580 (537,623)	508 (352,664)	532 (532,532)	593 (410,776)
5/26/2020	611	176 (-631,982)	532 (377,687)	561 (456,667)	581 (536,625)	508 (347,669)	532 (532,532)	599 (389,810)
5/27/2020	612	176 (-635,986)	532 (375,689)	567 (462,671)	581 (535,627)	508 (343,673)	532 (532,532)	606 (367,844)
5/28/2020	616	176 (-639,990)	532 (367,697)	572 (469,675)	582 (533,630)	522 (356,688)	532 (532,532)	612 (344,880)
5/29/2020	616	176 (-643,994)	532 (367,697)	578 (477,679)	582 (532,631)	522 (354,690)	532 (532,532)	618 (319,917)
5/30/2020	618	176 (-646,997)	532 (363,701)	583 (484,683)	581 (530,633)	522 (353,691)	532 (532,532)	624 (293,956)
5/31/2020	618	176 (-649,1000)	532 (363,701)	589 (492,686)	580 (527,634)	522 (352,692)	532 (532,532)	631 (267,995)
6/1/2020	619	176 (-652,1003)	532 (361,703)	595 (500,690)	579 (524,634)	522 (350,694)	532 (532,532)	637 (239,1035)
6/2/2020	620	176 (-654,1005)	532 (360,704)	600 (507,693)	578 (521,635)	522 (349,695)	532 (532,532)	643 (210,1076)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3118	546	536 (528,545)	542 (531,553)	499 (408,591)	539 (525,554)	542 (530,553)	275 (-255,806)	
	553	542 (525,559)	552 (535,569)	498 (399,598)	547 (478,617)	551 (534,568)	282 (-248,813)	
	558	548 (519,576)	562 (536,587)	498 (392,604)	555 (414,697)	561 (535,586)	286 (-245,817)	
	569	553 (512,595)	572 (538,606)	497 (381,613)	565 (326,804)	571 (537,605)	290 (-245,825)	
	584	559 (503,615)	582 (538,626)	496 (367,625)	572 (234,909)	580 (536,624)	295 (-247,836)	
	599	564 (492,636)	592 (538,646)	495 (351,639)	579 (133,1026)	590 (536,644)	301 (-247,850)	
	600	569 (480,658)	603 (537,668)	494 (339,649)	585 (28,1143)	600 (534,665)	308 (-244,860)	
	609	574 (467,681)	613 (536,690)	493 (328,659)	591 (-80,1262)	609 (532,687)	312 (-244,868)	
	610	579 (453,705)	624 (534,713)	492 (318,667)	596 (-189,1381)	619 (529,709)	316 (-242,874)	
	611	584 (439,730)	634 (531,737)	492 (311,673)	601 (-300,1501)	629 (526,732)	319 (-241,879)	
	611	589 (423,755)	645 (529,761)	491 (305,678)	607 (-418,1633)	638 (522,755)	324 (-236,884)	
	612	594 (407,781)	656 (525,786)	490 (299,682)	611 (-537,1759)	648 (517,779)	328 (-232,888)	
	616	599 (390,807)	666 (521,812)	490 (294,686)	616 (-658,1891)	658 (512,803)	334 (-226,893)	
	616	603 (372,834)	677 (517,838)	489 (289,690)	620 (-779,2019)	667 (506,828)	340 (-218,898)	
	618	608 (354,861)	688 (512,865)	489 (284,693)	623 (-900,2146)	677 (500,854)	345 (-211,902)	
	618	612 (335,889)	700 (507,892)	488 (280,696)	626 (-1019,2271)	687 (493,880)	351 (-204,905)	
	619	616 (315,917)	711 (502,920)	488 (277,699)	629 (-1136,2394)	696 (486,906)	356 (-197,908)	
	620	620 (295,945)	722 (496,948)	487 (273,701)	634 (-1257,2525)	706 (479,933)	362 (-188,911)	

**Table A.112**

Actual and Predicted Cases with 95% Confidence Intervals for Mauritania using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	40	4 (-68,75)	29 (7,51)	10 (-48,69)	14 (-38,65)	8 (-55,71)	29 (29,29)	31 (27,34)
5/17/2020	62	4 (-92,99)	29 (-36,94)	10 (-72,93)	14 (-62,90)	8 (-79,95)	29 (29,29)	34 (29,39)
5/18/2020	81	4 (-114,121)	29 (-73,131)	10 (-94,115)	14 (-84,112)	8 (-101,117)	29 (29,29)	37 (29,45)
5/19/2020	131	4 (-157,165)	29 (-171,229)	11 (-138,159)	15 (-128,157)	8 (-145,161)	29 (29,29)	40 (29,51)
5/20/2020	141	4 (-184,191)	29 (-191,249)	11 (-165,186)	15 (-154,183)	8 (-172,188)	29 (29,29)	44 (29,58)
5/21/2020	173	4 (-215,222)	29 (-253,311)	11 (-195,217)	15 (-184,214)	8 (-203,219)	29 (29,29)	47 (29,65)
5/22/2020	200	4 (-246,253)	29 (-306,364)	11 (-226,248)	15 (-214,245)	8 (-233,249)	29 (29,29)	50 (28,72)
5/23/2020	227	4 (-276,283)	29 (-359,417)	11 (-256,278)	16 (-244,276)	8 (-264,280)	29 (29,29)	53 (27,79)
5/24/2020	237	4 (-301,308)	29 (-379,437)	11 (-281,303)	16 (-268,300)	8 (-289,305)	29 (29,29)	57 (26,87)
5/25/2020	262	4 (-327,334)	29 (-428,486)	11 (-306,329)	16 (-293,326)	8 (-315,331)	29 (29,29)	60 (25,95)
5/26/2020	268	4 (-348,355)	29 (-439,497)	11 (-327,350)	17 (-314,347)	8 (-336,352)	29 (29,29)	63 (23,103)
5/27/2020	292	4 (-371,378)	29 (-486,544)	11 (-350,373)	17 (-336,370)	8 (-358,374)	29 (29,29)	66 (21,111)
5/28/2020	346	4 (-401,408)	29 (-592,650)	12 (-380,403)	17 (-366,400)	8 (-389,405)	29 (29,29)	69 (19,120)
5/29/2020	423	4 (-444,451)	29 (-743,801)	12 (-423,446)	18 (-408,443)	8 (-432,448)	29 (29,29)	73 (17,128)
5/30/2020	483	4 (-492,500)	29 (-861,919)	12 (-471,495)	18 (-456,492)	8 (-480,496)	29 (29,29)	76 (15,137)
5/31/2020	530	4 (-542,549)	29 (-953,1011)	12 (-520,544)	18 (-505,541)	8 (-530,546)	29 (29,29)	79 (12,146)
6/1/2020	588	4 (-594,601)	29 (-1067,1125)	12 (-572,596)	19 (-557,594)	8 (-582,598)	29 (29,29)	82 (10,155)
6/2/2020	668	4 (-653,660)	29 (-1223,1281)	12 (-631,656)	19 (-615,653)	8 (-641,657)	29 (29,29)	86 (7,165)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3119	40	31 (27,34)	39 (38,40)	25 (-5,55)	37 (21,53)	39 (38,40)	23 (-9,56)	
	62	34 (29,39)	51 (48,53)	30 (-19,79)	45 (-74,164)	51 (48,53)	30 (-20,80)	
	81	37 (29,45)	63 (59,68)	38 (-25,101)	54 (-198,306)	63 (59,68)	40 (-22,102)	
	131	40 (29,51)	77 (70,84)	49 (-47,146)	62 (-350,474)	77 (70,84)	49 (-48,145)	
	141	44 (29,58)	92 (81,102)	69 (-39,176)	70 (-526,666)	92 (81,102)	64 (-46,174)	
	173	47 (29,65)	107 (92,121)	105 (-8,217)	79 (-722,879)	107 (92,122)	69 (-61,199)	
	200	50 (28,72)	122 (104,141)	182 (77,287)	87 (-937,1111)	123 (103,142)	79 (-71,229)	
	227	53 (27,79)	139 (115,163)	376 (234,519)	95 (-1169,1360)	139 (114,164)	82 (-91,255)	
	237	57 (26,87)	155 (126,185)	877 (438,1316)	104 (-1418,1625)	155 (125,186)	93 (-95,281)	
	262	60 (25,95)	172 (136,208)	2077 (877,3276)	112 (-1682,1906)	172 (135,209)	97 (-108,303)	
	268	63 (23,103)	189 (147,232)	4915 (1940,7890)	120 (-1961,2201)	189 (145,233)	105 (-113,324)	
	292	66 (21,111)	207 (157,256)	11686 (4638,18733)	129 (-2253,2510)	206 (155,258)	110 (-122,343)	
	346	69 (19,120)	224 (167,281)	27867 (11445,44288)	137 (-2558,2832)	224 (164,283)	122 (-133,376)	
	423	73 (17,128)	242 (177,307)	66516 (28449,104583)	145 (-2877,3167)	241 (173,309)	136 (-152,424)	
	483	76 (15,137)	260 (187,333)	158821 (70655,246987)	154 (-3207,3514)	259 (182,335)	158 (-165,481)	
	530	79 (12,146)	278 (196,360)	379313 (175018,583607)	162 (-3549,3873)	276 (190,362)	174 (-185,532)	
	588	82 (10,155)	297 (206,388)	905784 (432031,1379536)	170 (-3902,4243)	294 (198,389)	181 (-216,579)	
	668	86 (7,165)	315 (215,416)	2163057 (1063094,3263020)	179 (-4267,4624)	312 (206,417)	187 (-259,633)	

**Table A.113**

Actual and Predicted Cases with 95% Confidence Intervals for Mauritius using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	332	128 (-271,528)	332 (332,332)	367 (299,435)	351 (314,387)	332 (332,332)	332 (332,332)	332 (332,332)
5/17/2020	332	128 (-271,528)	332 (332,332)	371 (299,443)	349 (314,384)	332 (332,332)	332 (332,332)	332 (332,332)
5/18/2020	332	128 (-271,528)	332 (332,332)	375 (299,451)	346 (314,379)	332 (332,332)	332 (332,332)	332 (332,332)
5/19/2020	332	128 (-271,528)	332 (332,332)	379 (298,459)	344 (313,375)	332 (332,332)	332 (332,332)	332 (332,332)
5/20/2020	332	128 (-271,528)	332 (332,332)	383 (298,468)	341 (312,369)	332 (332,332)	332 (332,332)	332 (332,332)
5/21/2020	332	128 (-271,528)	332 (332,332)	387 (298,476)	337 (311,364)	332 (332,332)	332 (332,332)	332 (332,332)
5/22/2020	332	128 (-271,528)	332 (332,332)	391 (298,484)	333 (309,358)	332 (332,332)	332 (332,332)	332 (332,332)
5/23/2020	332	128 (-271,528)	332 (332,332)	395 (297,493)	329 (306,352)	332 (332,332)	332 (332,332)	332 (332,332)
5/24/2020	334	128 (-272,528)	332 (328,336)	399 (298,500)	325 (302,347)	332 (331,333)	332 (332,332)	332 (332,332)
5/25/2020	334	128 (-272,529)	332 (328,336)	403 (298,508)	320 (296,343)	332 (330,334)	332 (332,332)	332 (332,332)
5/26/2020	334	128 (-273,529)	332 (328,336)	407 (298,516)	314 (289,339)	332 (330,334)	332 (332,332)	332 (332,332)
5/27/2020	334	128 (-273,529)	332 (328,336)	411 (298,525)	308 (280,336)	332 (330,334)	332 (332,332)	332 (332,332)
5/28/2020	334	128 (-273,529)	332 (328,336)	415 (298,533)	302 (270,334)	332 (330,334)	332 (332,332)	332 (332,332)
5/29/2020	335	128 (-273,530)	332 (326,338)	419 (298,541)	295 (258,332)	332 (329,335)	332 (332,332)	332 (332,332)
5/30/2020	335	128 (-274,530)	332 (326,338)	423 (298,549)	288 (244,331)	332 (329,335)	332 (332,332)	332 (332,332)
5/31/2020	335	128 (-274,530)	332 (326,338)	427 (298,557)	280 (230,330)	332 (329,335)	332 (332,332)	332 (332,332)
6/1/2020	335	128 (-274,530)	332 (326,338)	431 (297,566)	272 (215,329)	332 (328,336)	332 (332,332)	332 (332,332)
6/2/2020	335	128 (-274,530)	332 (326,338)	436 (297,574)	263 (199,328)	332 (328,336)	332 (332,332)	332 (332,332)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3120	332	332 (332,332)	332 (322,342)	335 (329,341)	330 (326,334)	332 (322,342)	166 (-159,491)	
	332	332 (332,332)	332 (316,348)	335 (329,342)	330 (325,335)	332 (316,348)	166 (-159,491)	
	332	332 (332,332)	332 (309,355)	336 (329,342)	330 (324,336)	332 (309,355)	166 (-159,491)	
	332	332 (332,332)	332 (301,363)	336 (329,343)	329 (324,335)	332 (301,363)	166 (-159,491)	
	332	332 (332,332)	332 (293,371)	336 (329,344)	328 (322,334)	332 (293,371)	166 (-159,491)	
	332	332 (332,332)	332 (285,379)	337 (329,345)	330 (323,336)	332 (285,379)	166 (-159,491)	
	332	332 (332,332)	332 (275,388)	337 (329,345)	329 (323,336)	332 (275,388)	166 (-159,491)	
	332	332 (332,332)	332 (266,398)	337 (329,346)	327 (321,334)	332 (266,398)	166 (-159,491)	
	334	332 (332,332)	332 (256,408)	338 (329,346)	328 (321,335)	332 (256,408)	166 (-160,492)	
	334	332 (332,332)	332 (246,418)	338 (330,346)	328 (321,335)	332 (246,418)	166 (-160,492)	
	334	332 (332,332)	332 (235,429)	338 (330,346)	327 (320,335)	332 (235,429)	166 (-160,493)	
	334	332 (332,332)	332 (223,441)	338 (330,346)	326 (318,334)	332 (223,441)	166 (-160,493)	
	334	332 (332,332)	332 (211,453)	338 (330,347)	328 (320,336)	332 (211,453)	166 (-161,493)	
	335	332 (332,332)	332 (199,465)	338 (330,347)	327 (319,336)	332 (199,465)	166 (-161,493)	
	335	332 (332,332)	332 (187,477)	339 (330,347)	326 (316,335)	332 (187,477)	166 (-161,493)	
	335	332 (332,332)	332 (174,490)	339 (331,347)	326 (316,337)	332 (174,490)	166 (-161,494)	
	335	332 (332,332)	332 (161,503)	339 (331,347)	326 (315,337)	332 (161,503)	166 (-162,494)	
	335	332 (332,332)	332 (147,517)	339 (331,347)	326 (314,338)	332 (147,517)	166 (-162,494)	

**Table A.114**

Actual and Predicted Cases with 95% Confidence Intervals for Mexico using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	47144	6214 (-74009,86437)	45032 (40892,49172)	21126 (-29870,72121)	46599 (45530,47668)	45032 (40892,49172)
5/17/2020	49219	6214 (-76068,88496)	45032 (36825,53239)	21379 (-31433,74190)	48600 (47457,49743)	45032 (38533,51531)
5/18/2020	51633	6214 (-78374,90802)	45032 (32094,57970)	21631 (-33250,76513)	50655 (49208,52103)	45032 (35869,54195)
5/19/2020	54346	6214 (-80914,93342)	45032 (26777,63287)	21884 (-35309,79077)	52765 (50771,54758)	45032 (32937,57127)
5/20/2020	56594	6214 (-83358,95786)	45032 (22370,67694)	22137 (-37269,81543)	54929 (52625,57233)	45032 (30209,59855)
5/21/2020	59567	6214 (-86028,98456)	45032 (16543,73521)	22390 (-39464,84243)	57149 (54290,60007)	45032 (27189,62875)
5/22/2020	62527	6214 (-88830,101258)	45032 (10742,79322)	22642 (-41796,87081)	59425 (55920,62930)	45032 (24035,66029)
5/23/2020	65856	6214 (-91829,104256)	45032 (4217,85847)	22895 (-44332,90123)	61758 (57420,66095)	45032 (20660,69404)
5/24/2020	68620	6214 (-94814,107242)	45032 (-1200,91264)	23148 (-46852,93148)	64148 (59123,69174)	45032 (17365,72699)
5/25/2020	71105	6214 (-97727,110154)	45032 (-6071,96135)	23401 (-49292,96093)	66597 (61071,72123)	45032 (14208,75856)
5/26/2020	74560	6214 (-100804,113232)	45032 (-12843,102907)	23653 (-51904,99210)	69105 (62929,75282)	45032 (10853,79211)
5/27/2020	78023	6214 (-104010,116437)	45032 (-19630,109694)	23906 (-54648,102460)	71673 (64753,78593)	45032 (7358,82706)
5/28/2020	81400	6214 (-107299,119727)	45032 (-26249,116313)	24159 (-57476,105794)	74301 (66614,81988)	45032 (3789,86275)
5/29/2020	84627	6214 (-110628,123056)	45032 (-32574,122638)	24412 (-60342,109165)	76990 (68571,85408)	45032 (203,89861)
5/30/2020	87512	6214 (-113930,126358)	45032 (-38229,128293)	24664 (-63176,112504)	79740 (70706,88775)	45032 (-3319,93383)
5/31/2020	90664	6214 (-117256,129684)	45032 (-44407,134471)	24917 (-66031,115865)	82553 (72945,92161)	45032 (-6850,96914)
6/1/2020	93435	6214 (-120542,132970)	45032 (-49838,139902)	25170 (-68841,119181)	85429 (75361,95497)	45032 (-10310,100374)
6/2/2020	97326	6214 (-123964,136391)	45032 (-57464,147528)	25423 (-71791,122636)	88368 (77745,98992)	45032 (-13928,103992)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SES	HLT	DT	ARIMA	
5/16/2020	47144	45032 (45032,45032)	46806 (43329,50284)	46806 (43329,50284)	47352 (47086,47619)	
5/17/2020	49219	45032 (45032,45032)	48738 (-1029122,1126599)	48738 (-1029122,1126599)	49667 (49136,50198)	
5/18/2020	51633	45032 (45032,45032)	50671 (-2357001,2458343)	50671 (-2357001,2458343)	52003 (51194,52812)	
5/19/2020	54346	45032 (45032,45032)	52603 (-3974416,4079621)	52603 (-3974416,4079621)	54359 (53248,55469)	
5/20/2020	56594	45032 (45032,45032)	54535 (-5838964,5948034)	54535 (-5838964,5948034)	56735 (55297,58172)	
5/21/2020	59567	45032 (45032,45032)	56467 (-7922117,8035051)	56467 (-7922117,8035051)	59131 (57344,60918)	
5/22/2020	62527	45032 (45032,45032)	58399 (-10203270,10320069)	58399 (-10203270,10320069)	61548 (59388,63708)	
5/23/2020	65856	45032 (45032,45032)	60331 (-12666690,12787353)	60331 (-12666690,12787353)	63985 (61430,66540)	
5/24/2020	68620	45032 (45032,45032)	62263 (-15299865,15424392)	62263 (-15299865,15424392)	66442 (63472,69413)	
5/25/2020	71105	45032 (45032,45032)	64195 (-18092544,18220935)	64195 (-18092544,18220935)	68920 (65514,72326)	
5/26/2020	74560	45032 (45032,45032)	66128 (-21036129,21168385)	66128 (-21036129,21168385)	71418 (67558,75278)	
5/27/2020	78023	45032 (45032,45032)	68060 (-24123276,24259395)	68060 (-24123276,24259395)	73936 (69604,78269)	
5/28/2020	81400	45032 (45032,45032)	69992 (-27347614,27487598)	69992 (-27347614,27487598)	76475 (71653,81297)	
5/29/2020	84627	45032 (45032,45032)	71924 (-30703555,30847403)	71924 (-30703555,30847403)	79034 (73705,84363)	
5/30/2020	87512	45032 (45032,45032)	73856 (-34186138,34333850)	73856 (-34186138,34333850)	81613 (75760,87466)	
5/31/2020	90664	45032 (45032,45032)	75788 (-37790924,37942501)	75788 (-37790924,37942501)	84213 (77821,90605)	
6/1/2020	93435	45032 (45032,45032)	77720 (-41513912,41669353)	77720 (-41513912,41669353)	86833 (79885,93780)	
6/2/2020	97326	45032 (45032,45032)	79653 (-45351467,45510772)	79653 (-45351467,45510772)	89473 (81955,96991)	

(continued on next page)

**Table A.114 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	47144	48387 (45951,50822)	47439 (42722,52155)	47401 (47127,47675)	24824 (-18922,68571)
5/17/2020	49219	51218 (47956,54480)	49845 (-8914892,9014582)	49761 (49197,50325)	26024 (-18588,70637)
5/18/2020	51633	54275 (50271,58279)	52251 (-19988382,20092884)	52121 (51227,53014)	27132 (-18645,72909)
5/19/2020	54346	57581 (52883,62280)	54657 (-33475891,33585205)	54480 (53216,55744)	28305 (-18844,75453)
5/20/2020	56594	61172 (55361,66983)	57063 (-49022400,49136526)	56840 (55168,58512)	29596 (-18760,77953)
5/21/2020	59567	65086 (58184,71989)	59468 (-66389922,66508858)	59200 (57084,61315)	30824 (-18952,80599)
5/22/2020	62527	69375 (61216,77534)	61873 (-85406112,85529859)	61559 (58969,64150)	32128 (-19163,83420)
5/23/2020	65856	74099 (64566,83632)	64278 (-105939650,106068207)	63919 (60823,67015)	33388 (-19604,86380)
5/24/2020	68620	79349 (67951,90747)	66683 (-127886310,128019676)	66279 (62647,69910)	34804 (-19825,89432)
5/25/2020	71105	85206 (71302,99109)	69087 (-151160403,151298578)	68638 (64445,72831)	36005 (-20201,92211)
5/26/2020	74560	91780 (75068,108492)	71492 (-175690477,175833461)	70998 (66216,75779)	37170 (-20797,95137)
5/27/2020	78023	99228 (79228,119227)	73896 (-201414834,201562626)	73357 (67963,78752)	38449 (-21396,98295)
5/28/2020	81400	107743 (83779,131706)	76300 (-228280375,228432974)	75717 (69685,81749)	39839 (-21939,101616)
5/29/2020	84627	117605 (88767,146444)	78703 (-256240155,256397561)	78077 (71384,84769)	41272 (-22444,104987)
5/30/2020	87512	129183 (94241,164125)	81106 (-285252726,285414939)	80436 (73061,87812)	42520 (-23111,108151)
5/31/2020	90664	142938 (100503,185373)	83509 (-315281153,315448172)	82796 (74716,90877)	43718 (-23864,111301)
6/1/2020	93435	159556 (107761,211352)	85912 (-346291924,346463748)	85156 (76350,93962)	44988 (-24503,114480)
6/2/2020	97326	179987 (116804,243169)	88315 (-378254935,378431564)	87515 (77963,97068)	46229 (-25312,117769)

**Table A.115**

Actual and Predicted Cases with 95% Confidence Intervals for Moldova using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	5934	1185 (-8123,10493)	5745 (5375,6115)	3795 (-397,7987)	6470 (5419,7521)	5745 (5375,6115)	5745 (5745,5745)	5883 (5612,6154)	
5/17/2020	6060	1185 (-8248,10617)	5745 (5128,6362)	3839 (-434,8113)	6674 (5544,7804)	5745 (5236,6254)	5745 (5745,5745)	6034 (-707,12775)	
5/18/2020	6138	1185 (-8340,10710)	5745 (4975,6515)	3883 (-439,8206)	6883 (5633,8132)	5745 (5136,6354)	5745 (5745,5745)	6184 (-8686,21054)	
5/19/2020	6340	1185 (-8488,10858)	5745 (4579,6911)	3928 (-500,8355)	7095 (5784,8406)	5745 (4959,6531)	5745 (5745,5745)	6334 (-18406,31074)	
5/20/2020	6553	1185 (-8664,11034)	5745 (4161,7329)	3972 (-589,8533)	7311 (5964,8659)	5745 (4747,6743)	5745 (5745,5745)	6485 (-29617,42586)	
5/21/2020	6704	1185 (-8832,11202)	5745 (3865,7625)	4016 (-670,8702)	7532 (6135,8929)	5745 (4554,6936)	5745 (5745,5745)	6635 (-42148,55418)	
5/22/2020	6847	1185 (-8993,11363)	5745 (3585,7905)	4060 (-744,8865)	7757 (6298,9216)	5745 (4373,7117)	5745 (5745,5745)	6785 (-55877,69447)	
5/23/2020	6994	1185 (-9152,11522)	5745 (3297,8193)	4105 (-815,9025)	7986 (6458,9514)	5745 (4197,7293)	5745 (5745,5745)	6935 (-70708,84579)	
5/24/2020	7093	1185 (-9297,11667)	5745 (3103,8387)	4149 (-873,9170)	8219 (6601,9836)	5745 (4040,7450)	5745 (5745,5745)	7086 (-86566,100737)	
5/25/2020	7147	1185 (-9424,11794)	5745 (2997,8493)	4193 (-910,9297)	8456 (6721,10192)	5745 (3909,7581)	5745 (5745,5745)	7236 (-103389,117861)	
5/26/2020	7305	1185 (-9557,11927)	5745 (2687,8803)	4237 (-955,9430)	8698 (6850,10547)	5745 (3767,7723)	5745 (5745,5745)	7386 (-121126,135899)	
5/27/2020	7537	1185 (-9710,12080)	5745 (2233,9257)	4282 (-1020,9584)	8944 (7004,10885)	5745 (3597,7893)	5745 (5745,5745)	7537 (-139733,154806)	
5/28/2020	7725	1185 (-9870,12240)	5745 (1864,9626)	4326 (-1093,9745)	9195 (7166,11223)	5745 (3417,8073)	5745 (5745,5745)	7687 (-159169,174543)	
5/29/2020	7896	1185 (-10033,12402)	5745 (1529,9961)	4370 (-1169,9909)	9450 (7332,11567)	5745 (3235,8255)	5745 (5745,5745)	7837 (-179403,195078)	
5/30/2020	8098	1185 (-10203,12573)	5745 (1133,10357)	4414 (-1252,10081)	9709 (7507,11912)	5745 (3043,8447)	5745 (5745,5745)	7988 (-200404,216379)	
5/31/2020	8251	1185 (-10372,12742)	5745 (833,10657)	4459 (-1334,10251)	9973 (7680,12267)	5745 (2855,8635)	5745 (5745,5745)	8138 (-222145,238421)	
6/1/2020	8360	1185 (-10534,12904)	5745 (620,10870)	4503 (-1408,10414)	10242 (7844,12640)	5745 (2678,8812)	5745 (5745,5745)	8288 (-244602,261179)	
6/2/2020	8548	1185 (-10701,13071)	5745 (251,11239)	4547 (-1488,10582)	10515 (8014,13016)	5745 (2495,8995)	5745 (5745,5745)	8438 (-267753,284630)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3123	5934	5883 (5612,6154)	5917 (5860,5974)	5450 (4502,6398)	5920 (5577,6263)	5916 (5858,5974)	3059 (-2576,8694)		
	6060	6034 (-707,12775)	6083 (5983,6183)	5510 (4494,6525)	6072 (-13897,26042)	6080 (5977,6183)	3131 (-2558,8819)		
	6138	6184 (-8686,21054)	6250 (6110,6390)	5571 (4522,6619)	6242 (-40123,52606)	6243 (6097,6390)	3211 (-2494,8915)		
	6340	6334 (-18406,31074)	6419 (6238,6599)	5628 (4483,6773)	6444 (-75866,88755)	6407 (6216,6598)	3276 (-2506,9057)		
	6553	6485 (-29617,42586)	6589 (6366,6811)	5683 (4406,6960)	6636 (-117410,130682)	6571 (6332,6809)	3363 (-2516,9242)		
	6704	6635 (-42148,55418)	6760 (6495,7026)	5735 (4335,7135)	6794 (-161170,174759)	6734 (6447,7022)	3464 (-2497,9424)		
	6847	6785 (-55877,69447)	6933 (6623,7244)	5786 (4270,7302)	6966 (-208794,222726)	6898 (6559,7237)	3562 (-2468,9593)		
	6994	6935 (-70708,84579)	7108 (6750,7465)	5835 (4205,7465)	7144 (-260544,274833)	7062 (6669,7454)	3640 (-2462,9741)		
	7093	7086 (-86566,100737)	7284 (6878,7690)	5882 (4154,7610)	7296 (-314219,328811)	7225 (6776,7674)	3716 (-2445,9877)		
	7147	7236 (-103389,117861)	7461 (7005,7918)	5927 (4122,7733)	7466 (-371151,386082)	7389 (6882,7896)	3796 (-2407,9999)		
	7305	7386 (-121126,135899)	7640 (7132,8149)	5972 (4078,7865)	7668 (-433320,448656)	7552 (6985,8120)	3871 (-2382,10123)		
	7537	7537 (-139733,154806)	7821 (7259,8383)	6014 (4007,8021)	7860 (-499495,515214)	7716 (7086,8346)	3963 (-2356,10282)		
	7725	7687 (-159169,174543)	8003 (7385,8620)	6056 (3925,8187)	8018 (-567320,583356)	7880 (7185,8575)	4076 (-2311,10463)		
	7896	7837 (-179403,195078)	8186 (7512,8861)	6096 (3836,8356)	8190 (-637671,654050)	8043 (7282,8805)	4191 (-2263,10644)		
	8098	7988 (-200404,216379)	8371 (7638,9104)	6135 (3737,8534)	8368 (-710860,727596)	8207 (7377,9037)	4285 (-2241,10812)		
	8251	8138 (-222145,238421)	8557 (7764,9351)	6173 (3637,8709)	8520 (-785362,802402)	8371 (7470,9271)	4373 (-2225,10972)		
	8360	8288 (-244602,261179)	8745 (7891,9600)	6209 (3545,8873)	8689 (-862155,879533)	8534 (7561,9507)	4461 (-2203,11126)		
	8548	8438 (-267753,284630)	8935 (8017,9852)	6244 (3445,9043)	8891 (-942887,960670)	8698 (7651,9745)	4545 (-2190,11281)		

**Table A.116**

Actual and Predicted Cases with 95% Confidence Intervals for Monaco using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	96	39 (-73,151)	96 (96,96)	108 (84,132)	96 (96,96)	95 (93,97)	96 (96,96)	96 (96,96)
5/17/2020	96	39 (-73,151)	96 (96,96)	109 (84,134)	95 (93,96)	95 (93,97)	96 (96,96)	96 (96,96)
5/18/2020	97	39 (-74,151)	96 (94,98)	110 (85,136)	94 (90,98)	95 (92,98)	96 (96,96)	96 (96,96)
5/19/2020	97	39 (-74,152)	96 (94,98)	112 (85,138)	92 (87,98)	95 (92,98)	96 (96,96)	96 (96,97)
5/20/2020	97	39 (-74,152)	96 (94,98)	113 (86,140)	91 (84,98)	95 (92,98)	96 (96,96)	96 (96,97)
5/21/2020	97	39 (-74,152)	96 (94,98)	114 (86,142)	90 (81,98)	95 (92,98)	96 (96,96)	96 (96,97)
5/22/2020	97	39 (-74,152)	96 (94,98)	115 (86,145)	88 (77,99)	95 (92,98)	96 (96,96)	96 (96,97)
5/23/2020	98	39 (-75,153)	96 (92,100)	116 (86,147)	86 (73,99)	95 (91,99)	96 (96,96)	97 (96,97)
5/24/2020	98	39 (-75,153)	96 (92,100)	117 (86,149)	84 (69,99)	95 (91,99)	96 (96,96)	97 (96,97)
5/25/2020	98	39 (-75,153)	96 (92,100)	119 (86,151)	82 (65,100)	95 (91,99)	96 (96,96)	97 (96,97)
5/26/2020	98	39 (-75,153)	96 (92,100)	120 (86,153)	80 (60,100)	95 (90,100)	96 (96,96)	97 (96,97)
5/27/2020	98	39 (-76,153)	96 (92,100)	121 (86,155)	78 (56,100)	95 (90,100)	96 (96,96)	97 (96,97)
5/28/2020	98	39 (-76,153)	96 (92,100)	122 (86,158)	75 (51,100)	95 (90,100)	96 (96,96)	97 (96,97)
5/29/2020	98	39 (-76,153)	96 (92,100)	123 (86,160)	73 (45,100)	95 (90,100)	96 (96,96)	97 (96,97)
5/30/2020	99	39 (-76,154)	96 (90,102)	124 (87,162)	70 (40,100)	95 (90,100)	96 (96,96)	97 (96,97)
5/31/2020	99	39 (-76,154)	96 (90,102)	126 (87,165)	67 (34,100)	95 (90,100)	96 (96,96)	97 (96,98)
6/1/2020	99	39 (-76,154)	96 (90,102)	127 (87,167)	64 (28,100)	95 (90,100)	96 (96,96)	97 (96,98)
6/2/2020	99	39 (-76,154)	96 (90,102)	128 (87,169)	61 (21,100)	95 (89,101)	96 (96,96)	97 (97,98)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3124	96	96 (96,96)	96 (93,99)	96 (96,97)	96 (96,96)	96 (93,99)	48 (-46,142)	
	96	96 (96,96)	96 (92,100)	97 (96,97)	96 (96,97)	96 (92,100)	48 (-46,142)	
	97	96 (96,96)	96 (91,101)	97 (96,97)	96 (96,96)	96 (91,101)	48 (-47,143)	
	97	96 (96,96)	96 (89,103)	97 (96,98)	96 (95,96)	96 (89,103)	48 (-47,143)	
	97	96 (96,96)	96 (87,104)	97 (96,98)	96 (95,96)	96 (87,104)	48 (-47,143)	
	97	96 (96,97)	96 (85,106)	97 (96,98)	95 (95,96)	96 (85,106)	48 (-47,143)	
	97	96 (96,97)	96 (83,109)	97 (96,98)	96 (96,96)	96 (83,109)	48 (-48,143)	
	98	96 (96,97)	96 (80,111)	97 (96,98)	96 (95,96)	96 (80,111)	48 (-48,144)	
	98	96 (96,97)	95 (77,114)	97 (96,98)	96 (96,96)	95 (77,114)	48 (-48,144)	
	98	96 (96,97)	95 (74,116)	97 (96,98)	96 (96,96)	95 (74,116)	48 (-49,144)	
	98	96 (96,97)	95 (71,119)	97 (96,98)	95 (95,96)	95 (71,119)	48 (-49,144)	
	98	97 (96,97)	95 (68,122)	97 (96,98)	95 (95,96)	95 (68,122)	48 (-49,144)	
	98	97 (96,97)	95 (65,125)	97 (96,99)	95 (95,95)	95 (65,125)	48 (-49,144)	
	98	97 (96,97)	95 (61,129)	97 (96,99)	96 (95,96)	95 (62,129)	48 (-50,145)	
	99	97 (96,97)	95 (58,132)	97 (95,99)	95 (95,96)	95 (58,132)	47 (-50,145)	
	99	97 (96,97)	95 (54,135)	97 (95,99)	96 (95,96)	95 (54,135)	48 (-50,145)	
	99	97 (96,97)	95 (51,139)	97 (95,99)	96 (95,96)	95 (51,139)	48 (-50,145)	
	99	97 (96,97)	95 (47,143)	97 (95,99)	95 (95,95)	95 (47,143)	47 (-50,145)	

**Table A.117**

Actual and Predicted Cases with 95% Confidence Intervals for Mongolia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	135	14 (-222,251)	98 (25,171)	43 (-136,223)	65 (-72,202)	42 (-140,224)	98 (98,98)	107 (89,125)
5/17/2020	136	14 (-223,252)	98 (24,172)	44 (-136,224)	67 (-69,203)	42 (-141,225)	98 (98,98)	116 (72,161)
5/18/2020	140	14 (-226,255)	98 (16,180)	44 (-138,227)	69 (-69,206)	42 (-144,228)	98 (98,98)	126 (45,206)
5/19/2020	140	14 (-227,256)	98 (16,180)	45 (-139,228)	70 (-67,208)	42 (-146,230)	98 (98,98)	135 (11,259)
5/20/2020	140	14 (-228,257)	98 (16,180)	45 (-139,229)	72 (-64,209)	42 (-147,231)	98 (98,98)	145 (-28,317)
5/21/2020	140	14 (-229,258)	98 (16,180)	46 (-138,230)	74 (-61,209)	42 (-147,231)	98 (98,98)	154 (-73,381)
5/22/2020	141	14 (-229,258)	98 (14,182)	46 (-138,231)	76 (-58,210)	42 (-148,232)	98 (98,98)	164 (-122,449)
5/23/2020	141	14 (-230,259)	98 (14,182)	47 (-138,231)	78 (-55,211)	42 (-148,232)	98 (98,98)	173 (-176,522)
5/24/2020	141	14 (-230,259)	98 (14,182)	47 (-137,232)	80 (-52,211)	42 (-149,233)	98 (98,98)	182 (-234,599)
5/25/2020	141	14 (-231,260)	98 (14,182)	48 (-137,232)	82 (-48,212)	42 (-149,233)	98 (98,98)	192 (-296,679)
5/26/2020	141	14 (-231,260)	98 (14,182)	48 (-136,232)	84 (-45,212)	42 (-149,233)	98 (98,98)	201 (-361,763)
5/27/2020	148	14 (-232,261)	98 (0,196)	49 (-136,234)	86 (-42,214)	42 (-151,235)	98 (98,98)	211 (-430,851)
5/28/2020	161	14 (-236,265)	98 (-25,221)	49 (-139,237)	88 (-41,217)	42 (-154,238)	98 (98,98)	220 (-502,942)
5/29/2020	179	14 (-242,270)	98 (-61,257)	50 (-144,243)	90 (-43,223)	42 (-160,244)	98 (98,98)	229 (-577,1036)
5/30/2020	179	14 (-247,275)	98 (-61,257)	50 (-148,248)	92 (-43,228)	42 (-165,249)	98 (98,98)	239 (-656,1134)
5/31/2020	179	14 (-251,280)	98 (-61,257)	51 (-151,252)	94 (-43,232)	42 (-170,254)	98 (98,98)	248 (-737,1234)
6/1/2020	185	14 (-255,284)	98 (-73,269)	51 (-155,257)	97 (-44,237)	42 (-174,258)	98 (98,98)	258 (-821,1337)
6/2/2020	185	14 (-259,288)	98 (-73,269)	52 (-158,261)	99 (-43,241)	42 (-178,262)	98 (98,98)	267 (-909,1443)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Surte-Arima	
3125	135	107 (89,125)	95 (84,105)	80 (-29,188)	100 (96,104)	102 (91,112)	60 (-86,207)	
	136	116 (72,161)	96 (81,110)	86 (-18,189)	102 (96,107)	102 (87,117)	68 (-72,208)	
	140	126 (45,206)	96 (79,114)	94 (-6,193)	104 (97,111)	102 (83,121)	56 (-93,204)	
	140	135 (11,259)	97 (77,117)	103 (10,197)	107 (98,115)	102 (80,124)	57 (-96,209)	
	140	145 (-28,317)	98 (76,120)	115 (28,201)	108 (98,118)	102 (77,127)	50 (-108,208)	
	140	154 (-73,381)	99 (75,123)	129 (49,208)	113 (102,125)	102 (74,129)	50 (-111,211)	
	141	164 (-122,449)	100 (74,126)	146 (73,220)	115 (102,128)	102 (72,131)	50 (-114,213)	
	141	173 (-176,522)	101 (73,128)	169 (98,241)	117 (103,132)	102 (70,134)	50 (-115,216)	
	141	182 (-234,599)	101 (72,131)	200 (122,278)	119 (103,135)	102 (68,135)	51 (-116,218)	
	141	192 (-296,679)	102 (72,133)	242 (145,339)	121 (104,138)	102 (66,137)	51 (-116,219)	
	141	201 (-361,763)	103 (71,135)	304 (171,438)	124 (105,142)	102 (64,139)	52 (-117,220)	
	148	211 (-430,851)	104 (70,137)	401 (209,593)	126 (106,146)	102 (63,141)	52 (-118,222)	
	161	220 (-502,942)	105 (70,140)	567 (279,855)	131 (109,152)	102 (61,142)	54 (-120,227)	
	179	229 (-577,1036)	106 (69,142)	887 (424,1350)	132 (109,156)	102 (59,144)	56 (-123,235)	
	179	239 (-656,1134)	106 (69,144)	1576 (739,2413)	134 (110,159)	102 (58,146)	60 (-123,243)	
	179	248 (-737,1234)	107 (69,146)	3133 (1474,4792)	136 (110,163)	102 (56,147)	59 (-128,246)	
	185	258 (-821,1337)	108 (68,148)	6523 (3107,9939)	138 (110,166)	102 (55,148)	57 (-134,248)	
	185	267 (-909,1443)	109 (68,150)	13408 (6455,20360)	141 (111,170)	102 (54,150)	55 (-140,251)	

**Table A.118**

Actual and Predicted Cases with 95% Confidence Intervals for Montenegro using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	324	120 (-281,520)	324 (324,324)	346 (303,389)	355 (294,416)	324 (324,324)	324 (324,324)	324 (324,324)
5/17/2020	324	120 (-281,520)	324 (324,324)	350 (303,397)	355 (294,416)	324 (324,324)	324 (324,324)	324 (324,324)
5/18/2020	324	120 (-281,520)	324 (324,324)	354 (303,405)	355 (294,416)	324 (324,324)	324 (324,324)	324 (324,325)
5/19/2020	324	120 (-281,520)	324 (324,324)	358 (302,413)	354 (294,415)	324 (324,324)	324 (324,324)	324 (324,325)
5/20/2020	324	120 (-281,520)	324 (324,324)	361 (302,420)	354 (294,414)	324 (324,324)	324 (324,324)	324 (324,325)
5/21/2020	324	120 (-281,520)	324 (324,324)	365 (302,428)	352 (293,412)	324 (324,324)	324 (324,324)	324 (324,325)
5/22/2020	324	120 (-281,520)	324 (324,324)	369 (302,436)	351 (293,410)	324 (324,324)	324 (324,324)	325 (324,325)
5/23/2020	324	120 (-281,520)	324 (324,324)	373 (301,444)	349 (292,407)	324 (324,324)	324 (324,324)	325 (324,325)
5/24/2020	324	120 (-281,520)	324 (324,324)	377 (301,452)	347 (291,404)	324 (324,324)	324 (324,324)	325 (324,325)
5/25/2020	324	120 (-281,520)	324 (324,324)	381 (301,460)	345 (290,400)	324 (324,324)	324 (324,324)	325 (324,325)
5/26/2020	324	120 (-281,520)	324 (324,324)	384 (300,469)	342 (289,396)	324 (324,324)	324 (324,324)	325 (324,325)
5/27/2020	324	120 (-281,520)	324 (324,324)	388 (300,477)	339 (287,391)	324 (324,324)	324 (324,324)	325 (324,325)
5/28/2020	324	120 (-281,520)	324 (324,324)	392 (299,485)	336 (286,386)	324 (324,324)	324 (324,324)	325 (324,325)
5/29/2020	324	120 (-281,520)	324 (324,324)	396 (299,493)	332 (283,381)	324 (324,324)	324 (324,324)	325 (324,326)
5/30/2020	324	120 (-281,520)	324 (324,324)	400 (299,501)	328 (281,375)	324 (324,324)	324 (324,324)	325 (324,326)
5/31/2020	324	120 (-281,520)	324 (324,324)	404 (298,509)	324 (278,369)	324 (324,324)	324 (324,324)	325 (324,326)
6/1/2020	324	120 (-281,520)	324 (324,324)	407 (298,517)	319 (275,363)	324 (324,324)	324 (324,324)	325 (325,326)
6/2/2020	324	120 (-281,520)	324 (324,324)	411 (297,525)	314 (270,357)	324 (324,324)	324 (324,324)	325 (325,326)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3126	324	324 (324,324)	324 (317,332)	325 (323,327)	324 (324,324)	324 (317,331)	162 (-155,479)	
	324	324 (324,324)	324 (311,338)	325 (323,328)	324 (324,324)	324 (311,338)	162 (-155,479)	
	324	324 (324,324)	324 (303,345)	325 (323,328)	324 (324,324)	324 (303,345)	162 (-155,479)	
	324	324 (324,324)	324 (296,353)	326 (323,328)	324 (324,324)	324 (296,353)	162 (-155,480)	
	324	324 (324,324)	324 (288,361)	326 (323,329)	324 (324,324)	324 (288,361)	162 (-155,480)	
	324	324 (324,324)	325 (280,369)	326 (323,329)	324 (324,324)	325 (280,369)	162 (-155,480)	
	324	324 (324,324)	325 (272,378)	326 (323,329)	324 (324,324)	325 (272,378)	162 (-155,480)	
	324	324 (324,325)	325 (263,386)	326 (323,329)	324 (324,324)	325 (263,386)	162 (-155,480)	
	324	324 (324,325)	325 (255,395)	326 (323,329)	324 (324,324)	325 (255,395)	162 (-155,480)	
	324	324 (324,325)	325 (246,405)	326 (323,330)	324 (324,324)	325 (246,404)	163 (-154,480)	
	324	324 (324,325)	325 (236,414)	326 (323,330)	324 (324,324)	325 (236,414)	163 (-154,480)	
	324	324 (324,325)	325 (227,424)	326 (323,330)	324 (324,324)	325 (227,424)	163 (-154,480)	
	324	324 (324,325)	326 (217,434)	326 (323,330)	324 (324,324)	325 (217,434)	163 (-154,480)	
	324	324 (324,325)	326 (207,444)	326 (323,330)	324 (324,324)	326 (207,444)	163 (-154,480)	
	324	324 (324,325)	326 (197,454)	326 (323,330)	324 (324,324)	326 (197,454)	163 (-154,480)	
	324	324 (324,325)	326 (187,465)	326 (323,330)	324 (324,324)	326 (187,465)	163 (-154,480)	
	324	325 (324,325)	326 (176,476)	326 (323,330)	324 (324,324)	326 (176,476)	163 (-153,480)	
	324	325 (324,325)	326 (165,487)	326 (322,331)	324 (324,324)	326 (165,487)	163 (-153,480)	

**Table A.119**

Actual and Predicted Cases with 95% Confidence Intervals for Morocco using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	6741	1402 (-9063,11867)	6652 (6478,6826)	4497 (97,8896)	7808 (5717,9898)	6652 (6478,6826)	6652 (6652,6652)	6799 (6510,7088)	
5/17/2020	6870	1402 (-9190,11994)	6652 (6225,7079)	4549 (74,9024)	8062 (5845,10278)	6652 (6326,6978)	6652 (6652,6652)	6924 (915,12934)	
5/18/2020	6952	1402 (-9286,12090)	6652 (6064,7240)	4601 (82,9121)	8321 (5939,10703)	6652 (6220,7084)	6652 (6652,6652)	7049 (-6170,20268)	
5/19/2020	7023	1402 (-9370,12173)	6652 (5925,7379)	4654 (103,9205)	8585 (6016,11154)	6652 (6131,7173)	6652 (6652,6652)	7174 (-14794,29142)	
5/20/2020	7133	1402 (-9464,12267)	6652 (5709,7595)	4706 (114,9299)	8855 (6106,11604)	6652 (6023,7281)	6652 (6652,6652)	7299 (-24736,39334)	
5/21/2020	7211	1402 (-9552,12356)	6652 (5556,7748)	4759 (130,9388)	9130 (6188,12073)	6652 (5924,7380)	6652 (6652,6652)	7424 (-35847,50694)	
5/22/2020	7332	1402 (-9650,12454)	6652 (5319,7985)	4811 (137,9486)	9411 (6282,12540)	6652 (5811,7493)	6652 (6652,6652)	7548 (-48017,63114)	
5/23/2020	7406	1402 (-9742,12546)	6652 (5174,8130)	4864 (150,9578)	9697 (6367,13027)	6652 (5707,7597)	6652 (6652,6652)	7673 (-61163,76509)	
5/24/2020	7433	1402 (-9819,12623)	6652 (5121,8183)	4916 (177,9655)	9989 (6433,13545)	6652 (5626,7678)	6652 (6652,6652)	7798 (-75217,90814)	
5/25/2020	7532	1402 (-9901,12705)	6652 (4927,8377)	4969 (200,9737)	10286 (6505,14067)	6652 (5536,7768)	6652 (6652,6652)	7923 (-90126,105972)	
5/26/2020	7577	1402 (-9976,12780)	6652 (4839,8465)	5021 (230,9812)	10589 (6569,14609)	6652 (5456,7848)	6652 (6652,6652)	8048 (-105844,121939)	
5/27/2020	7601	1402 (-10043,12846)	6652 (4792,8512)	5074 (269,9878)	10897 (6620,15175)	6652 (5387,7917)	6652 (6652,6652)	8173 (-122330,138676)	
5/28/2020	7643	1402 (-10105,12909)	6652 (4710,8594)	5126 (311,9941)	11212 (6667,15756)	6652 (5323,7981)	6652 (6652,6652)	8297 (-139552,156147)	
5/29/2020	7714	1402 (-10169,12973)	6652 (4570,8734)	5178 (353,10004)	11532 (6718,16346)	6652 (5255,8049)	6652 (6652,6652)	8422 (-157480,174324)	
5/30/2020	7780	1402 (-10234,13037)	6652 (4441,8863)	5231 (394,10068)	11858 (6770,16946)	6652 (5187,8117)	6652 (6652,6652)	8547 (-176086,193180)	
5/31/2020	7807	1402 (-10293,13097)	6652 (4388,8916)	5283 (439,10128)	12189 (6815,17564)	6652 (5125,8179)	6652 (6652,6652)	8672 (-195348,212691)	
6/1/2020	7833	1402 (-10349,13152)	6652 (4337,8967)	5336 (489,10183)	12527 (6856,18198)	6652 (5068,8236)	6652 (6652,6652)	8797 (-215243,232836)	
6/2/2020	7866	1402 (-10402,13205)	6652 (4273,9031)	5388 (541,10236)	12871 (6894,18847)	6652 (5013,8291)	6652 (6652,6652)	8921 (-235753,253596)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3127	6741	6799 (6510,7088)	6729 (6669,6788)	6722 (6686,6759)	6722 (6585,6858)	6727 (6667,6787)	3404 (-3138,9945)		
	6870	6924 (915,12934)	6803 (6696,6911)	6821 (6749,6894)	6789 (1415,12163)	6799 (6691,6907)	3440 (-3192,10073)		
	6952	7049 (-6170,20268)	6879 (6716,7042)	6916 (6845,6988)	6850 (-4643,18343)	6871 (6707,7035)	3484 (-3205,10172)		
	7023	7174 (-14794,29142)	6955 (6731,7179)	7008 (6944,7072)	6908 (-11706,25521)	6943 (6717,7169)	3528 (-3201,10257)		
	7133	7299 (-24736,39334)	7032 (6740,7324)	7096 (7030,7161)	6966 (-19757,33688)	7015 (6721,7309)	3563 (-3220,10347)		
	7211	7424 (-35847,50694)	7109 (6744,7474)	7180 (7115,7245)	7023 (-28675,42722)	7087 (6719,7455)	3599 (-3235,10433)		
	7332	7548 (-48017,63114)	7187 (6744,7630)	7261 (7181,7341)	7087 (-38686,52860)	7159 (6712,7606)	3637 (-3257,10531)		
	7406	7673 (-61163,76509)	7266 (6740,7792)	7338 (7250,7427)	7145 (-49402,63693)	7231 (6700,7762)	3685 (-3260,10630)		
	7433	7798 (-75217,90814)	7345 (6732,7959)	7413 (7329,7497)	7206 (-60873,75285)	7303 (6683,7923)	3718 (-3264,10701)		
	7532	7923 (-90126,105972)	7425 (6720,8131)	7485 (7399,7570)	7260 (-72819,87340)	7375 (6662,8088)	3750 (-3277,10777)		
	7577	8048 (-105844,121939)	7506 (6704,8308)	7553 (7471,7636)	7311 (-85103,99725)	7447 (6637,8258)	3787 (-3278,10851)		
	7601	8173 (-122330,138676)	7587 (6686,8489)	7620 (7540,7699)	7363 (-97779,112505)	7519 (6607,8431)	3822 (-3271,10916)		
	7643	8297 (-139552,156147)	7669 (6664,8675)	7683 (7604,7763)	7414 (-110848,125675)	7591 (6574,8609)	3863 (-3256,10981)		
	7714	8422 (-157480,174324)	7752 (6639,8865)	7744 (7666,7823)	7471 (-124521,139463)	7663 (6537,8790)	3895 (-3251,11040)		
	7780	8547 (-176086,193180)	7835 (6611,9060)	7803 (7726,7879)	7523 (-138598,153644)	7735 (6496,8975)	3941 (-3231,11112)		
	7807	8672 (-195348,212691)	7919 (6580,9258)	7858 (7780,7937)	7577 (-153135,168290)	7807 (6452,9163)	3990 (-3201,11181)		
	7833	8797 (-215243,232836)	8004 (6547,9461)	7912 (7827,7997)	7626 (-167948,183200)	7880 (6404,9355)	4029 (-3177,11236)		
	7866	8921 (-235753,253596)	8089 (6511,9667)	7963 (7870,8057)	7671 (-182934,198276)	7952 (6353,9550)	4065 (-3156,11285)		

**Table A.120**

Actual and Predicted Cases with 95% Confidence Intervals for Mozambique using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	129	22 (-189,232)	119 (99,139)	70 (-45,185)	129 (128,129)	81 (-13,175)	119 (119,119)	123 (115,131)
5/17/2020	137	22 (-197,240)	119 (84,154)	71 (-51,193)	133 (128,138)	104 (23,185)	119 (119,119)	128 (113,142)
5/18/2020	145	22 (-205,248)	119 (68,170)	72 (-58,202)	138 (129,147)	104 (23,185)	119 (119,119)	132 (109,155)
5/19/2020	146	22 (-209,253)	119 (66,172)	73 (-60,206)	143 (134,151)	104 (23,185)	119 (119,119)	136 (103,169)
5/20/2020	156	22 (-216,259)	119 (46,192)	74 (-66,213)	147 (137,158)	104 (18,190)	119 (119,119)	141 (97,185)
5/21/2020	162	22 (-223,266)	119 (35,203)	74 (-71,220)	152 (140,165)	104 (13,195)	119 (119,119)	145 (89,201)
5/22/2020	164	22 (-228,271)	119 (31,207)	75 (-74,225)	157 (145,170)	104 (9,199)	119 (119,119)	149 (80,219)
5/23/2020	168	22 (-233,276)	119 (23,215)	76 (-78,230)	162 (150,175)	104 (5,203)	119 (119,119)	154 (70,237)
5/24/2020	194	22 (-244,287)	119 (-28,266)	77 (-87,241)	168 (147,188)	104 (-7,215)	119 (119,119)	158 (60,257)
5/25/2020	209	22 (-256,299)	119 (-57,295)	78 (-98,253)	173 (143,203)	104 (-20,228)	119 (119,119)	163 (49,277)
5/26/2020	213	22 (-266,309)	119 (-65,303)	79 (-107,264)	178 (143,213)	104 (-30,238)	119 (119,119)	167 (37,297)
5/27/2020	227	22 (-277,320)	119 (-93,331)	79 (-117,275)	184 (143,225)	104 (-42,250)	119 (119,119)	171 (24,319)
5/28/2020	233	22 (-288,331)	119 (-104,342)	80 (-126,286)	190 (143,236)	104 (-53,261)	119 (119,119)	176 (10,341)
5/29/2020	234	22 (-296,340)	119 (-106,344)	81 (-133,295)	195 (146,244)	104 (-62,270)	119 (119,119)	180 (-4,364)
5/30/2020	244	22 (-306,349)	119 (-126,364)	82 (-140,304)	201 (149,253)	104 (-71,279)	119 (119,119)	185 (-19,388)
5/31/2020	254	22 (-315,358)	119 (-146,384)	83 (-148,314)	207 (152,263)	104 (-81,289)	119 (119,119)	189 (-34,412)
6/1/2020	254	22 (-323,366)	119 (-146,384)	84 (-155,322)	213 (156,270)	104 (-89,297)	119 (119,119)	193 (-50,437)
6/2/2020	307	22 (-338,382)	119 (-249,487)	84 (-169,338)	220 (151,288)	104 (-106,314)	119 (119,119)	198 (-67,462)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3128	129	123 (115,130)	122 (117,127)	110 (73,147)	123 (116,129)	122 (117,127)	64 (-65,192)	
	137	127 (114,140)	125 (118,132)	112 (69,155)	126 (114,138)	126 (118,133)	67 (-66,200)	
	145	131 (110,152)	128 (119,137)	114 (65,164)	130 (113,146)	129 (119,139)	68 (-71,207)	
	146	135 (106,165)	131 (121,142)	116 (64,168)	133 (111,155)	132 (120,144)	70 (-71,212)	
	156	139 (100,178)	135 (123,146)	118 (61,175)	137 (109,165)	136 (121,150)	70 (-77,218)	
	162	143 (93,192)	138 (125,151)	120 (58,182)	140 (106,174)	139 (123,155)	72 (-80,225)	
	164	147 (86,207)	141 (127,155)	122 (57,187)	144 (103,184)	142 (124,160)	73 (-83,230)	
	168	150 (78,223)	144 (129,159)	124 (56,192)	147 (99,195)	146 (125,166)	75 (-84,235)	
	194	154 (69,239)	148 (132,164)	126 (48,204)	151 (96,206)	149 (127,171)	76 (-93,245)	
	209	158 (60,256)	151 (134,168)	128 (39,218)	154 (92,217)	152 (128,176)	81 (-98,260)	
	213	161 (50,273)	155 (137,172)	130 (32,229)	158 (87,228)	155 (129,182)	85 (-101,272)	
	227	165 (40,290)	158 (140,177)	133 (24,241)	161 (83,240)	159 (130,187)	87 (-109,282)	
	233	169 (29,308)	162 (142,181)	135 (18,251)	165 (78,252)	162 (132,193)	86 (-118,290)	
	234	172 (18,326)	165 (145,185)	137 (13,260)	168 (72,264)	165 (133,198)	87 (-125,298)	
	244	175 (6,345)	169 (148,189)	139 (8,269)	172 (67,277)	169 (134,203)	88 (-131,307)	
	254	179 (-6,364)	172 (151,194)	141 (2,279)	175 (61,290)	172 (135,209)	89 (-138,316)	
	254	182 (-18,383)	176 (154,198)	143 (-2,287)	179 (55,303)	175 (136,215)	91 (-142,325)	
	307	185 (-31,402)	179 (157,202)	144 (-15,303)	182 (49,316)	179 (137,220)	93 (-154,340)	

**Table A.121**

Actual and Predicted Cases with 95% Confidence Intervals for MS Zaandam using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	9	4 (-7,14)	9 (9,9)	10 (8,13)	9 (9,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/17/2020	9	4 (-7,14)	9 (9,9)	10 (8,13)	9 (9,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/18/2020	9	4 (-7,14)	9 (9,9)	10 (8,13)	9 (9,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/19/2020	9	4 (-7,14)	9 (9,9)	11 (8,13)	9 (8,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/20/2020	9	4 (-7,14)	9 (9,9)	11 (8,14)	9 (8,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/21/2020	9	4 (-7,14)	9 (9,9)	11 (8,14)	8 (8,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/22/2020	9	4 (-7,14)	9 (9,9)	11 (8,14)	8 (7,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/23/2020	9	4 (-7,14)	9 (9,9)	11 (8,14)	8 (7,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/24/2020	9	4 (-7,14)	9 (9,9)	11 (8,14)	8 (7,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/25/2020	9	4 (-7,14)	9 (9,9)	11 (8,15)	8 (6,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/26/2020	9	4 (-7,14)	9 (9,9)	11 (8,15)	7 (6,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/27/2020	9	4 (-7,14)	9 (9,9)	11 (8,15)	7 (5,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/28/2020	9	4 (-7,14)	9 (9,9)	12 (8,15)	7 (5,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/29/2020	9	4 (-7,14)	9 (9,9)	12 (8,16)	7 (4,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/30/2020	9	4 (-7,14)	9 (9,9)	12 (8,16)	6 (4,9)	9 (9,9)	9 (9,9)	9 (9,9)
5/31/2020	9	4 (-7,14)	9 (9,9)	12 (8,16)	6 (3,9)	9 (9,9)	9 (9,9)	9 (9,9)
6/1/2020	9	4 (-7,14)	9 (9,9)	12 (8,16)	6 (2,9)	9 (9,9)	9 (9,9)	9 (9,9)
6/2/2020	9	4 (-7,14)	9 (9,9)	12 (8,17)	5 (2,9)	9 (9,9)	9 (9,9)	9 (9,9)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	9	9 (9,9)	9 (8,10)	9 (9,9)	9 (9,9)	9 (8,10)	5 (-4,13)	
5/17/2020	9	9 (9,9)	9 (7,11)	9 (9,9)	9 (9,9)	9 (7,11)	5 (-4,13)	
5/18/2020	9	9 (9,9)	9 (7,12)	9 (9,9)	9 (9,9)	9 (7,12)	5 (-4,13)	
5/19/2020	9	9 (9,9)	10 (7,12)	9 (9,9)	9 (9,9)	9 (7,12)	5 (-4,13)	
5/20/2020	9	9 (9,9)	10 (7,13)	9 (9,9)	9 (9,9)	9 (6,12)	5 (-4,13)	
5/21/2020	9	9 (9,9)	10 (7,13)	9 (9,9)	9 (9,9)	9 (6,13)	5 (-3,13)	
5/22/2020	9	9 (9,9)	10 (6,13)	9 (9,9)	9 (9,9)	10 (6,13)	5 (-3,13)	
5/23/2020	9	9 (9,9)	10 (6,14)	9 (9,9)	9 (9,9)	10 (6,14)	5 (-3,13)	
5/24/2020	9	9 (9,9)	10 (6,14)	9 (9,9)	9 (9,9)	10 (6,14)	5 (-3,13)	
5/25/2020	9	9 (9,9)	10 (6,15)	9 (9,9)	9 (9,9)	10 (5,14)	5 (-3,13)	
5/26/2020	9	9 (9,9)	10 (6,15)	9 (9,9)	9 (9,9)	10 (5,14)	5 (-3,13)	
5/27/2020	9	9 (9,9)	11 (6,15)	9 (9,9)	9 (9,9)	10 (5,15)	5 (-3,13)	
5/28/2020	9	9 (9,9)	11 (6,16)	9 (9,9)	9 (9,9)	10 (5,15)	5 (-3,13)	
5/29/2020	9	9 (9,9)	11 (6,16)	9 (9,9)	9 (9,9)	10 (5,15)	5 (-2,13)	
5/30/2020	9	9 (9,9)	11 (6,16)	9 (9,9)	9 (9,9)	10 (5,16)	6 (-2,13)	
5/31/2020	9	9 (9,9)	11 (6,16)	9 (9,9)	9 (9,9)	10 (5,16)	6 (-2,13)	
6/1/2020	9	9 (9,9)	11 (6,17)	9 (9,9)	9 (9,9)	10 (4,16)	6 (-2,13)	
6/2/2020	9	9 (9,9)	11 (6,17)	9 (9,9)	9 (9,9)	10 (4,16)	6 (-2,13)	

**Table A.122**

Actual and Predicted Cases with 95% Confidence Intervals for Namibia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	16	7 (-11,25)	16 (16,16)	19 (13,25)	15 (12,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/17/2020	16	7 (-11,25)	16 (16,16)	19 (13,25)	14 (11,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/18/2020	16	7 (-11,25)	16 (16,16)	19 (13,26)	14 (11,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/19/2020	16	7 (-11,25)	16 (16,16)	20 (13,26)	14 (10,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/20/2020	16	7 (-11,25)	16 (16,16)	20 (13,27)	13 (9,17)	16 (16,16)	16 (16,16)	16 (16,16)
5/21/2020	18	7 (-11,25)	16 (12,20)	20 (14,26)	13 (7,18)	16 (14,18)	16 (16,16)	16 (16,16)
5/22/2020	19	7 (-12,26)	16 (10,22)	20 (14,26)	12 (5,20)	16 (13,19)	16 (16,16)	16 (16,16)
5/23/2020	20	7 (-13,27)	16 (8,24)	20 (15,26)	12 (3,21)	16 (12,20)	16 (16,16)	16 (16,16)
5/24/2020	21	7 (-14,28)	16 (6,26)	21 (15,26)	11 (1,22)	16 (11,21)	16 (16,16)	16 (16,16)
5/25/2020	21	7 (-15,29)	16 (6,26)	21 (16,26)	11 (-1,23)	16 (10,22)	16 (16,16)	16 (16,16)
5/26/2020	21	7 (-15,29)	16 (6,26)	21 (16,26)	10 (-3,23)	16 (10,22)	16 (16,16)	16 (16,16)
5/27/2020	22	7 (-16,30)	16 (4,28)	21 (17,26)	9 (-5,24)	16 (9,23)	16 (16,16)	16 (16,16)
5/28/2020	22	7 (-16,31)	16 (4,28)	21 (17,26)	9 (-7,24)	16 (9,23)	16 (16,16)	16 (16,16)
5/29/2020	23	7 (-17,31)	16 (2,30)	22 (17,26)	8 (-9,25)	16 (8,24)	16 (16,16)	16 (16,16)
5/30/2020	23	7 (-18,32)	16 (2,30)	22 (18,26)	7 (-11,26)	16 (8,24)	16 (16,16)	16 (16,16)
5/31/2020	24	7 (-18,32)	16 (0,32)	22 (18,26)	7 (-13,26)	16 (7,25)	16 (16,16)	16 (16,16)
6/1/2020	25	7 (-19,33)	16 (-2,34)	22 (18,27)	6 (-15,27)	16 (6,26)	16 (16,16)	16 (16,16)
6/2/2020	25	7 (-20,34)	16 (-2,34)	22 (18,27)	5 (-18,27)	16 (6,26)	16 (16,16)	16 (16,16)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3130	16	16 (16,16)	16 (15,17)	16 (16,16)	16 (16,16)	16 (15,17)	8 (-8,24)	
	16	16 (16,16)	16 (15,17)	16 (16,16)	16 (16,16)	16 (15,17)	8 (-8,24)	
	16	16 (16,16)	16 (14,18)	16 (16,16)	16 (16,16)	16 (14,18)	8 (-8,24)	
	16	16 (16,16)	16 (14,18)	16 (16,17)	16 (16,16)	16 (14,18)	8 (-8,24)	
	16	16 (16,16)	16 (13,19)	16 (16,17)	16 (16,16)	16 (13,19)	8 (-8,24)	
	18	16 (16,16)	16 (13,19)	16 (15,18)	16 (16,16)	16 (13,19)	8 (-8,24)	
	19	16 (16,16)	16 (12,20)	16 (14,19)	16 (16,16)	16 (12,20)	8 (-9,25)	
	20	16 (16,16)	16 (12,20)	16 (13,20)	16 (16,16)	16 (12,20)	9 (-9,26)	
	21	16 (16,16)	16 (12,20)	16 (12,21)	16 (16,16)	16 (12,20)	9 (-10,27)	
	21	16 (16,16)	16 (11,21)	16 (11,21)	16 (16,16)	16 (11,21)	9 (-11,28)	
	21	16 (16,16)	16 (10,22)	16 (11,22)	16 (16,16)	16 (10,22)	8 (-12,28)	
	22	16 (16,16)	16 (10,22)	16 (10,23)	16 (16,17)	16 (10,22)	8 (-12,29)	
	22	16 (16,16)	16 (9,23)	16 (9,23)	16 (16,17)	16 (9,23)	8 (-13,29)	
	23	16 (16,16)	16 (9,23)	16 (9,24)	16 (16,16)	16 (9,23)	8 (-14,30)	
	23	16 (16,16)	16 (8,24)	16 (8,24)	16 (16,16)	16 (8,24)	8 (-14,31)	
	24	16 (16,16)	16 (8,24)	16 (8,25)	16 (16,17)	16 (8,24)	8 (-15,31)	
	25	16 (16,16)	16 (7,25)	16 (7,26)	16 (16,17)	16 (7,25)	8 (-15,32)	
	25	16 (16,16)	16 (6,26)	16 (6,26)	16 (16,17)	16 (6,26)	8 (-16,33)	

**Table A.123**

Actual and Predicted Cases with 95% Confidence Intervals for Nepal using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	291	25 (-496,546)	267 (220,314)	85 (-319,489)	212 (57,367)	110 (-245,465)	267 (267,267)	289 (246,332)
5/17/2020	295	25 (-500,550)	267 (212,322)	86 (-321,493)	222 (73,371)	110 (-249,469)	267 (267,267)	309 (130,489)
5/18/2020	375	25 (-559,609)	267 (55,479)	87 (-378,552)	233 (31,434)	110 (-309,529)	267 (267,267)	330 (-32,691)
5/19/2020	402	25 (-601,651)	267 (2,532)	88 (-419,595)	243 (9,477)	110 (-352,572)	267 (267,267)	350 (-230,930)
5/20/2020	427	25 (-637,687)	267 (-47,581)	89 (-453,631)	254 (-4,513)	110 (-388,608)	267 (267,267)	370 (-460,1201)
5/21/2020	457	25 (-671,721)	267 (-105,639)	90 (-485,665)	266 (-15,547)	110 (-423,643)	267 (267,267)	391 (-717,1499)
5/22/2020	516	25 (-715,765)	267 (-221,755)	91 (-527,710)	277 (-37,592)	110 (-468,688)	267 (267,267)	411 (-1000,1822)
5/23/2020	584	25 (-768,818)	267 (-354,888)	92 (-579,764)	289 (-69,647)	110 (-522,742)	267 (267,267)	432 (-1306,2169)
5/24/2020	603	25 (-813,863)	267 (-392,926)	93 (-622,808)	302 (-89,692)	110 (-568,788)	267 (267,267)	452 (-1633,2537)
5/25/2020	682	25 (-868,918)	267 (-546,1080)	94 (-676,864)	314 (-121,749)	110 (-624,844)	267 (267,267)	472 (-1981,2926)
5/26/2020	772	25 (-934,984)	267 (-723,1257)	95 (-741,931)	327 (-164,818)	110 (-692,912)	267 (267,267)	493 (-2349,3334)
5/27/2020	886	25 (-1015,1064)	267 (-946,1480)	96 (-821,1013)	340 (-222,903)	110 (-774,994)	267 (267,267)	513 (-2735,3761)
5/28/2020	1042	25 (-1117,1167)	267 (-1252,1786)	97 (-923,1117)	354 (-303,1011)	110 (-879,1099)	267 (267,267)	533 (-3138,4205)
5/29/2020	1212	25 (-1239,1289)	267 (-1585,2119)	98 (-1045,1241)	368 (-405,1140)	110 (-1004,1224)	267 (267,267)	554 (-3559,4666)
5/30/2020	1401	25 (-1380,1430)	267 (-1956,2490)	99 (-1186,1385)	382 (-525,1289)	110 (-1149,1369)	267 (267,267)	574 (-3996,5144)
5/31/2020	1572	25 (-1533,1583)	267 (-2291,2825)	100 (-1338,1539)	397 (-653,1447)	110 (-1304,1524)	267 (267,267)	594 (-4449,5638)
6/1/2020	1811	25 (-1708,1758)	267 (-2759,3293)	101 (-1514,1716)	412 (-805,1629)	110 (-1483,1703)	267 (267,267)	615 (-4916,6146)
6/2/2020	2099	25 (-1913,1963)	267 (-3324,3858)	102 (-1718,1923)	427 (-985,1839)	110 (-1690,1910)	267 (267,267)	635 (-5399,6670)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3131	291	289 (246,332)	284 (270,299)	295 (287,303)	275 (260,290)	284 (270,299)	151 (-124,425)	
	295	309 (130,489)	296 (268,325)	338 (278,397)	279 (203,356)	297 (268,326)	155 (-119,429)	
	375	330 (-32,691)	309 (270,347)	388 (337,438)	282 (144,420)	309 (270,348)	162 (-166,491)	
	402	350 (-230,930)	320 (272,369)	449 (385,512)	289 (40,538)	321 (273,370)	180 (-178,538)	
	427	370 (-460,1201)	332 (276,389)	524 (422,625)	286 (-13,585)	333 (276,391)	186 (-197,570)	
	457	391 (-717,1499)	344 (279,408)	618 (459,777)	283 (-43,609)	345 (279,411)	196 (-212,604)	
	516	411 (-1000,1822)	355 (282,428)	740 (518,962)	285 (-76,647)	357 (282,431)	192 (-256,639)	
	584	432 (-1306,2169)	366 (285,447)	902 (600,1205)	285 (-109,680)	368 (286,451)	203 (-292,698)	
	603	452 (-1633,2537)	377 (289,466)	1128 (682,1574)	285 (-139,710)	380 (289,471)	216 (-315,747)	
	682	472 (-1981,2926)	388 (292,484)	1457 (817,2097)	286 (-168,739)	391 (292,490)	220 (-360,799)	
	772	493 (-2349,3334)	399 (295,503)	1967 (1033,2900)	291 (-219,801)	402 (294,510)	229 (-410,867)	
	886	513 (-2735,3761)	409 (297,521)	2820 (1407,4233)	287 (-254,828)	413 (297,529)	238 (-476,951)	
	1042	533 (-3138,4205)	419 (300,539)	4379 (2113,6645)	284 (-275,842)	424 (299,548)	260 (-547,1066)	
	1212	554 (-3559,4666)	430 (303,557)	7452 (3521,11383)	286 (-296,867)	434 (302,567)	279 (-639,1197)	
	1401	574 (-3996,5144)	440 (305,574)	13650 (6381,20920)	286 (-317,889)	445 (304,586)	299 (-749,1346)	
	1572	594 (-4449,5638)	450 (307,592)	25597 (11881,39313)	285 (-338,909)	455 (305,605)	317 (-869,1503)	
	1811	615 (-4916,6146)	459 (309,609)	47509 (22034,72984)	286 (-358,930)	466 (307,624)	324 (-1027,1675)	
	2099	635 (-5399,6670)	469 (311,627)	86980 (40606,133354)	291 (-394,976)	476 (308,643)	341 (-1203,1885)	

**Table A.124**

Actual and Predicted Cases with 95% Confidence Intervals for Netherlands using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	44070	13751 (-45675,73176)	43880 (43508,44252)	40635 (33902,47368)	50174 (38210,62138)	43410 (42116,44704)	43880 (43880,43880)	44147 (43624,44669)	
5/17/2020	44195	13751 (-45797,73299)	43880 (43263,44497)	41091 (34674,47508)	50869 (38334,63404)	43410 (41989,44831)	43880 (43880,43880)	44400 (22782,66018)	
5/18/2020	44341	13751 (-45934,73435)	43880 (42976,44784)	41546 (35426,47666)	51555 (38464,64647)	43410 (41843,44977)	43880 (43880,43880)	44653 (-3301,92608)	
5/19/2020	44449	13751 (-46055,73557)	43880 (42765,44995)	42002 (36185,47819)	52234 (38568,65899)	43410 (41713,45107)	43880 (43880,43880)	44907 (-35065,124878)	
5/20/2020	44647	13751 (-46206,73708)	43880 (42377,45383)	42458 (36912,48003)	52903 (38698,67108)	43410 (41545,45275)	43880 (43880,43880)	45160 (-71686,162007)	
5/21/2020	44900	13751 (-46390,73892)	43880 (41881,45879)	42913 (37607,48220)	53563 (38860,68267)	43680 (41717,45643)	43880 (43880,43880)	45414 (-112609,203436)	
5/22/2020	45088	13751 (-46574,74076)	43880 (41512,46248)	43369 (38294,48444)	54214 (39015,69414)	43680 (41585,45775)	43880 (43880,43880)	45667 (-157428,248762)	
5/23/2020	45265	13751 (-46757,74258)	43880 (41165,46595)	43825 (38973,48676)	54855 (39161,70549)	43880 (41698,46062)	43880 (43880,43880)	45921 (-205835,297676)	
5/24/2020	45437	13751 (-46936,74438)	43880 (40828,46932)	44280 (39644,48916)	55486 (39298,71674)	43880 (41585,46175)	43880 (43880,43880)	46174 (-257585,349932)	
5/25/2020	45647	13751 (-47122,74623)	43880 (40417,47343)	44736 (40302,49170)	56106 (39437,72776)	43880 (41443,46317)	43880 (43880,43880)	46427 (-312475,405330)	
5/26/2020	45780	13751 (-47297,74799)	43880 (40156,47604)	45191 (40950,49433)	56716 (39559,73873)	43880 (41299,46461)	43880 (43880,43880)	46681 (-370338,463700)	
5/27/2020	45970	13751 (-47475,74977)	43880 (39784,47976)	45647 (41582,49713)	57314 (39678,74951)	43880 (41141,46619)	43880 (43880,43880)	46934 (-431029,524987)	
5/28/2020	46152	13751 (-47653,75155)	43880 (39427,48333)	46103 (42197,50009)	57901 (39793,76010)	43880 (40973,46787)	43880 (43880,43880)	47188 (-494423,588798)	
5/29/2020	46328	13751 (-47831,75333)	43880 (39082,48678)	46558 (42793,50324)	58476 (39903,77050)	43880 (40799,46961)	43880 (43880,43880)	47441 (-560408,655290)	
5/30/2020	46460	13751 (-48003,75505)	43880 (38823,48937)	47014 (43365,50663)	59039 (40000,78079)	43880 (40630,47130)	43880 (43880,43880)	47694 (-628889,724278)	
5/31/2020	46645	13751 (-48177,75678)	43880 (38461,49299)	47470 (43914,51026)	59590 (40094,79086)	43880 (40454,47306)	43880 (43880,43880)	47948 (-699778,795673)	
6/1/2020	46749	13751 (-48342,75843)	43880 (38257,49503)	47925 (44430,51420)	60127 (40173,80082)	43880 (40287,47473)	43880 (43880,43880)	48201 (-772995,869397)	
6/2/2020	46852	13751 (-48500,76001)	43880 (38055,49705)	48381 (44912,51850)	60652 (40239,81065)	43880 (40128,47632)	43880 (43880,43880)	48455 (-848469,945378)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3132	44070	44132 (43638,44626)	44074 (43853,44295)	43748 (43116,44379)	44080 (43688,44472)	44072 (43851,44293)	22153 (-20803,65110)		
	44195	44372 (25024,63720)	44279 (43778,44780)	43872 (43240,44504)	44280 (-34522,123082)	44273 (43772,44774)	22250 (-20735,65234)		
	44341	44610 (1842,87377)	44487 (43668,45306)	43987 (43334,44640)	44480 (-131310,220270)	44475 (43656,45294)	22330 (-20708,65367)		
	44449	44846 (-26249,115941)	44696 (43520,45872)	44092 (43426,44757)	44680 (-249250,338610)	44677 (43500,45853)	22425 (-20645,65495)		
	44647	45080 (-58479,148639)	44906 (43333,46480)	44188 (43469,44906)	44880 (-385202,474962)	44878 (43303,46452)	22516 (-20615,65648)		
	44900	45313 (-94319,184944)	45119 (43112,47126)	44277 (43453,45101)	45080 (-537087,627248)	45079 (43071,47087)	22635 (-20582,65851)		
	45088	45543 (-133382,224468)	45333 (42859,47807)	44359 (43424,45293)	45280 (-703363,793923)	45280 (42805,47755)	22760 (-20535,66055)		
	45265	45772 (-175368,266912)	45549 (42577,48521)	44435 (43388,45481)	45480 (-882886,973846)	45481 (42507,48455)	22881 (-20486,66249)		
	45437	45999 (-220036,312034)	45766 (42267,49266)	44505 (43345,45665)	45680 (-1074780,1166140)	45682 (42181,49184)	22986 (-20452,66425)		
	45647	46224 (-267188,359636)	45986 (41932,50040)	44570 (43283,45857)	45880 (-1278261,1370020)	45884 (41827,49940)	23083 (-20435,66601)		
	45780	46448 (-316653,409548)	46207 (41571,50843)	44631 (43229,46033)	46080 (-1492757,1584916)	46085 (41446,50724)	23197 (-20389,66783)		
	45970	46669 (-368286,461625)	46430 (41187,51673)	44687 (43161,46214)	46280 (-1717712,1810271)	46286 (41040,51532)	23301 (-20356,66958)		
	46152	46890 (-421958,515738)	46655 (40781,52529)	44740 (43085,46395)	46479 (-1952663,2045622)	46487 (40609,52365)	23417 (-20311,67144)		
	46328	47108 (-477558,571774)	46882 (40353,53410)	44789 (43002,46576)	46679 (-2197169,2290528)	46688 (40155,53221)	23525 (-20272,67322)		
	46460	47324 (-534983,629632)	47110 (39904,54316)	44835 (42922,46747)	46879 (-2450868,2544625)	46889 (39679,54100)	23647 (-20212,67505)		
	46645	47539 (-594142,689221)	47340 (39435,55245)	44877 (42833,46921)	47079 (-2713460,2807617)	47091 (39180,55001)	23752 (-20171,67675)		
	46749	47753 (-654953,750458)	47572 (38947,56198)	44917 (42751,47083)	47278 (-2984626,3079183)	47292 (38661,55923)	23868 (-20109,67846)		
	46852	47964 (-717339,813267)	47806 (38440,57173)	44953 (42673,47234)	47478 (-3264143,3359100)	47493 (38120,56866)	23973 (-20053,67999)		

**Table A.125**

Actual and Predicted Cases with 95% Confidence Intervals for New Zealand using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1499	564 (-1268,2396)	1498 (1496,1500)	1620 (1383,1858)	1600 (1402,1797)	1497 (1493,1501)	1498 (1498,1498)	1499 (1497,1501)	
5/17/2020	1499	564 (-1268,2396)	1498 (1496,1500)	1638 (1382,1894)	1595 (1402,1788)	1497 (1493,1501)	1498 (1498,1498)	1500 (1497,1503)	
5/18/2020	1499	564 (-1268,2396)	1498 (1496,1500)	1656 (1382,1930)	1589 (1401,1777)	1497 (1493,1501)	1498 (1498,1498)	1501 (1497,1505)	
5/19/2020	1503	564 (-1270,2398)	1498 (1488,1508)	1674 (1383,1964)	1582 (1402,1762)	1497 (1490,1504)	1498 (1498,1498)	1502 (1497,1506)	
5/20/2020	1503	564 (-1271,2400)	1498 (1488,1508)	1692 (1384,2000)	1573 (1401,1745)	1497 (1489,1505)	1498 (1498,1498)	1503 (1497,1508)	
5/21/2020	1504	564 (-1272,2401)	1498 (1486,1510)	1710 (1384,2036)	1562 (1398,1726)	1497 (1488,1506)	1498 (1498,1498)	1503 (1497,1510)	
5/22/2020	1504	564 (-1273,2401)	1498 (1486,1510)	1728 (1383,2072)	1550 (1394,1706)	1497 (1487,1507)	1498 (1498,1498)	1504 (1497,1511)	
5/23/2020	1504	564 (-1274,2402)	1498 (1486,1510)	1746 (1383,2108)	1536 (1389,1684)	1497 (1486,1508)	1498 (1498,1498)	1505 (1497,1513)	
5/24/2020	1504	564 (-1274,2403)	1498 (1486,1510)	1763 (1382,2145)	1521 (1382,1660)	1497 (1486,1508)	1498 (1498,1498)	1506 (1497,1515)	
5/25/2020	1504	564 (-1275,2403)	1498 (1486,1510)	1781 (1380,2182)	1504 (1372,1636)	1497 (1486,1508)	1498 (1498,1498)	1507 (1497,1517)	
5/26/2020	1504	564 (-1275,2403)	1498 (1486,1510)	1799 (1379,2219)	1485 (1359,1612)	1497 (1486,1508)	1498 (1498,1498)	1508 (1497,1519)	
5/27/2020	1504	564 (-1275,2403)	1498 (1486,1510)	1817 (1378,2257)	1465 (1341,1588)	1497 (1485,1509)	1498 (1498,1498)	1509 (1496,1521)	
5/28/2020	1504	564 (-1275,2404)	1498 (1486,1510)	1835 (1376,2294)	1442 (1319,1565)	1497 (1485,1509)	1498 (1498,1498)	1509 (1496,1522)	
5/29/2020	1504	564 (-1276,2404)	1498 (1486,1510)	1853 (1374,2332)	1418 (1292,1545)	1497 (1485,1509)	1498 (1498,1498)	1510 (1496,1524)	
5/30/2020	1504	564 (-1276,2404)	1498 (1486,1510)	1871 (1373,2369)	1392 (1258,1527)	1497 (1485,1509)	1498 (1498,1498)	1511 (1496,1526)	
5/31/2020	1504	564 (-1276,2404)	1498 (1486,1510)	1889 (1371,2407)	1365 (1217,1512)	1497 (1485,1509)	1498 (1498,1498)	1512 (1495,1528)	
6/1/2020	1504	564 (-1276,2404)	1498 (1486,1510)	1907 (1369,2444)	1335 (1171,1499)	1497 (1485,1509)	1498 (1498,1498)	1513 (1495,1530)	
6/2/2020	1504	564 (-1276,2404)	1498 (1486,1510)	1924 (1367,2482)	1303 (1119,1488)	1497 (1485,1509)	1498 (1498,1498)	1514 (1495,1533)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3133	1499	1499 (1497,1500)	1499 (1483,1515)	1499 (1498,1499)	1498 (1498,1499)	1499 (1483,1515)	750 (-719,2218)		
	1499	1499 (1497,1502)	1499 (1468,1531)	1499 (1498,1500)	1500 (1499,1502)	1499 (1468,1531)	750 (-718,2218)		
	1499	1500 (1497,1503)	1500 (1446,1553)	1499 (1499,1500)	1498 (1496,1500)	1500 (1446,1553)	750 (-718,2218)		
	1503	1501 (1497,1504)	1500 (1422,1579)	1499 (1496,1503)	1499 (1497,1501)	1500 (1422,1579)	750 (-720,2220)		
	1503	1501 (1497,1505)	1501 (1396,1606)	1500 (1496,1504)	1498 (1496,1500)	1501 (1395,1606)	751 (-720,2222)		
	1504	1502 (1498,1506)	1501 (1365,1637)	1500 (1495,1505)	1499 (1497,1501)	1501 (1365,1637)	751 (-720,2223)		
	1504	1502 (1498,1507)	1502 (1333,1671)	1500 (1495,1506)	1499 (1497,1502)	1502 (1333,1670)	752 (-720,2224)		
	1504	1503 (1498,1509)	1502 (1299,1705)	1500 (1495,1506)	1500 (1497,1502)	1502 (1299,1705)	751 (-721,2224)		
	1504	1504 (1497,1510)	1503 (1263,1743)	1501 (1495,1506)	1501 (1498,1505)	1503 (1262,1743)	752 (-721,2224)		
	1504	1504 (1497,1511)	1503 (1224,1783)	1501 (1495,1507)	1499 (1496,1503)	1503 (1224,1782)	752 (-721,2225)		
	1504	1505 (1497,1512)	1504 (1184,1824)	1501 (1495,1507)	1500 (1496,1504)	1504 (1184,1823)	752 (-721,2225)		
	1504	1505 (1497,1513)	1504 (1142,1867)	1501 (1495,1507)	1500 (1496,1504)	1504 (1142,1867)	752 (-721,2225)		
	1504	1506 (1497,1514)	1505 (1098,1912)	1501 (1495,1507)	1500 (1496,1505)	1505 (1098,1911)	753 (-720,2225)		
	1504	1506 (1497,1515)	1505 (1053,1958)	1501 (1495,1507)	1500 (1496,1505)	1505 (1052,1958)	753 (-720,2226)		
	1504	1506 (1497,1516)	1506 (1006,2006)	1501 (1495,1507)	1501 (1496,1506)	1506 (1005,2006)	753 (-720,2226)		
	1504	1507 (1497,1517)	1507 (957,2056)	1501 (1495,1507)	1503 (1497,1508)	1506 (956,2056)	753 (-719,2226)		
	1504	1507 (1497,1518)	1507 (907,2107)	1501 (1496,1507)	1500 (1495,1506)	1506 (906,2107)	754 (-719,2226)		
	1504	1508 (1496,1519)	1508 (855,2160)	1501 (1496,1507)	1501 (1495,1507)	1507 (855,2159)	754 (-719,2226)		

**Table A.126**

Actual and Predicted Cases with 95% Confidence Intervals for Nicaragua using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	25	5 (-34,44)	25 (25,25)	15 (-4,34)	24 (22,26)	25 (25,25)	25 (25,25)	26 (24,29)
5/17/2020	25	5 (-34,44)	25 (25,25)	15 (-4,34)	24 (23,26)	25 (25,25)	25 (25,25)	27 (24,31)
5/18/2020	25	5 (-34,44)	25 (25,25)	16 (-3,34)	25 (24,27)	25 (25,25)	25 (25,25)	29 (24,33)
5/19/2020	254	5 (-241,251)	25 (-424,474)	16 (-218,250)	26 (-198,249)	25 (-199,249)	25 (25,25)	30 (24,36)
5/20/2020	254	5 (-305,315)	25 (-424,474)	16 (-280,312)	27 (-256,309)	25 (-259,309)	25 (25,25)	31 (23,38)
5/21/2020	279	5 (-353,363)	25 (-473,523)	16 (-326,358)	27 (-300,354)	25 (-304,354)	25 (25,25)	32 (23,40)
5/22/2020	279	5 (-384,394)	25 (-473,523)	16 (-355,388)	28 (-327,383)	25 (-333,383)	25 (25,25)	33 (23,43)
5/23/2020	279	5 (-405,415)	25 (-473,523)	16 (-376,409)	29 (-346,404)	25 (-354,404)	25 (25,25)	34 (23,45)
5/24/2020	279	5 (-421,431)	25 (-473,523)	17 (-391,424)	30 (-360,419)	25 (-369,419)	25 (25,25)	35 (22,48)
5/25/2020	279	5 (-434,444)	25 (-473,523)	17 (-403,436)	30 (-370,430)	25 (-380,430)	25 (25,25)	36 (22,50)
5/26/2020	759	5 (-606,616)	25 (-1414,1464)	17 (-577,611)	31 (-544,606)	25 (-556,606)	25 (25,25)	37 (21,53)
5/27/2020	759	5 (-719,729)	25 (-1414,1464)	17 (-689,724)	32 (-655,719)	25 (-669,719)	25 (25,25)	38 (21,56)
5/28/2020	759	5 (-802,812)	25 (-1414,1464)	17 (-772,807)	33 (-737,802)	25 (-752,802)	25 (25,25)	39 (20,58)
5/29/2020	759	5 (-868,878)	25 (-1414,1464)	18 (-837,872)	33 (-800,867)	25 (-817,867)	25 (25,25)	40 (19,61)
5/30/2020	759	5 (-920,930)	25 (-1414,1464)	18 (-889,924)	34 (-850,919)	25 (-869,919)	25 (25,25)	41 (19,64)
5/31/2020	759	5 (-964,974)	25 (-1414,1464)	18 (-932,968)	35 (-892,962)	25 (-912,962)	25 (25,25)	42 (18,67)
6/1/2020	759	5 (-1001,1011)	25 (-1414,1464)	18 (-969,1005)	36 (-927,999)	25 (-949,999)	25 (25,25)	43 (17,70)
6/2/2020	1118	5 (-1100,1110)	25 (-2117,2167)	18 (-1067,1103)	37 (-1024,1097)	25 (-1048,1098)	25 (25,25)	45 (16,73)
Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3134	25	26 (24,28)	26 (24,27)	21 (13,29)	26 (24,27)	26 (24,27)	13 (-11,37)	
	25	27 (24,30)	26 (24,29)	21 (13,29)	26 (24,29)	26 (24,29)	13 (-10,37)	
	25	28 (24,31)	27 (24,30)	21 (14,29)	27 (24,30)	27 (24,30)	14 (-10,37)	
	254	28 (24,33)	28 (25,31)	21 (-207,249)	28 (25,31)	28 (24,31)	14 (-222,250)	
	254	29 (24,34)	28 (25,32)	21 (-267,310)	28 (24,32)	28 (24,32)	84 (-175,342)	
	279	30 (24,36)	29 (25,33)	22 (-313,356)	29 (25,33)	29 (24,33)	84 (-199,367)	
	279	30 (23,37)	30 (26,34)	22 (-342,385)	29 (25,34)	29 (25,34)	89 (-209,386)	
	279	31 (23,39)	30 (26,35)	22 (-362,406)	30 (25,35)	30 (25,35)	20 (-312,351)	
	279	31 (23,40)	31 (26,36)	22 (-378,421)	31 (26,36)	31 (25,37)	20 (-335,375)	
	279	32 (23,41)	32 (27,36)	22 (-389,433)	31 (26,37)	31 (25,38)	16 (-359,390)	
	759	32 (22,43)	32 (27,37)	22 (-564,608)	32 (26,38)	32 (25,39)	16 (-550,582)	
	759	33 (22,44)	33 (28,38)	22 (-678,721)	32 (26,38)	33 (25,40)	134 (-514,781)	
	759	33 (22,45)	34 (28,39)	22 (-761,804)	33 (27,39)	33 (26,41)	134 (-575,842)	
	759	34 (21,46)	35 (29,40)	22 (-825,869)	33 (27,40)	34 (26,42)	134 (-623,891)	
	759	34 (21,47)	35 (29,41)	22 (-878,921)	34 (27,41)	34 (26,43)	18 (-804,840)	
	759	34 (20,49)	36 (30,42)	22 (-921,964)	35 (27,42)	35 (26,44)	18 (-857,893)	
	759	35 (20,50)	37 (31,43)	22 (-958,1001)	35 (28,43)	36 (26,45)	18 (-900,937)	
	1118	35 (19,51)	38 (31,44)	22 (-1057,1100)	36 (28,45)	36 (26,46)	19 (-1008,1046)	

**Table A.127**

Actual and Predicted Cases with 95% Confidence Intervals for Niger using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	889	237 (-1042,1515)	885 (877,893)	735 (435,1036)	1030 (754,1306)	885 (877,893)	885 (885,885)	897 (873,922)
5/17/2020	904	237 (-1057,1530)	885 (848,922)	744 (437,1051)	1051 (769,1333)	885 (858,912)	885 (885,885)	909 (839,980)
5/18/2020	909	237 (-1065,1538)	885 (838,932)	752 (445,1060)	1072 (777,1368)	885 (850,920)	885 (885,885)	921 (788,1055)
5/19/2020	914	237 (-1071,1545)	885 (828,942)	761 (455,1066)	1094 (783,1404)	885 (843,927)	885 (885,885)	933 (725,1142)
5/20/2020	920	237 (-1078,1551)	885 (816,954)	769 (466,1073)	1115 (789,1441)	885 (837,933)	885 (885,885)	945 (652,1239)
5/21/2020	924	237 (-1083,1557)	885 (809,961)	778 (477,1079)	1137 (794,1480)	885 (831,939)	885 (885,885)	957 (569,1345)
5/22/2020	937	237 (-1091,1564)	885 (783,987)	786 (486,1086)	1158 (801,1516)	885 (822,948)	885 (885,885)	969 (478,1460)
5/23/2020	943	237 (-1098,1571)	885 (771,999)	795 (496,1094)	1180 (808,1553)	885 (814,956)	885 (885,885)	981 (380,1582)
5/24/2020	945	237 (-1104,1577)	885 (767,1003)	803 (506,1100)	1202 (813,1591)	885 (807,963)	885 (885,885)	993 (274,1712)
5/25/2020	951	237 (-1110,1584)	885 (756,1014)	812 (517,1106)	1224 (818,1630)	885 (801,969)	885 (885,885)	1005 (162,1848)
5/26/2020	952	237 (-1115,1589)	885 (754,1016)	820 (529,1111)	1246 (822,1670)	885 (795,975)	885 (885,885)	1017 (43,1991)
5/27/2020	952	237 (-1119,1593)	885 (754,1016)	828 (541,1116)	1268 (824,1712)	885 (791,979)	885 (885,885)	1029 (-82,2140)
5/28/2020	955	237 (-1123,1597)	885 (748,1022)	837 (553,1121)	1290 (826,1754)	885 (787,983)	885 (885,885)	1041 (-213,2295)
5/29/2020	955	237 (-1127,1600)	885 (748,1022)	845 (566,1125)	1313 (828,1797)	885 (784,986)	885 (885,885)	1053 (-350,2456)
5/30/2020	956	237 (-1130,1603)	885 (746,1024)	854 (579,1129)	1335 (829,1841)	885 (781,989)	885 (885,885)	1065 (-492,2622)
5/31/2020	958	237 (-1133,1606)	885 (742,1028)	862 (592,1132)	1357 (830,1885)	885 (778,992)	885 (885,885)	1077 (-639,2793)
6/1/2020	958	237 (-1136,1609)	885 (742,1028)	871 (605,1136)	1380 (830,1930)	885 (776,994)	885 (885,885)	1089 (-792,2969)
6/2/2020	960	237 (-1138,1612)	885 (738,1032)	879 (619,1140)	1402 (830,1974)	885 (773,997)	885 (885,885)	1101 (-949,3150)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3135	889	896 (875,916)	894 (877,910)	859 (800,918)	896 (874,918)	894 (877,910)	452 (-404,1308)	
	904	906 (852,960)	909 (880,937)	862 (790,934)	906 (786,1027)	908 (880,937)	459 (-405,1323)	
	909	915 (817,1013)	917 (877,956)	864 (787,942)	916 (669,1163)	916 (876,955)	463 (-405,1330)	
	914	925 (775,1075)	929 (873,986)	866 (784,948)	925 (529,1320)	928 (871,985)	469 (-400,1338)	
	920	934 (726,1141)	941 (869,1013)	868 (781,954)	933 (374,1493)	939 (867,1011)	475 (-395,1344)	
	924	943 (673,1213)	951 (861,1041)	869 (778,959)	941 (204,1678)	949 (858,1039)	478 (-392,1349)	
	937	951 (615,1288)	964 (854,1074)	869 (772,967)	949 (25,1873)	961 (851,1071)	485 (-388,1357)	
	943	960 (553,1367)	975 (845,1104)	870 (766,975)	956 (-164,2076)	971 (841,1100)	491 (-383,1366)	
	945	968 (487,1449)	987 (835,1138)	871 (761,980)	963 (-359,2285)	982 (830,1133)	497 (-377,1372)	
	951	976 (419,1533)	999 (825,1173)	871 (756,986)	969 (-561,2499)	993 (819,1167)	503 (-372,1378)	
	952	983 (348,1619)	1010 (813,1208)	871 (751,991)	976 (-767,2718)	1003 (805,1201)	508 (-367,1382)	
	952	991 (274,1707)	1023 (801,1245)	872 (748,995)	981 (-977,2939)	1014 (792,1237)	513 (-361,1386)	
	955	998 (198,1797)	1035 (787,1282)	872 (745,999)	987 (-1190,3163)	1025 (777,1273)	519 (-354,1391)	
	955	1005 (121,1888)	1047 (773,1321)	872 (742,1002)	992 (-1405,3389)	1036 (761,1310)	524 (-346,1394)	
	956	1011 (41,1981)	1059 (758,1361)	872 (740,1005)	997 (-1622,3616)	1047 (745,1348)	530 (-338,1398)	
	958	1018 (-39,2075)	1072 (742,1401)	873 (738,1007)	1002 (-1840,3844)	1057 (727,1387)	537 (-329,1402)	
	958	1024 (-122,2170)	1084 (726,1443)	873 (736,1010)	1006 (-2060,4072)	1068 (709,1427)	543 (-320,1405)	
	960	1030 (-205,2265)	1097 (708,1485)	873 (734,1012)	1010 (-2279,4300)	1079 (690,1468)	549 (-310,1408)	

**Table A.128**

Actual and Predicted Cases with 95% Confidence Intervals for Nigeria using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	5621	673 (-9026,10371)	5450 (5115,5785)	2339 (-4094,8772)	5652 (5591,5712)	5450 (5115,5785)	5450 (5450,5450)	5663 (5245,6081)	
5/17/2020	5959	673 (-9363,10708)	5450 (4452,6448)	2367 (-4377,9111)	5914 (5839,5990)	5450 (4706,6194)	5450 (5450,5450)	5889 (-9541,21319)	
5/18/2020	6175	673 (-9618,10964)	5450 (4029,6871)	2395 (-4577,9367)	6184 (6122,6246)	5450 (4429,6471)	5450 (5450,5450)	6115 (-28079,40308)	
5/19/2020	6401	673 (-9860,11206)	5450 (3586,7314)	2423 (-4764,9610)	6461 (6381,6541)	5450 (4165,6735)	5450 (5450,5450)	6340 (-50659,63340)	
5/20/2020	6677	673 (-10119,11464)	5450 (3045,7855)	2452 (-4967,9871)	6746 (6652,6840)	5450 (3876,7024)	5450 (5450,5450)	6566 (-76696,89829)	
5/21/2020	7016	673 (-10409,11755)	5450 (2381,8519)	2480 (-5204,10164)	7039 (6951,7127)	5450 (3544,7356)	5450 (5450,5450)	6792 (-105795,119379)	
5/22/2020	7261	673 (-10689,12034)	5450 (1900,9000)	2508 (-5429,10446)	7339 (7240,7439)	5450 (3233,7667)	5450 (5450,5450)	7018 (-137668,151703)	
5/23/2020	7526	673 (-10968,12313)	5450 (1381,9519)	2536 (-5654,10727)	7648 (7522,7774)	5450 (2926,7974)	5450 (5450,5450)	7243 (-172095,186581)	
5/24/2020	7839	673 (-11259,12605)	5450 (768,10132)	2565 (-5891,11021)	7964 (7820,8108)	5450 (2604,8296)	5450 (5450,5450)	7469 (-208901,223839)	
5/25/2020	8068	673 (-11540,12885)	5450 (319,10581)	2593 (-6117,11303)	8289 (8095,8482)	5450 (2300,8600)	5450 (5450,5450)	7695 (-247944,263333)	
5/26/2020	8344	673 (-11823,13168)	5450 (-222,11122)	2621 (-6346,11588)	8621 (8375,8868)	5450 (1994,8906)	5450 (5450,5450)	7921 (-289102,304944)	
5/27/2020	8733	673 (-12130,13476)	5450 (-985,11885)	2649 (-6600,11899)	8962 (8693,9232)	5450 (1655,9245)	5450 (5450,5450)	8146 (-332274,348567)	
5/28/2020	8915	673 (-12419,13764)	5450 (-1341,12241)	2678 (-6834,12189)	9312 (8975,9649)	5450 (1346,9554)	5450 (5450,5450)	8372 (-377370,394114)	
5/29/2020	9302	673 (-12728,14073)	5450 (-2100,13000)	2706 (-7090,12501)	9670 (9292,10047)	5450 (1011,9889)	5450 (5450,5450)	8598 (-424311,441507)	
5/30/2020	9855	673 (-13082,14428)	5450 (-3184,14084)	2734 (-7392,12860)	10036 (9660,10412)	5450 (616,10284)	5450 (5450,5450)	8824 (-473029,490676)	
5/31/2020	10162	673 (-13434,14779)	5450 (-3786,14686)	2762 (-7691,13216)	10411 (10027,10795)	5450 (231,10669)	5450 (5450,5450)	9049 (-523460,541559)	
6/1/2020	10578	673 (-13800,15146)	5450 (-4601,15501)	2791 (-8005,13587)	10795 (10409,11182)	5450 (-169,11069)	5450 (5450,5450)	9275 (-575550,594101)	
6/2/2020	10819	673 (-14153,15498)	5450 (-5073,15973)	2819 (-8305,13943)	11188 (10775,11601)	5450 (-548,11448)	5450 (5450,5450)	9501 (-629247,648249)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3136	5621	5663 (5245,6081)	5713 (5643,5782)	5251 (4526,5976)	5685 (5225,6144)	5706 (5636,5777)	2969 (-2228,8167)		
	5959	5889 (-9541,21319)	5957 (5827,6087)	5410 (4492,6327)	5919 (-39965,51803)	5942 (5809,6074)	3089 (-2326,8505)		
	6175	6115 (-28079,40308)	6206 (6021,6391)	5561 (4539,6583)	6154 (-96026,108334)	6180 (5988,6372)	3239 (-2291,8770)		
	6401	6340 (-50659,63340)	6457 (6214,6699)	5703 (4584,6821)	6388 (-164287,177064)	6418 (6164,6672)	3352 (-2293,8997)		
	6677	6566 (-76696,89829)	6710 (6407,7013)	5837 (4594,7079)	6623 (-242975,256221)	6656 (6336,6976)	3488 (-2283,9259)		
	7016	6792 (-105795,119379)	6965 (6599,7331)	5966 (4555,7378)	6858 (-330881,344596)	6895 (6505,7284)	3605 (-2329,9538)		
	7261	7018 (-137668,151703)	7223 (6790,7655)	6094 (4527,7661)	7092 (-427136,441320)	7133 (6669,7596)	3755 (-2322,9831)		
	7526	7243 (-172095,186581)	7482 (6980,7985)	6219 (4496,7942)	7326 (-531076,545729)	7371 (6830,7912)	3888 (-2331,10106)		
	7839	7469 (-208901,223839)	7744 (7170,8319)	6343 (4448,8239)	7561 (-642174,657296)	7609 (6987,8230)	4017 (-2356,10389)		
	8068	7695 (-247944,263333)	8008 (7358,8658)	6465 (4411,8520)	7795 (-759999,775590)	7847 (7141,8553)	4144 (-2372,10660)		
	8344	7921 (-289102,304944)	8275 (7546,9003)	6584 (4366,8802)	8030 (-884185,900244)	8085 (7292,8879)	4274 (-2388,10937)		
	8733	8146 (-332274,348567)	8543 (7734,9352)	6700 (4285,9115)	8264 (-1014426,1030955)	8323 (7439,9208)	4410 (-2421,11242)		
	8915	8372 (-377370,394114)	8814 (7921,9707)	6815 (4229,9400)	8499 (-1150449,1167446)	8561 (7583,9540)	4559 (-2419,11536)		
	9302	8598 (-424311,441507)	9086 (8107,10066)	6927 (4141,9712)	8733 (-1292017,1309483)	8800 (7724,9875)	4687 (-2458,11832)		
	9855	8824 (-473029,490676)	9361 (8293,10430)	7037 (3991,10082)	8967 (-1438918,1456853)	9038 (7862,10213)	4844 (-2511,12198)		
	10162	9049 (-523460,541559)	9639 (8479,10798)	7144 (3845,10443)	9201 (-1590968,1609371)	9276 (7997,10554)	5011 (-2544,12565)		
	10578	9275 (-575550,594101)	9918 (8665,11171)	7250 (3679,10820)	9436 (-1747996,1766868)	9514 (8130,10898)	5172 (-2595,12938)		
	10819	9501 (-629247,648249)	10200 (8850,11549)	7353 (3532,11174)	9670 (-1909848,1929188)	9752 (8260,11245)	5317 (-2647,13282)		

**Table A.129**

Actual and Predicted Cases with 95% Confidence Intervals for North Macedonia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1762	483 (-2023,2990)	1740 (1697,1783)	1468 (891,2044)	2009 (1525,2494)	1740 (1697,1783)	1740 (1740,1740)	1761 (1720,1801)	
5/17/2020	1792	483 (-2053,3019)	1740 (1638,1842)	1485 (895,2074)	2049 (1555,2544)	1740 (1662,1818)	1740 (1740,1740)	1781 (1611,1952)	
5/18/2020	1817	483 (-2079,3046)	1740 (1589,1891)	1501 (902,2101)	2089 (1581,2597)	1740 (1632,1848)	1740 (1740,1740)	1802 (1458,2145)	
5/19/2020	1839	483 (-2103,3070)	1740 (1546,1934)	1518 (911,2125)	2130 (1606,2654)	1740 (1605,1875)	1740 (1740,1740)	1822 (1270,2374)	
5/20/2020	1858	483 (-2125,3092)	1740 (1509,1971)	1535 (922,2147)	2170 (1627,2713)	1740 (1581,1899)	1740 (1740,1740)	1842 (1053,2632)	
5/21/2020	1898	483 (-2153,3120)	1740 (1430,2050)	1551 (927,2176)	2211 (1656,2767)	1740 (1548,1932)	1740 (1740,1740)	1863 (809,2916)	
5/22/2020	1921	483 (-2180,3146)	1740 (1385,2095)	1568 (934,2202)	2252 (1682,2822)	1740 (1517,1963)	1740 (1740,1740)	1883 (542,3225)	
5/23/2020	1941	483 (-2205,3171)	1740 (1346,2134)	1585 (942,2227)	2293 (1707,2880)	1740 (1489,1991)	1740 (1740,1740)	1904 (252,3555)	
5/24/2020	1978	483 (-2233,3199)	1740 (1274,2206)	1601 (947,2255)	2335 (1735,2934)	1740 (1457,2023)	1740 (1740,1740)	1924 (-58,3907)	
5/25/2020	1999	483 (-2259,3226)	1740 (1232,2248)	1618 (954,2282)	2376 (1761,2991)	1740 (1427,2053)	1740 (1740,1740)	1945 (-388,4277)	
5/26/2020	2014	483 (-2284,3250)	1740 (1203,2277)	1635 (963,2306)	2418 (1785,3051)	1740 (1401,2079)	1740 (1740,1740)	1965 (-737,4667)	
5/27/2020	2039	483 (-2308,3275)	1740 (1154,2326)	1651 (972,2331)	2459 (1808,3111)	1740 (1374,2106)	1740 (1740,1740)	1985 (-1103,5073)	
5/28/2020	2077	483 (-2335,3302)	1740 (1079,2401)	1668 (979,2358)	2501 (1835,3168)	1740 (1343,2137)	1740 (1740,1740)	2006 (-1485,5497)	
5/29/2020	2129	483 (-2366,3333)	1740 (978,2502)	1685 (981,2389)	2543 (1865,3222)	1740 (1307,2173)	1740 (1740,1740)	2026 (-1884,5936)	
5/30/2020	2164	483 (-2398,3365)	1740 (909,2571)	1702 (982,2421)	2586 (1896,3275)	1740 (1270,2210)	1740 (1740,1740)	2047 (-2298,6392)	
5/31/2020	2226	483 (-2434,3401)	1740 (787,2693)	1718 (979,2458)	2628 (1932,3324)	1740 (1226,2254)	1740 (1740,1740)	2067 (-2728,6862)	
6/1/2020	2315	483 (-2478,3445)	1740 (613,2867)	1735 (966,2503)	2670 (1975,3366)	1740 (1171,2309)	1740 (1740,1740)	2087 (-3172,7347)	
6/2/2020	2391	483 (-2527,3493)	1740 (464,3016)	1752 (948,2555)	2713 (2021,3405)	1740 (1111,2369)	1740 (1740,1740)	2108 (-3630,7845)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3137	1762	1760 (1721,1799)	1760 (1737,1784)	1703 (1588,1819)	1762 (1719,1804)	1760 (1736,1783)	891 (-815,2598)		
	1792	1779 (1622,1936)	1781 (1741,1822)	1710 (1571,1850)	1781 (1415,2146)	1780 (1740,1821)	902 (-823,2628)		
	1817	1799 (1484,2113)	1803 (1745,1860)	1717 (1557,1878)	1797 (1065,2528)	1800 (1743,1858)	913 (-828,2654)		
	1839	1818 (1316,2319)	1824 (1749,1899)	1723 (1544,1903)	1819 (569,3069)	1821 (1745,1896)	925 (-829,2679)		
	1858	1837 (1122,2552)	1846 (1752,1939)	1729 (1533,1925)	1843 (-51,3738)	1841 (1747,1935)	936 (-829,2700)		
	1898	1856 (905,2806)	1867 (1754,1981)	1734 (1511,1956)	1870 (-790,4529)	1861 (1747,1975)	945 (-838,2727)		
	1921	1874 (668,3081)	1889 (1755,2024)	1738 (1492,1984)	1885 (-1524,5295)	1881 (1746,2017)	958 (-839,2756)		
	1941	1893 (412,3373)	1912 (1755,2068)	1742 (1473,2011)	1907 (-2321,6135)	1902 (1744,2059)	970 (-842,2781)		
	1978	1911 (140,3683)	1934 (1755,2113)	1746 (1450,2041)	1926 (-3157,7010)	1922 (1741,2103)	981 (-847,2809)		
	1999	1930 (-148,4007)	1956 (1754,2159)	1749 (1429,2069)	1942 (-4009,7893)	1942 (1738,2147)	992 (-851,2835)		
	2014	1948 (-451,4347)	1979 (1752,2207)	1752 (1410,2094)	1965 (-4925,8855)	1962 (1733,2192)	1003 (-853,2859)		
	2039	1966 (-768,4699)	2002 (1749,2255)	1755 (1390,2120)	1989 (-5920,9898)	1983 (1727,2238)	1013 (-856,2883)		
	2077	1984 (-1097,5064)	2025 (1746,2305)	1758 (1367,2149)	2015 (-6999,11029)	2003 (1721,2285)	1023 (-862,2908)		
	2129	2001 (-1439,5441)	2048 (1742,2355)	1760 (1337,2184)	2031 (-8085,12147)	2023 (1713,2333)	1037 (-867,2942)		
	2164	2019 (-1792,5830)	2072 (1737,2407)	1763 (1306,2220)	2053 (-9214,13319)	2043 (1705,2382)	1055 (-868,2979)		
	2226	2036 (-2157,6229)	2096 (1732,2459)	1765 (1269,2262)	2072 (-10371,14514)	2064 (1696,2432)	1069 (-878,3016)		
	2315	2054 (-2532,6639)	2119 (1726,2513)	1767 (1220,2315)	2088 (-11537,15712)	2084 (1686,2482)	1085 (-892,3062)		
	2391	2071 (-2917,7058)	2143 (1720,2567)	1769 (1164,2374)	2110 (-12749,16969)	2104 (1676,2533)	1103 (-908,3115)		

**Table A.130**

Actual and Predicted Cases with 95% Confidence Intervals for Norway using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	8237	3237 (-6563,13037)	8219 (8184,8254)	8819 (7678,9960)	8147 (7971,8323)	8219 (8184,8254)	8219 (8219,8219)	8246 (8193,8298)	
5/17/2020	8249	3237 (-6575,13049)	8219 (8160,8278)	8914 (7689,10138)	8100 (7859,8341)	8219 (8171,8267)	8219 (8219,8219)	8272 (8008,8535)	
5/18/2020	8257	3237 (-6584,13058)	8219 (8145,8293)	9008 (7696,10321)	8046 (7736,8355)	8219 (8161,8277)	8219 (8219,8219)	8297 (7755,8839)	
5/19/2020	8267	3237 (-6593,13067)	8219 (8125,8313)	9103 (7702,10504)	7983 (7596,8369)	8219 (8150,8288)	8219 (8219,8219)	8323 (7445,9201)	
5/20/2020	8281	3237 (-6604,13079)	8219 (8097,8341)	9198 (7709,10686)	7912 (7439,8385)	8219 (8137,8301)	8219 (8219,8219)	8349 (7087,9610)	
5/21/2020	8309	3237 (-6621,13095)	8219 (8043,8395)	9292 (7722,10862)	7833 (7257,8409)	8219 (8115,8323)	8219 (8219,8219)	8374 (6686,10063)	
5/22/2020	8332	3237 (-6640,13114)	8219 (7998,8440)	9387 (7736,11037)	7745 (7057,8433)	8219 (8091,8347)	8219 (8219,8219)	8400 (6246,10554)	
5/23/2020	8346	3237 (-6657,13131)	8219 (7970,8468)	9481 (7749,11214)	7649 (6844,8454)	8219 (8071,8367)	8219 (8219,8219)	8426 (5769,11082)	
5/24/2020	8352	3237 (-6671,13146)	8219 (7958,8480)	9576 (7757,11395)	7544 (6619,8468)	8219 (8054,8384)	8219 (8219,8219)	8451 (5259,11643)	
5/25/2020	8364	3237 (-6686,13160)	8219 (7935,8503)	9671 (7764,11577)	7430 (6379,8481)	8219 (8039,8399)	8219 (8219,8219)	8477 (4717,12237)	
5/26/2020	8383	3237 (-6701,13175)	8219 (7898,8540)	9765 (7773,11758)	7307 (6120,8493)	8219 (8022,8416)	8219 (8219,8219)	8503 (4146,12860)	
5/27/2020	8401	3237 (-6716,13190)	8219 (7862,8576)	9860 (7781,11938)	7174 (5843,8506)	8219 (8004,8434)	8219 (8219,8219)	8528 (3545,13511)	
5/28/2020	8411	3237 (-6731,13205)	8219 (7843,8595)	9954 (7788,12121)	7032 (5550,8515)	8219 (7987,8451)	8219 (8219,8219)	8554 (2918,14191)	
5/29/2020	8422	3237 (-6745,13219)	8219 (7821,8617)	10049 (7794,12304)	6881 (5240,8522)	8219 (7972,8466)	8219 (8219,8219)	8580 (2264,14896)	
5/30/2020	8437	3237 (-6759,13233)	8219 (7792,8646)	10144 (7800,12487)	6720 (4912,8528)	8219 (7956,8482)	8219 (8219,8219)	8605 (1584,15627)	
5/31/2020	8440	3237 (-6772,13246)	8219 (7786,8652)	10238 (7804,12672)	6549 (4569,8530)	8219 (7942,8496)	8219 (8219,8219)	8631 (881,16382)	
6/1/2020	8446	3237 (-6783,13258)	8219 (7774,8664)	10333 (7807,12859)	6368 (4208,8529)	8219 (7930,8508)	8219 (8219,8219)	8657 (154,17160)	
6/2/2020	8455	3237 (-6795,13269)	8219 (7756,8682)	10428 (7809,13046)	6177 (3829,8526)	8219 (7917,8521)	8219 (8219,8219)	8683 (-597,17962)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3138	8237	8243 (8196,8291)	8241 (8152,8330)	8099 (7829,8369)	8227 (8212,8242)	8241 (8152,8330)	4131 (-3917,12179)		
	8249	8267 (8045,8488)	8264 (8111,8416)	8098 (7814,8381)	8233 (8174,8292)	8263 (8110,8415)	4142 (-3907,12191)		
	8257	8290 (7840,8740)	8286 (8062,8510)	8097 (7803,8391)	8236 (8135,8338)	8284 (8060,8509)	4152 (-3896,12200)		
	8267	8313 (7590,9035)	8309 (8005,8614)	8095 (7789,8400)	8249 (8048,8449)	8306 (8002,8611)	4161 (-3887,12209)		
	8281	8335 (7303,9367)	8332 (7940,8724)	8092 (7772,8412)	8257 (7949,8565)	8328 (7936,8721)	4171 (-3878,12220)		
	8309	8357 (6985,9730)	8355 (7868,8842)	8089 (7748,8430)	8278 (7787,8769)	8350 (7863,8837)	4183 (-3873,12239)		
	8332	8379 (6638,10121)	8379 (7790,8967)	8086 (7722,8450)	8302 (7556,9048)	8372 (7783,8960)	4198 (-3864,12260)		
	8346	8401 (6265,10537)	8402 (7707,9098)	8083 (7697,8469)	8307 (7351,9263)	8394 (7698,9090)	4212 (-3855,12279)		
	8352	8422 (5869,10976)	8426 (7617,9235)	8080 (7675,8485)	8312 (7167,9457)	8416 (7607,9225)	4224 (-3846,12294)		
	8364	8443 (5451,11435)	8450 (7523,9378)	8077 (7653,8501)	8314 (6999,9629)	8437 (7510,9365)	4232 (-3841,12305)		
	8383	8464 (5014,11914)	8474 (7423,9526)	8074 (7631,8518)	8325 (6824,9826)	8459 (7408,9511)	4243 (-3834,12319)		
	8401	8484 (4558,12411)	8499 (7318,9679)	8072 (7608,8535)	8332 (6642,10021)	8481 (7300,9662)	4256 (-3825,12336)		
	8411	8505 (4085,12924)	8523 (7209,9838)	8069 (7586,8552)	8351 (6430,10271)	8503 (7188,9818)	4270 (-3814,12353)		
	8422	8525 (3597,13453)	8548 (7095,10001)	8067 (7566,8568)	8374 (6170,10579)	8525 (7072,9978)	4282 (-3804,12368)		
	8437	8544 (3093,13996)	8573 (6977,10169)	8064 (7545,8584)	8378 (5910,10845)	8547 (6950,10143)	4293 (-3795,12381)		
	8440	8564 (2575,14553)	8599 (6855,10342)	8062 (7527,8598)	8381 (5666,11096)	8569 (6825,10313)	4305 (-3784,12394)		
	8446	8583 (2044,15122)	8624 (6728,10519)	8060 (7509,8612)	8382 (5438,11325)	8590 (6695,10486)	4317 (-3773,12406)		
	8455	8602 (1501,15704)	8650 (6598,10701)	8059 (7492,8625)	8391 (5210,11572)	8612 (6560,10664)	4329 (-3760,12418)		

**Table A.131**

Actual and Predicted Cases with 95% Confidence Intervals for Oman using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	5029	719 (-7729,9167)	4625 (3833,5417)	2372 (-2836,7580)	4688 (4019,5357)	4625 (3833,5417)	4625 (4625,4625)	4812 (4445,5179)
5/17/2020	5186	719 (-7884,9322)	4625 (3525,5725)	2400 (-2936,7736)	4868 (4222,5514)	4625 (3667,5583)	4625 (4625,4625)	5026 (-7807,17858)
5/18/2020	5379	719 (-8065,9502)	4625 (3147,6103)	2428 (-3062,7917)	5053 (4409,5697)	4625 (3467,5783)	4625 (4625,4625)	5239 (-23183,33661)
5/19/2020	5671	719 (-8304,9742)	4625 (2575,6675)	2456 (-3248,8159)	5242 (4544,5940)	4625 (3191,6059)	4625 (4625,4625)	5452 (-41916,52821)
5/20/2020	6043	719 (-8604,10042)	4625 (1846,7404)	2484 (-3496,8464)	5436 (4616,6256)	4625 (2839,6411)	4625 (4625,4625)	5666 (-63520,74852)
5/21/2020	6370	719 (-8918,10356)	4625 (1205,8045)	2512 (-3759,8783)	5635 (4682,6587)	4625 (2478,6772)	4625 (4625,4625)	5879 (-87667,99425)
5/22/2020	6794	719 (-9274,10712)	4625 (374,8876)	2540 (-4066,9146)	5838 (4707,6969)	4625 (2069,7181)	4625 (4625,4625)	6093 (-114117,126302)
5/23/2020	7257	719 (-9669,11107)	4625 (-534,9784)	2568 (-4414,9550)	6045 (4695,7396)	4625 (1618,7632)	4625 (4625,4625)	6306 (-142688,155300)
5/24/2020	7770	719 (-10104,11542)	4625 (-1539,10789)	2596 (-4804,9996)	6258 (4646,7870)	4625 (1124,8126)	4625 (4625,4625)	6519 (-173236,186274)
5/25/2020	7770	719 (-10440,11878)	4625 (-1539,10789)	2624 (-5087,10335)	6475 (4748,8202)	4625 (774,8476)	4625 (4625,4625)	6733 (-205640,219106)
5/26/2020	8118	719 (-10784,12222)	4625 (-2221,11471)	2652 (-5378,10682)	6697 (4849,8545)	4625 (412,8838)	4625 (4625,4625)	6946 (-239802,253695)
5/27/2020	8373	719 (-11115,12553)	4625 (-2721,11971)	2680 (-5656,11016)	6924 (4974,8874)	4625 (68,9182)	4625 (4625,4625)	7160 (-275637,289956)
5/28/2020	9009	719 (-11512,12949)	4625 (-3968,13218)	2708 (-6003,11418)	7156 (5029,9283)	4625 (-360,9610)	4625 (4625,4625)	7373 (-313069,327814)
5/29/2020	9820	719 (-11995,13432)	4625 (-5557,14807)	2736 (-6441,11913)	7393 (4981,9805)	4625 (-896,10146)	4625 (4625,4625)	7586 (-352034,367206)
5/30/2020	10423	719 (-12509,13947)	4625 (-6739,15989)	2764 (-6912,12440)	7635 (4911,10359)	4625 (-1462,10712)	4625 (4625,4625)	7800 (-392474,408073)
5/31/2020	11437	719 (-13124,14562)	4625 (-8727,17977)	2792 (-7490,13074)	7882 (4721,11043)	4625 (-2148,11398)	4625 (4625,4625)	8013 (-434338,450364)
6/1/2020	12223	719 (-13781,15219)	4625 (-10267,19517)	2820 (-8111,13751)	8134 (4504,11765)	4625 (-2873,12123)	4625 (4625,4625)	8226 (-477579,494032)
6/2/2020	12799	719 (-14438,15875)	4625 (-11396,20646)	2848 (-8727,14423)	8392 (4318,12465)	4625 (-3582,12832)	4625 (4625,4625)	8440 (-522155,539034)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3139	5029	4812 (4445,5179)	4624 (4475,4772)	3557 (673,6442)	4931 (4331,5531)	4624 (4475,4772)	2468 (-2552,7488)	
	5186	5026 (-7807,17858)	4622 (4412,4833)	3575 (551,6599)	5238 (-114162,124638)	4622 (4412,4833)	2486 (-2672,7644)	
	5379	5239 (-23183,33661)	4621 (4364,4879)	3591 (399,6783)	5546 (-261420,272512)	4621 (4364,4879)	2456 (-2899,7811)	
	5671	5452 (-41916,52821)	4620 (4323,4917)	3600 (171,7029)	5851 (-439832,451533)	4620 (4322,4917)	2439 (-3176,8055)	
	6043	5666 (-63520,74852)	4619 (4286,4951)	3604 (-135,7343)	6169 (-649193,661532)	4619 (4286,4951)	2419 (-3525,8362)	
	6370	5879 (-87667,99425)	4617 (4253,4981)	3605 (-463,7672)	6478 (-882117,895073)	4617 (4253,4981)	2455 (-3809,8720)	
	6794	6093 (-114117,126302)	4616 (4223,5009)	3603 (-844,8049)	6783 (-1135733,1149298)	4616 (4223,5009)	2478 (-4145,9101)	
	7257	6306 (-142688,155300)	4615 (4195,5035)	3599 (-1272,8470)	7089 (-1409089,1423267)	4615 (4194,5035)	2500 (-4517,9518)	
	7770	6519 (-173236,186274)	4613 (4168,5059)	3594 (-1748,8936)	7395 (-1701094,1715885)	4613 (4168,5059)	2515 (-4939,9969)	
	7770	6733 (-205640,219106)	4612 (4143,5081)	3588 (-2105,9280)	7703 (-2010896,2026303)	4612 (4142,5082)	2547 (-5230,10324)	
	8118	6946 (-239802,253695)	4611 (4119,5103)	3581 (-2472,9634)	8008 (-2336867,2352883)	4611 (4118,5104)	2474 (-5657,10604)	
	8373	7160 (-275637,289956)	4609 (4096,5123)	3574 (-2827,9974)	8327 (-2680983,2697637)	4610 (4095,5124)	2452 (-6023,10927)	
	9009	7373 (-313069,327814)	4608 (4074,5143)	3566 (-3258,10390)	8635 (-3040235,3057506)	4608 (4073,5144)	2407 (-6492,11305)	
	9820	7586 (-352034,367206)	4607 (4052,5161)	3557 (-3792,10906)	8940 (-3413333,3431213)	4607 (4051,5163)	2516 (-6874,11905)	
	10423	7800 (-392474,408073)	4606 (4032,5180)	3548 (-4359,11454)	9246 (-3800113,3818605)	4606 (4031,5181)	2597 (-7301,12495)	
	11437	8013 (-434338,450364)	4604 (4012,5197)	3537 (-5041,12115)	9553 (-4200261,4219367)	4605 (4011,5198)	2657 (-7849,13162)	
	12223	8226 (-477579,494032)	4603 (3992,5214)	3524 (-5769,12817)	9861 (-4613553,4633275)	4603 (3991,5215)	2723 (-8425,13870)	
	12799	8440 (-522155,539034)	4602 (3974,5230)	3508 (-6491,13507)	10166 (-5039073,5059404)	4602 (3972,5232)	2717 (-9076,14509)	

**Table A.132**

Actual and Predicted Cases with 95% Confidence Intervals for Pakistan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	38799	5711 (-59140,70563)	38799 (38799,38799)	18970 (-19894,57835)	39495 (38131,40860)	38799 (38799,38799)	38799 (38799,38799)	40119 (37531,42707)
5/17/2020	40151	5711 (-60479,71901)	38799 (36149,41449)	19195 (-20789,59179)	41110 (39467,42752)	38799 (36925,40673)	38799 (38799,38799)	41719 (-622891,706330)
5/18/2020	42125	5711 (-62249,73672)	38799 (32280,45318)	19420 (-22125,60965)	42766 (41242,44291)	38799 (34736,42862)	38799 (38799,38799)	43320 (-1440934,1527573)
5/19/2020	43966	5711 (-64070,75493)	38799 (28672,48926)	19644 (-23514,62802)	44465 (43057,45873)	38799 (32633,44965)	38799 (38799,38799)	44920 (-2437380,2527220)
5/20/2020	45898	5711 (-65957,77380)	38799 (24885,52713)	19869 (-24971,64709)	46206 (44918,47494)	38799 (30484,47114)	38799 (38799,38799)	46520 (-3586114,3679154)
5/21/2020	48091	5711 (-67979,79402)	38799 (20587,57011)	20094 (-26569,66756)	47991 (46813,49170)	38799 (28174,49424)	38799 (38799,38799)	48120 (-4869559,4965798)
5/22/2020	50694	5711 (-70216,81639)	38799 (15485,62113)	20319 (-28392,69029)	49820 (48552,51089)	38799 (25592,52006)	38799 (38799,38799)	49720 (-6275019,6374458)
5/23/2020	52437	5711 (-72345,83767)	38799 (12069,65529)	20543 (-30098,71185)	51694 (50400,52987)	38799 (23245,54353)	38799 (38799,38799)	51320 (-7792798,7895438)
5/24/2020	54601	5711 (-74513,85936)	38799 (7827,69771)	20768 (-31846,73382)	53612 (52232,54992)	38799 (20865,56733)	38799 (38799,38799)	52920 (-9415190,9521030)
5/25/2020	56349	5711 (-76614,88037)	38799 (4401,73197)	20993 (-33520,75505)	55576 (54181,56970)	38799 (18605,58993)	38799 (38799,38799)	54520 (-11135875,11244915)
5/26/2020	57705	5711 (-78582,90005)	38799 (1743,75855)	21217 (-35053,77488)	57585 (56254,58917)	38799 (16538,61060)	38799 (38799,38799)	56120 (-12949557,13061797)
5/27/2020	59151	5711 (-80472,91895)	38799 (-1091,78689)	21442 (-36504,79388)	59641 (58337,60946)	38799 (14574,63024)	38799 (38799,38799)	57720 (-14851708,14967149)
5/28/2020	61227	5711 (-82419,93842)	38799 (-5160,82758)	21667 (-38015,81349)	61745 (60460,63029)	38799 (12524,65074)	38799 (38799,38799)	59320 (-16838405,16957046)
5/29/2020	64028	5711 (-84540,95963)	38799 (-10650,88248)	21892 (-39710,83493)	63895 (62656,65135)	38799 (10239,67359)	38799 (38799,38799)	60921 (-18906203,19028044)
5/30/2020	66457	5711 (-86741,98163)	38799 (-15411,93009)	22116 (-41486,85719)	66094 (64882,67306)	38799 (7860,69738)	38799 (38799,38799)	62521 (-21052045,21177086)
5/31/2020	69496	5711 (-89104,100527)	38799 (-21367,98965)	22341 (-43434,88116)	68342 (67039,69644)	38799 (5278,72320)	38799 (38799,38799)	64121 (-23273195,23401437)
6/1/2020	72460	5711 (-91592,103015)	38799 (-27177,104775)	22566 (-45510,90642)	70638 (69106,72170)	38799 (2555,75043)	38799 (38799,38799)	65721 (-25567189,25698630)
6/2/2020	76398	5711 (-94330,105753)	38799 (-34895,112493)	22791 (-47851,93432)	72984 (70815,75153)	38799 (-474,78072)	38799 (38799,38799)	67321 (-27931785,28066427)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3140	5/16/2020	38799	40119 (37531,42707)	40132 (39566,40698)	33094 (21913,44276)	40073 (37576,42571)	40038 (39459,40618)	20833 (-14381,56047)
5/17/2020	40151	41719 (-622891,706330)	41832 (41069,42596)	33661 (21686,45637)	41685 (-1015128,1098498)	41675 (40882,42468)	21520 (-14350,57391)	
5/18/2020	42125	43320 (-1440934,1527573)	43548 (42554,44541)	34121 (20793,47449)	43274 (-2304580,2391127)	43312 (42259,44365)	22525 (-14214,59264)	
5/19/2020	43966	44920 (-2437380,2527220)	45278 (44028,46529)	34475 (19652,49299)	44963 (-3925749,4015675)	44949 (43599,46299)	23205 (-14560,60971)	
5/20/2020	45898	46520 (-3586114,3679154)	47024 (45494,48554)	34753 (18283,51222)	46590 (-5781907,5875086)	46586 (44909,48263)	24392 (-14291,63074)	
5/21/2020	48091	48120 (-4869559,4965798)	48785 (46954,50616)	34964 (16624,53304)	48147 (-7820401,7916695)	48223 (46191,50255)	25372 (-14346,65089)	
5/22/2020	50694	49720 (-6275019,6374458)	50561 (48409,52712)	35148 (14632,55665)	49869 (-10101081,10200819)	49860 (47449,52271)	26297 (-14676,67269)	
5/23/2020	52437	51320 (-7792798,7895438)	52352 (49862,54841)	35321 (12760,57882)	51514 (-12563574,12666603)	51497 (48684,54310)	27324 (-14768,69416)	
5/24/2020	54601	52920 (-9415190,9521030)	54158 (51313,57002)	35488 (10823,60153)	53126 (-15183603,15289855)	53134 (49897,56370)	28193 (-15080,71467)	
5/25/2020	56349	54520 (-11135875,11244915)	55979 (52763,59194)	35655 (8971,62339)	54715 (-17946002,18055432)	54771 (51091,58451)	29098 (-15293,73489)	
5/26/2020	57705	56120 (-12949557,13061797)	57815 (54213,61417)	35818 (7276,64359)	56404 (-20879474,20992282)	56408 (52265,60551)	29867 (-15544,75277)	
5/27/2020	59151	57720 (-14851708,14967149)	59666 (55663,63669)	35977 (5668,66287)	58030 (-23952160,24068220)	58045 (53420,62669)	30725 (-15631,77082)	
5/28/2020	61227	59320 (-16838405,16957046)	61532 (57114,65950)	36141 (3986,68296)	59588 (-27137322,27256498)	59682 (54558,64805)	31535 (-15838,78907)	
5/29/2020	64028	60921 (-18906203,19028044)	63413 (58567,68260)	36310 (2092,70529)	61310 (-30482401,30605020)	61318 (55679,66958)	32531 (-16008,81071)	
5/30/2020	66457	62521 (-21052045,21177086)	65310 (60021,70599)	36480 (107,72853)	62955 (-33955603,34081513)	62955 (56783,69127)	33728 (-16005,83461)	
5/31/2020	69496	64121 (-23273195,23401437)	67221 (61478,72965)	36651 (-2070,75372)	64567 (-37542973,37672107)	64592 (57872,71313)	34852 (-16206,85910)	
6/1/2020	72460	65721 (-25567189,25698630)	69148 (62937,75359)	36822 (-4387,78030)	66156 (-41235346,41367657)	66229 (58945,73514)	35981 (-16500,88463)	
6/2/2020	76398	67321 (-27931785,28066427)	71089 (64399,77779)	36994 (-6996,80985)	67845 (-45057281,45192970)	67866 (60003,75730)	36979 (-17177,91135)	

**Table A.133**

Actual and Predicted Cases with 95% Confidence Intervals for Panama using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	9449	2093 (-12323,16510)	9268 (8913,9623)	6591 (989,12193)	10680 (8268,13091)	9268 (8913,9623)	9268 (9268,9268)	9446 (9097,9794)	
5/17/2020	9606	2093 (-12478,16665)	9268 (8606,9930)	6667 (985,12349)	10992 (8423,13560)	9268 (8737,9799)	9268 (9268,9268)	9618 (-258,19494)	
5/18/2020	9726	2093 (-12609,16796)	9268 (8370,10166)	6743 (1006,12480)	11309 (8551,14068)	9268 (8592,9944)	9268 (9268,9268)	9790 (-12034,31613)	
5/19/2020	9867	2093 (-12744,16931)	9268 (8094,10442)	6819 (1022,12617)	11633 (8683,14583)	9268 (8439,10097)	9268 (9268,9268)	9962 (-26374,46298)	
5/20/2020	9977	2093 (-12869,17056)	9268 (7878,10658)	6896 (1049,12742)	11962 (8801,15122)	9268 (8301,10235)	9268 (9268,9268)	10134 (-42909,63177)	
5/21/2020	10116	2093 (-12998,17185)	9268 (7606,10930)	6972 (1072,12872)	12296 (8925,15668)	9268 (8154,10382)	9268 (9268,9268)	10306 (-61389,82001)	
5/22/2020	10267	2093 (-13134,17321)	9268 (7310,11226)	7048 (1088,13008)	12637 (9056,16218)	9268 (7999,10537)	9268 (9268,9268)	10478 (-81630,102586)	
5/23/2020	10577	2093 (-13316,17503)	9268 (6702,11834)	7124 (1057,13191)	12983 (9241,16725)	9268 (7774,10762)	9268 (9268,9268)	10650 (-103494,124795)	
5/24/2020	10926	2093 (-13539,17726)	9268 (6018,12518)	7201 (984,13417)	13335 (9472,17198)	9268 (7491,11045)	9268 (9268,9268)	10822 (-126870,148514)	
5/25/2020	11183	2093 (-13771,17958)	9268 (5515,13021)	7277 (902,13652)	13693 (9712,17675)	9268 (7206,11330)	9268 (9268,9268)	10994 (-151667,173655)	
5/26/2020	11447	2093 (-14011,18198)	9268 (4997,13539)	7353 (811,13895)	14057 (9959,18155)	9268 (6918,11618)	9268 (9268,9268)	11166 (-177807,200140)	
5/27/2020	11728	2093 (-14261,18448)	9268 (4446,14090)	7429 (710,14149)	14427 (10217,18637)	9268 (6622,11914)	9268 (9268,9268)	11338 (-205227,227904)	
5/28/2020	12131	2093 (-14539,18726)	9268 (3657,14879)	7505 (577,14434)	14803 (10505,19100)	9268 (6287,12249)	9268 (9268,9268)	11510 (-233870,256891)	
5/29/2020	12531	2093 (-14841,19028)	9268 (2873,15663)	7582 (420,14744)	15185 (10816,19553)	9268 (5926,12610)	9268 (9268,9268)	11682 (-263685,287050)	
5/30/2020	13018	2093 (-15176,19363)	9268 (1918,16618)	7658 (226,15090)	15573 (11159,19986)	9268 (5523,13013)	9268 (9268,9268)	11855 (-294629,318338)	
5/31/2020	13463	2093 (-15531,19718)	9268 (1046,17490)	7734 (10,15458)	15967 (11521,20413)	9268 (5100,13436)	9268 (9268,9268)	12027 (-326663,350716)	
6/1/2020	13837	2093 (-15893,20080)	9268 (313,18223)	7810 (-212,15833)	16367 (11889,20845)	9268 (4678,13858)	9268 (9268,9268)	12199 (-359749,384147)	
6/2/2020	14095	2093 (-16245,20432)	9268 (-193,18729)	7887 (-421,16194)	16774 (12249,21298)	9268 (4281,14255)	9268 (9268,9268)	12371 (-393858,418599)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	9449	9446 (9097,9794)	9449 (9343,9556)	7851 (4719,10983)	9469 (9075,9864)	9439 (9331,9546)	4806 (-4294,13906)		
5/17/2020	9606	9618 (-258,19494)	9632 (9482,9783)	7731 (4316,11145)	9623 (-3401,22647)	9611 (9458,9765)	4901 (-4260,14062)		
5/18/2020	9726	9790 (-12034,31613)	9806 (9622,9990)	7613 (3941,11286)	9781 (-19496,39058)	9775 (9585,9965)	4985 (-4220,14190)		
5/19/2020	9867	9962 (-26374,46298)	9988 (9754,10222)	7487 (3543,11431)	9930 (-38569,58430)	9944 (9698,10189)	5071 (-4183,14325)		
5/20/2020	9977	10134 (-42909,63177)	10171 (9888,10455)	7358 (3149,11567)	10090 (-61030,81211)	10113 (9814,10411)	5156 (-4138,14449)		
5/21/2020	10116	10306 (-61389,82001)	10354 (10021,10687)	7230 (2748,11713)	10266 (-87175,107706)	10279 (9926,10633)	5239 (-4099,14577)		
5/22/2020	10267	10478 (-81630,102586)	10540 (10152,10928)	7106 (2341,11871)	10438 (-116241,137116)	10447 (10033,10862)	5335 (-4050,14721)		
5/23/2020	10577	10650 (-103494,124795)	10727 (10283,11171)	6985 (1880,12091)	10624 (-148613,169861)	10615 (10139,11092)	5431 (-4046,14907)		
5/24/2020	10926	10822 (-126870,148514)	10915 (10413,11418)	6871 (1376,12365)	10777 (-182340,203895)	10783 (10241,11325)	5559 (-4039,15157)		
5/25/2020	11183	10994 (-151667,173655)	11106 (10542,11670)	6761 (872,12650)	10936 (-217738,239609)	10951 (10341,11561)	5690 (-4031,15411)		
5/26/2020	11447	11166 (-177807,200140)	11298 (10670,11925)	6658 (370,12946)	11085 (-254418,276588)	11119 (10438,11800)	5804 (-4047,15654)		
5/27/2020	11728	11338 (-205227,227904)	11491 (10798,12184)	6560 (-132,13253)	11245 (-292849,315340)	11287 (10532,12041)	5892 (-4100,15885)		
5/28/2020	12131	11510 (-233870,256891)	11686 (10925,12447)	6469 (-659,13598)	11420 (-333535,356375)	11454 (10624,12284)	5978 (-4188,16144)		
5/29/2020	12531	11682 (-263685,287050)	11882 (11052,12713)	6384 (-1202,13971)	11592 (-376210,399395)	11622 (10714,12530)	6101 (-4258,16461)		
5/30/2020	13018	11855 (-294629,318338)	12080 (11178,12983)	6305 (-1773,14383)	11779 (-421273,444831)	11790 (10801,12779)	6224 (-4358,16806)		
5/31/2020	13463	12027 (-326663,350716)	12280 (11304,13256)	6231 (-2356,14818)	11932 (-467407,491271)	11958 (10887,13029)	6359 (-4462,17180)		
6/1/2020	13837	12199 (-359749,384147)	12482 (11430,13533)	6161 (-2934,15256)	12090 (-514786,538967)	12126 (10970,13282)	6467 (-4601,17534)		
6/2/2020	14095	12371 (-393858,418599)	12684 (11555,13814)	6095 (-3485,15675)	12240 (-563112,587591)	12294 (11051,13536)	6564 (-4741,17868)		

**Table A.134**

Actual and Predicted Cases with 95% Confidence Intervals for Papua New Guinea using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HT
5/16/2020	8	2 (-9,13)	8 (8,8)	7 (6,9)	10 (6,15)	8 (8,8)	8 (8,8)	8 (8,8)
5/17/2020	8	2 (-9,13)	8 (8,8)	7 (6,9)	11 (6,16)	8 (8,8)	8 (8,8)	8 (8,8)
5/18/2020	8	2 (-9,13)	8 (8,8)	7 (6,9)	11 (6,16)	8 (8,8)	8 (8,8)	8 (8,8)
5/19/2020	8	2 (-9,13)	8 (8,8)	8 (6,9)	11 (6,17)	8 (8,8)	8 (8,8)	8 (8,8)
5/20/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	11 (6,17)	8 (8,8)	8 (8,8)	8 (8,8)
5/21/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	12 (6,18)	8 (8,8)	8 (8,8)	8 (8,8)
5/22/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	12 (6,18)	8 (8,8)	8 (8,8)	8 (8,8)
5/23/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	12 (6,19)	8 (8,8)	8 (8,8)	8 (8,8)
5/24/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	12 (6,19)	8 (8,8)	8 (8,8)	8 (8,8)
5/25/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	13 (6,20)	8 (8,8)	8 (8,8)	8 (8,8)
5/26/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	13 (6,20)	8 (8,8)	8 (8,8)	8 (8,8)
5/27/2020	8	2 (-9,13)	8 (8,8)	8 (7,9)	13 (6,21)	8 (8,8)	8 (8,8)	8 (8,8)
5/28/2020	8	2 (-9,13)	8 (8,8)	8 (8,9)	13 (6,21)	8 (8,8)	8 (8,8)	8 (8,8)
5/29/2020	8	2 (-9,13)	8 (8,8)	8 (8,9)	14 (6,22)	8 (8,8)	8 (8,8)	8 (8,8)
5/30/2020	8	2 (-9,13)	8 (8,8)	8 (8,9)	14 (6,22)	8 (8,8)	8 (8,8)	8 (8,8)
5/31/2020	8	2 (-9,13)	8 (8,8)	9 (8,9)	14 (5,23)	8 (8,8)	8 (8,8)	8 (8,8)
6/1/2020	8	2 (-9,13)	8 (8,8)	9 (8,9)	14 (5,23)	8 (8,8)	8 (8,8)	8 (8,8)
6/2/2020	8	2 (-9,13)	8 (8,8)	9 (8,10)	15 (5,24)	8 (8,8)	8 (8,8)	8 (8,8)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	8	8 (8,8)	8 (7,9)	8 (8,8)	8 (8,8)	8 (7,9)	4 (-4,12)	
5/17/2020	8	8 (8,8)	8 (7,9)	8 (8,8)	8 (8,8)	8 (7,9)	4 (-4,12)	
5/18/2020	8	8 (8,8)	8 (7,10)	8 (8,8)	8 (8,8)	8 (6,10)	4 (-4,12)	
5/19/2020	8	8 (8,8)	8 (6,10)	8 (8,8)	8 (8,8)	8 (6,10)	4 (-4,12)	
5/20/2020	8	8 (8,8)	8 (6,10)	8 (8,8)	8 (8,8)	8 (6,10)	4 (-3,12)	
5/21/2020	8	8 (8,8)	8 (6,11)	8 (8,8)	8 (8,8)	8 (6,10)	4 (-3,12)	
5/22/2020	8	8 (8,8)	8 (6,11)	8 (8,8)	8 (8,8)	8 (5,11)	4 (-3,12)	
5/23/2020	8	8 (8,8)	9 (6,11)	8 (8,8)	8 (8,8)	8 (5,11)	4 (-3,12)	
5/24/2020	8	8 (8,8)	9 (6,11)	8 (8,8)	8 (8,8)	8 (5,11)	4 (-3,12)	
5/25/2020	8	8 (8,8)	9 (6,12)	8 (8,8)	8 (8,8)	8 (5,11)	4 (-3,12)	
5/26/2020	8	8 (8,8)	9 (6,12)	8 (8,8)	8 (8,8)	8 (5,11)	4 (-3,12)	
5/27/2020	8	8 (8,8)	9 (6,12)	8 (8,8)	8 (8,8)	8 (5,11)	4 (-3,12)	
5/28/2020	8	8 (8,8)	9 (6,12)	8 (8,8)	8 (8,9)	8 (4,12)	4 (-3,12)	
5/29/2020	8	8 (8,8)	9 (5,13)	8 (8,8)	8 (8,9)	8 (4,12)	4 (-3,12)	
5/30/2020	8	8 (8,8)	9 (5,13)	8 (8,8)	8 (8,9)	8 (4,12)	5 (-3,12)	
5/31/2020	8	8 (8,8)	9 (5,13)	8 (8,8)	8 (8,8)	8 (4,12)	5 (-3,12)	
6/1/2020	8	8 (8,8)	9 (5,13)	8 (8,8)	8 (8,8)	8 (4,12)	5 (-3,12)	
6/2/2020	8	8 (8,8)	9 (5,13)	8 (8,8)	8 (8,8)	8 (4,12)	5 (-3,12)	

**Table A.135**

Actual and Predicted Cases with 95% Confidence Intervals for Paraguay using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	778	123 (-1161,1407)	759 (722,796)	399 (-345,1142)	800 (757,843)	759 (722,796)	759 (759,759)	787 (733,841)
5/17/2020	786	123 (-1169,1415)	759 (706,812)	403 (-343,1150)	832 (761,902)	759 (713,805)	759 (759,759)	809 (567,1051)
5/18/2020	788	123 (-1173,1419)	759 (702,816)	408 (-338,1154)	864 (761,968)	759 (709,809)	759 (759,759)	831 (339,1323)
5/19/2020	829	123 (-1196,1441)	759 (622,896)	413 (-351,1177)	898 (785,1011)	759 (678,840)	759 (759,759)	853 (61,1646)
5/20/2020	833	123 (-1211,1456)	759 (614,904)	417 (-357,1192)	932 (799,1065)	759 (662,856)	759 (759,759)	876 (-260,2012)
5/21/2020	836	123 (-1222,1467)	759 (608,910)	422 (-358,1203)	967 (807,1128)	759 (651,867)	759 (759,759)	898 (-620,2416)
5/22/2020	838	123 (-1230,1476)	759 (604,914)	427 (-357,1211)	1003 (811,1196)	759 (643,875)	759 (759,759)	920 (-1014,2854)
5/23/2020	850	123 (-1239,1485)	759 (581,937)	432 (-357,1220)	1040 (817,1263)	759 (634,884)	759 (759,759)	943 (-1440,3325)
5/24/2020	862	123 (-1249,1495)	759 (557,961)	436 (-358,1230)	1078 (825,1331)	759 (623,895)	759 (759,759)	965 (-1897,3826)
5/25/2020	865	123 (-1258,1503)	759 (551,967)	441 (-357,1239)	1116 (830,1403)	759 (614,904)	759 (759,759)	987 (-2381,4355)
5/26/2020	877	123 (-1267,1513)	759 (528,990)	446 (-357,1248)	1156 (837,1475)	759 (604,914)	759 (759,759)	1009 (-2893,4911)
5/27/2020	884	123 (-1276,1521)	759 (514,1004)	450 (-356,1257)	1196 (843,1549)	759 (595,923)	759 (759,759)	1032 (-3429,5493)
5/28/2020	900	123 (-1286,1531)	759 (483,1035)	455 (-357,1267)	1238 (852,1623)	759 (584,934)	759 (759,759)	1054 (-3991,6098)
5/29/2020	917	123 (-1297,1542)	759 (449,1069)	460 (-358,1278)	1280 (863,1697)	759 (571,947)	759 (759,759)	1076 (-4575,6727)
5/30/2020	964	123 (-1313,1559)	759 (357,1161)	464 (-366,1294)	1323 (881,1765)	759 (550,968)	759 (759,759)	1098 (-5182,7379)
5/31/2020	986	123 (-1331,1576)	759 (314,1204)	469 (-374,1311)	1367 (900,1834)	759 (528,990)	759 (759,759)	1121 (-5811,8052)
6/1/2020	995	123 (-1347,1592)	759 (296,1222)	474 (-380,1328)	1412 (918,1907)	759 (508,1010)	759 (759,759)	1143 (-6461,8747)
6/2/2020	1013	123 (-1364,1609)	759 (261,1257)	478 (-388,1344)	1458 (935,1981)	759 (489,1029)	759 (759,759)	1165 (-7131,9461)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
3143	778	781 (738,823)	771 (749,794)	587 (213,961)	762 (756,769)	772 (750,795)	389 (-372,1151)	
	786	797 (644,951)	789 (741,838)	565 (160,970)	765 (742,788)	792 (743,841)	401 (-357,1159)	
	788	814 (513,1114)	807 (740,875)	540 (106,974)	766 (726,807)	811 (743,879)	409 (-344,1162)	
	829	830 (357,1302)	824 (740,909)	513 (26,1000)	767 (711,824)	830 (745,915)	417 (-350,1184)	
	833	845 (180,1509)	841 (741,941)	484 (-48,1016)	768 (696,841)	849 (748,949)	429 (-343,1201)	
	836	859 (-13,1732)	858 (743,973)	455 (-118,1029)	769 (681,856)	867 (751,983)	437 (-337,1211)	
	838	873 (-221,1968)	874 (744,1004)	427 (-185,1039)	769 (668,870)	885 (754,1016)	445 (-328,1218)	
	850	887 (-442,2216)	890 (746,1034)	399 (-253,1052)	769 (655,883)	903 (756,1049)	446 (-329,1222)	
	862	900 (-673,2474)	906 (747,1064)	373 (-320,1066)	769 (644,895)	920 (759,1082)	456 (-322,1233)	
	865	913 (-914,2740)	921 (748,1094)	348 (-383,1079)	770 (633,907)	938 (761,1114)	465 (-314,1243)	
	877	925 (-1162,3013)	936 (749,1123)	325 (-445,1095)	770 (622,917)	955 (763,1147)	472 (-307,1252)	
	884	937 (-1418,3292)	950 (749,1152)	303 (-504,1110)	770 (612,927)	971 (764,1179)	480 (-301,1261)	
	900	948 (-1680,3577)	965 (750,1180)	284 (-561,1129)	770 (603,937)	988 (765,1211)	486 (-297,1269)	
	917	959 (-1947,3866)	979 (750,1208)	266 (-617,1149)	770 (594,946)	1004 (766,1243)	495 (-291,1282)	
	964	970 (-2219,4159)	993 (750,1236)	250 (-676,1176)	770 (585,954)	1020 (766,1274)	503 (-291,1298)	
	986	980 (-2496,4456)	1007 (750,1264)	235 (-735,1204)	770 (577,963)	1036 (766,1306)	517 (-286,1320)	
	995	990 (-2776,4756)	1020 (749,1291)	221 (-789,1231)	770 (569,971)	1052 (766,1337)	525 (-286,1335)	
	1013	1000 (-3059,5058)	1033 (749,1318)	209 (-841,1258)	770 (561,978)	1067 (765,1368)	530 (-289,1349)	

**Table A.136**

Actual and Predicted Cases with 95% Confidence Intervals for Peru using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	88541	11617 (-139155,162388)	84495 (76565,92425)	39892 (-55459,135244)	89801 (87331,92270)	80604 (65047,96161)
5/17/2020	92273	11617 (-142855,166089)	84495 (69250,99740)	40372 (-58219,138962)	93718 (91061,96375)	80604 (61045,100163)
5/18/2020	94933	11617 (-145853,169086)	84495 (64037,104953)	40851 (-60270,141972)	97741 (93894,101588)	80604 (57845,103363)
5/19/2020	99483	11617 (-149667,172900)	84495 (55119,113871)	41330 (-63154,145814)	101870 (97799,105941)	80604 (53571,107637)
5/20/2020	104020	11617 (-153822,177056)	84495 (46226,122764)	41809 (-66390,150009)	106108 (102033,110184)	80604 (48888,112320)
5/21/2020	108769	11617 (-158241,181474)	84495 (36918,132072)	42289 (-69897,154474)	110456 (106499,114414)	80604 (43914,117294)
5/22/2020	111698	11617 (-162242,185475)	84495 (31177,137813)	42768 (-72970,158506)	114915 (110544,119286)	80604 (39562,121646)
5/23/2020	115754	11617 (-166305,189538)	84495 (23227,145763)	43247 (-76107,162601)	119487 (114648,124325)	84495 (40414,128576)
5/24/2020	119959	11617 (-170452,193685)	84495 (14986,154004)	43726 (-79331,166784)	124172 (118844,129499)	84495 (36913,132077)
5/25/2020	123979	11617 (-174620,197854)	84495 (7106,161884)	44206 (-82575,170987)	128972 (123046,134898)	84495 (33148,135842)
5/26/2020	129751	11617 (-179184,202418)	84495 (-4207,173197)	44685 (-86233,175603)	133888 (127732,140045)	84495 (28709,140281)
5/27/2020	135905	11617 (-184129,207363)	84495 (-16269,185259)	45164 (-90287,180616)	138923 (132786,145060)	84495 (23677,145313)
5/28/2020	141779	11617 (-189320,212554)	84495 (-27782,196772)	45643 (-94595,185882)	144076 (138049,150103)	84495 (18283,150707)
5/29/2020	148285	11617 (-194822,218055)	84495 (-40533,209523)	46123 (-99225,191471)	149350 (143516,155185)	84495 (12471,156519)
5/30/2020	155671	11617 (-200728,223962)	84495 (-55010,224000)	46602 (-104276,197480)	154746 (149090,160402)	84495 (6143,162847)
5/31/2020	164476	11617 (-207204,230437)	84495 (-72268,241258)	47081 (-109923,204086)	160265 (154413,166117)	84495 (-894,169884)
6/1/2020	170039	11617 (-213633,236866)	84495 (-83171,252161)	47560 (-115505,210626)	165908 (159901,171916)	84495 (-7787,176777)
6/2/2020	170039	11617 (-219197,242430)	84495 (-83171,252161)	48040 (-120155,216235)	171677 (165790,177565)	84495 (-13509,182499)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SES	HLT	DT	ARIMA	
5/16/2020	88541	84495 (84495,84495)	87716 (81403,94030)	87716 (81403,94030)	88107 (87155,89059)	
5/17/2020	92273	84495 (84495,84495)	91128 (-3360191,3542447)	91128 (-3360191,3542447)	91920 (90370,93471)	
5/18/2020	94933	84495 (84495,84495)	94539 (-7618317,7807395)	94539 (-7618317,7807395)	95596 (93423,97769)	
5/19/2020	99483	84495 (84495,84495)	97951 (-12804883,13000785)	97951 (-12804883,13000785)	99471 (96674,102267)	
5/20/2020	104020	84495 (84495,84495)	101362 (-1878316,18986541)	101362 (-1878316,18986541)	103217 (99746,106688)	
5/21/2020	108769	84495 (84495,84495)	104774 (-25463608,25673156)	104774 (-25463608,25673156)	107154 (102992,111315)	
5/22/2020	111698	84495 (84495,84495)	108185 (-32778181,32994552)	108185 (-32778181,32994552)	110970 (106069,115872)	
5/23/2020	115754	84495 (84495,84495)	111597 (-40677081,40900275)	111597 (-40677081,40900275)	114970 (109309,120630)	
5/24/2020	119959	84495 (84495,84495)	115009 (-49120193,49350211)	115009 (-49120193,49350211)	118856 (112391,125321)	
5/25/2020	123979	84495 (84495,84495)	118420 (-58074647,58311487)	118420 (-58074647,58311487)	122918 (115629,130207)	
5/26/2020	129751	84495 (84495,84495)	121832 (-67512875,67756538)	121832 (-67512875,67756538)	126875 (118720,135030)	
5/27/2020	135905	84495 (84495,84495)	125243 (-77411329,77661816)	125243 (-77411329,77661816)	131000 (121959,140040)	
5/28/2020	141779	84495 (84495,84495)	128655 (-87749591,88006900)	128655 (-87749591,88006900)	135026 (125061,144990)	
5/29/2020	148285	84495 (84495,84495)	132066 (-98509735,98773867)	132066 (-98509735,98773867)	139214 (128306,150121)	
5/30/2020	155671	84495 (84495,84495)	135478 (-109675861,109946817)	135478 (-109675861,109946817)	143310 (131423,155197)	
5/31/2020	164476	84495 (84495,84495)	138889 (-121233740,121511519)	138889 (-121233740,121511519)	147560 (134676,160445)	
6/1/2020	170039	84495 (84495,84495)	142301 (-133170539,133455141)	142301 (-133170539,133455141)	151726 (137809,165642)	
6/2/2020	170039	84495 (84495,84495)	145712 (-145474610,145766035)	145712 (-145474610,145766035)	156040 (141074,171006)	

**Table A.136** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	88541	85206 (78669,91743)	88289 (80853,95725)	88265 (87212,89319)	46181 (-36843,129206)
5/17/2020	92273	88742 (82010,95474)	92108 (-9777644,9961860)	92105 (90430,93780)	48050 (-36821,132921)
5/18/2020	94933	92394 (86191,98596)	95652 (-21333043,21524347)	96013 (93720,98305)	49787 (-36306,135880)
5/19/2020	99483	96150 (89863,102437)	99451 (-35823535,36022437)	99987 (97048,102926)	51510 (-36634,139653)
5/20/2020	104020	100022 (93396,106648)	103288 (-52728518,52935093)	104029 (100404,107654)	53469 (-36968,143906)
5/21/2020	108769	104046 (96914,111178)	107082 (-71635929,71850092)	108137 (103781,112492)	55576 (-37308,148459)
5/22/2020	111698	108214 (101124,115303)	110746 (-9214461,92366133)	112311 (107178,117444)	57843 (-36954,152641)
5/23/2020	115754	112580 (105594,119567)	114559 (-114402974,114632092)	116551 (110592,122510)	59562 (-37286,156409)
5/24/2020	119959	117113 (110269,123958)	118378 (-138276158,138512914)	120857 (114022,127691)	61420 (-37575,160415)
5/25/2020	123979	121846 (115219,128472)	121922 (-163272562,163516405)	125227 (117467,132988)	63355 (-37798,164508)
5/26/2020	129751	126783 (120226,133340)	125721 (-189724649,189976091)	129663 (120925,138401)	65520 (-38127,169166)
5/27/2020	135905	131959 (125295,138622)	129558 (-217591120,217850236)	134163 (124396,143930)	67878 (-38559,174315)
5/28/2020	141779	137397 (130567,144228)	133352 (-246738907,247005611)	138727 (127879,149574)	70227 (-39181,179636)
5/29/2020	148285	143148 (136038,150259)	137016 (-276957867,277231899)	143354 (131374,155335)	72640 (-39990,185269)
5/30/2020	155671	149263 (141666,156859)	140829 (-308391961,308673620)	148045 (134879,161212)	74813 (-41438,191063)
5/31/2020	164476	155737 (147225,164248)	144648 (-340996270,341285567)	152800 (138395,167205)	77149 (-43269,197568)
6/1/2020	170039	162589 (153605,171574)	148192 (-374430585,374726968)	157616 (141919,173314)	79740 (-44719,204200)
6/2/2020	170039	169862 (161131,178594)	151991 (-408960818,409264800)	162496 (145452,179539)	81731 (-45916,209379)

**Table A.137**

Actual and Predicted Cases with 95% Confidence Intervals for Philippines using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	12305	2883 (-15584,21350)	12091 (11672,12510)	8901 (2230,15573)	13447 (11208,15686)	11350 (9478,13222)	12091 (12091,12091)	12337 (11855,12818)	
5/17/2020	12513	2883 (-15789,21555)	12091 (11264,12918)	9003 (2227,15779)	13793 (11415,16171)	11350 (9264,13436)	12091 (12091,12091)	12577 (-6355,31510)	
5/18/2020	12718	2883 (-15993,21759)	12091 (10862,13320)	9105 (2226,15984)	14144 (11619,16668)	11350 (9049,13651)	12091 (12091,12091)	12818 (-29162,54798)	
5/19/2020	12942	2883 (-16206,21972)	12091 (10423,13759)	9207 (2215,16199)	14499 (11833,17166)	11350 (8819,13881)	12091 (12091,12091)	13059 (-56937,83055)	
5/20/2020	13221	2883 (-16447,22213)	12091 (9876,14306)	9309 (2177,16441)	14860 (12076,17644)	11350 (8555,14145)	12091 (12091,12091)	13300 (-88962,115561)	
5/21/2020	13434	2883 (-16678,22444)	12091 (9459,14723)	9411 (2148,16674)	15226 (12308,18143)	11350 (8302,14398)	12091 (12091,12091)	13540 (-124748,151829)	
5/22/2020	13597	2883 (-16890,22656)	12091 (9139,15043)	9513 (2140,16887)	15596 (12515,18677)	11350 (8073,14627)	12091 (12091,12091)	13781 (-163944,191056)	
5/23/2020	13777	2883 (-17094,22860)	12091 (8786,15396)	9615 (2139,17091)	15972 (12713,19230)	11350 (7854,14846)	12091 (12091,12091)	14022 (-206278,234321)	
5/24/2020	14035	2883 (-17312,23078)	12091 (8281,15901)	9717 (2125,17309)	16352 (12928,19777)	11350 (7616,15084)	12091 (12091,12091)	14263 (-251536,280061)	
5/25/2020	14319	2883 (-17545,23311)	12091 (7724,16458)	9819 (2096,17543)	16738 (13160,20317)	11350 (7358,15342)	12091 (12091,12091)	14503 (-299542,328549)	
5/26/2020	14669	2883 (-17802,23568)	12091 (7038,17144)	9921 (2041,17802)	17129 (13420,20838)	11350 (7068,15632)	12091 (12091,12091)	14744 (-350149,379637)	
5/27/2020	15049	2883 (-18083,23849)	12091 (6293,17889)	10023 (1960,18086)	17525 (13708,21343)	11350 (6747,15953)	12091 (12091,12091)	14985 (-403229,433199)	
5/28/2020	15588	2883 (-18412,24178)	12091 (5237,18945)	10125 (1829,18422)	17926 (14045,21808)	11350 (6364,16336)	12091 (12091,12091)	15225 (-458673,489124)	
5/29/2020	16634	2883 (-18865,24631)	12091 (3187,20995)	10227 (1557,18898)	18333 (14488,22178)	11350 (5805,16895)	12091 (12091,12091)	15466 (-516386,547318)	
5/30/2020	17224	2883 (-19346,25112)	12091 (2030,22152)	10329 (1255,19403)	18744 (14951,22538)	11350 (5223,17477)	12091 (12091,12091)	15707 (-576281,607695)	
5/31/2020	18086	2883 (-19893,25659)	12091 (341,23841)	10431 (878,19984)	19161 (15451,22872)	11350 (4562,18138)	12091 (12091,12091)	15948 (-638283,670178)	
6/1/2020	18638	2883 (-20447,26213)	12091 (-741,24923)	10533 (496,20570)	19583 (15956,23211)	11350 (3909,18791)	12091 (12091,12091)	16188 (-702322,734698)	
6/2/2020	18997	2883 (-20981,26747)	12091 (-1445,25627)	10635 (144,21126)	20011 (16454,23567)	11350 (3301,19399)	12091 (12091,12091)	16429 (-768335,801194)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3146	12305	12337 (11855,12818)	12348 (12223,12474)	11812 (10845,12779)	12327 (11864,12790)	12343 (12217,12469)	6299 (-5473,18071)		
	12513	12577 (-6355,31510)	12601 (12398,12804)	11942 (10897,12988)	12576 (-37269,62420)	12589 (12385,12793)	6416 (-5445,18277)		
	12718	12818 (-29162,54798)	12839 (12557,13121)	12070 (10945,13195)	12827 (-98915,124570)	12819 (12534,13104)	6526 (-5427,18480)		
	12942	13059 (-56937,83055)	13097 (12698,13496)	12189 (10967,13411)	13075 (-173448,199597)	13066 (12662,13470)	6654 (-5393,18701)		
	13221	13300 (-88962,115561)	13351 (12837,13866)	12299 (10940,13659)	13304 (-256572,283180)	13307 (12786,13829)	6783 (-5381,18946)		
	13434	13540 (-124748,151829)	13603 (12965,14240)	12403 (10913,13893)	13550 (-350333,377434)	13544 (12897,14190)	6920 (-5346,19187)		
	13597	13781 (-163944,191506)	13864 (13086,14642)	12502 (10901,14102)	13776 (-450890,478442)	13787 (12998,14577)	7052 (-5296,19400)		
	13777	14022 (-206278,234321)	14124 (13202,15046)	12598 (10892,14304)	13990 (-556950,584931)	14028 (13092,14964)	7172 (-5252,19596)		
	14035	14263 (-251536,280061)	14385 (13311,15458)	12694 (10862,14525)	14228 (-671108,699564)	14267 (13176,15358)	7286 (-5231,19802)		
	14319	14503 (-299542,328549)	14651 (13415,15886)	12787 (10807,14767)	14469 (-793063,822001)	14509 (13253,15765)	7426 (-5193,20045)		
	14669	14744 (-350149,379637)	14917 (13514,16320)	12876 (10711,15041)	14706 (-921819,951231)	14750 (13323,16176)	7580 (-5161,20320)		
	15049	14985 (-403229,433199)	15185 (13607,16763)	12963 (10578,15348)	14925 (-105254,1085104)	14990 (13385,16594)	7743 (-5137,20622)		
	15588	15225 (-458673,489124)	15457 (13697,17217)	13048 (10372,15723)	15160 (-1194923,1225244)	15231 (13441,17021)	7899 (-5162,20960)		
	16634	15466 (-516386,547318)	15730 (13781,17678)	13130 (9965,16295)	15375 (-1338687,1369437)	15472 (13490,17453)	8079 (-5280,21439)		
	17224	15707 (-576281,607695)	16005 (13862,18147)	13209 (9538,16880)	15579 (-1485681,1516840)	15712 (13532,17892)	8338 (-5330,22006)		
	18086	15948 (-638283,670178)	16282 (13939,18626)	13285 (9023,17548)	15806 (-1637928,1669541)	15953 (13568,18338)	8513 (-5528,22553)		
	18638	16188 (-702322,734698)	16562 (14012,19112)	13359 (8522,18196)	16037 (-1795525,1827599)	16194 (13598,18789)	8708 (-5708,23124)		
	18997	16429 (-768335,801194)	16844 (14082,19606)	13430 (8072,18789)	16264 (-1957947,1990475)	16434 (13623,19246)	8762 (-6024,23549)		

**Table A.138**

Actual and Predicted Cases with 95% Confidence Intervals for Poland using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	18257	4200 (-23353,31752)	18016 (17544,18488)	13073 (2914,23233)	20237 (16356,24117)	18016 (17544,18488)	18016 (18016,18016)	18383 (17664,19102)	
5/17/2020	18529	4200 (-23621,32020)	18016 (17011,19021)	13224 (2944,23503)	20781 (16625,24937)	18016 (17230,18802)	18016 (18016,18016)	18758 (-24973,62489)	
5/18/2020	18885	4200 (-23946,32345)	18016 (16313,19719)	13374 (2918,23831)	21334 (16953,25714)	18016 (16842,19190)	18016 (18016,18016)	19133 (-78127,116393)	
5/19/2020	19268	4200 (-24299,32698)	18016 (15562,20470)	13525 (2862,24187)	21895 (17310,26480)	18016 (16423,19609)	18016 (18016,18016)	19508 (-142867,181884)	
5/20/2020	19739	4200 (-24702,33101)	18016 (14639,21393)	13675 (2757,24593)	22464 (17719,27210)	18016 (15939,20093)	18016 (18016,18016)	19883 (-217509,257275)	
5/21/2020	20143	4200 (-25106,33505)	18016 (13847,22185)	13825 (2650,25001)	23043 (18128,27957)	18016 (15468,20564)	18016 (18016,18016)	20258 (-300913,341429)	
5/22/2020	20619	4200 (-25534,33933)	18016 (12914,23118)	13976 (2519,25433)	23630 (18562,28697)	18016 (14969,21063)	18016 (18016,18016)	20633 (-392255,433522)	
5/23/2020	20931	4200 (-25934,34333)	18016 (12303,23729)	14126 (2418,25835)	24225 (18964,29486)	18016 (14523,21509)	18016 (18016,18016)	21008 (-490907,532924)	
5/24/2020	21326	4200 (-26334,34733)	18016 (11528,24504)	14277 (2315,26238)	24830 (19367,30292)	18016 (14076,21956)	18016 (18016,18016)	21384 (-596367,639134)	
5/25/2020	21631	4200 (-26717,35116)	18016 (10931,25101)	14427 (2233,26621)	25443 (19747,31138)	18016 (13658,22374)	18016 (18016,18016)	21759 (-708225,751743)	
5/26/2020	22074	4200 (-27113,35512)	18016 (10062,25970)	14577 (2135,27020)	26065 (20144,31985)	18016 (13219,22813)	18016 (18016,18016)	22134 (-826137,870404)	
5/27/2020	22473	4200 (-27513,35912)	18016 (9280,26752)	14728 (2035,27421)	26695 (20544,32847)	18016 (12776,23256)	18016 (18016,18016)	22509 (-949807,994825)	
5/28/2020	22825	4200 (-27907,36306)	18016 (8590,27442)	14878 (1941,27816)	27335 (20937,33733)	18016 (12343,23689)	18016 (18016,18016)	22884 (-1078981,1124749)	
5/29/2020	23155	4200 (-28294,36693)	18016 (7944,28088)	15029 (1855,28202)	27984 (21320,34648)	18016 (11923,24109)	18016 (18016,18016)	23259 (-1213435,1259953)	
5/30/2020	23571	4200 (-28687,37086)	18016 (7128,28904)	15179 (1762,28596)	28642 (21711,35572)	18016 (11493,24539)	18016 (18016,18016)	23634 (-1352970,1400238)	
5/31/2020	23786	4200 (-29058,37457)	18016 (6707,29325)	15329 (1694,28965)	29308 (22073,36544)	18016 (11096,24936)	18016 (18016,18016)	24009 (-1497407,1545426)	
6/1/2020	24165	4200 (-29432,37831)	18016 (5964,30068)	15480 (1622,29338)	29984 (22439,37530)	18016 (10694,25338)	18016 (18016,18016)	24384 (-1646588,1695356)	
6/2/2020	24395	4200 (-29790,38189)	18016 (5513,30519)	15630 (1567,29693)	30670 (22785,38554)	18016 (10314,25718)	18016 (18016,18016)	24759 (-1800365,1849884)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3147	18257	18383 (17664,19102)	18418 (18306,18531)	15339 (9621,21058)	18405 (17643,19167)	18410 (18296,18524)	9394 (-7978,26766)		
	18529	18758 (-24973,62489)	18825 (18644,19006)	15187 (9038,21336)	18813 (-109690,147316)	18806 (18620,18991)	9590 (-7857,27036)		
	18885	19133 (-78127,116393)	19235 (18978,19492)	15035 (8388,21682)	19185 (-257631,296000)	19201 (18934,19469)	9771 (-7815,27358)		
	19268	19508 (-142867,181884)	19649 (19308,19990)	14864 (7669,22059)	19591 (-444532,483715)	19597 (19238,19956)	9970 (-7778,27718)		
	19739	19883 (-217509,257275)	20066 (19633,20498)	14685 (6872,22497)	19975 (-657079,697029)	19992 (19534,20451)	10203 (-7737,28143)		
	20143	20258 (-300913,341429)	20487 (19956,21017)	14501 (6061,22942)	20368 (-895136,935873)	20388 (19822,20954)	10447 (-7675,28569)		
	20619	20633 (-392255,433522)	20911 (20276,21546)	14319 (5217,23421)	20769 (-1157579,1199117)	20784 (20103,21464)	10667 (-7659,28993)		
	20931	21008 (-490907,532924)	21339 (20593,22084)	14140 (4411,23868)	21158 (-1439940,1482257)	21179 (20377,21982)	10897 (-7602,29396)		
	21326	21384 (-596367,639134)	21770 (20909,22632)	13965 (3609,24321)	21566 (-1744302,1787435)	21575 (20644,22506)	11086 (-7594,29766)		
	21631	21759 (-708225,751743)	22205 (21222,23189)	13797 (2838,24756)	21938 (-2062964,2106840)	21970 (20905,23036)	11302 (-7541,30144)		
	22074	22134 (-826137,870404)	22644 (21534,23754)	13637 (2059,25215)	22345 (-2401264,2445953)	22366 (21160,23571)	11492 (-7531,30515)		
	22473	22509 (-949807,994825)	23086 (21844,24328)	13485 (1289,25681)	22729 (-2754503,2799961)	22761 (21410,24113)	11735 (-7464,30935)		
	22825	22884 (-1078981,1124749)	23532 (22154,24911)	13341 (540,26143)	23122 (-3123586,3169830)	23157 (21654,24660)	11959 (-7410,31328)		
	23155	23259 (-1213435,1259953)	23982 (22462,25502)	13205 (-186,26597)	23523 (-3508900,3555945)	23553 (21893,25212)	12192 (-7336,31720)		
	23571	23634 (-1352970,1400238)	24435 (22769,26100)	13077 (-909,27062)	23912 (-3908119,3955943)	23948 (22127,25769)	12399 (-7296,32094)		
	23786	24009 (-1497407,1545426)	24891 (23075,26707)	12954 (-1590,27498)	24320 (-4323275,4371914)	24344 (22356,26332)	12630 (-7207,32467)		
	24165	24384 (-1646588,1695356)	25351 (23381,27322)	12838 (-2265,27940)	24692 (-4749066,4798450)	24739 (22580,26899)	12837 (-7147,32821)		
	24395	24759 (-1800365,1849884)	25815 (23686,27944)	12727 (-2909,28362)	25098 (-5189723,5239919)	25135 (22799,27471)	13077 (-7036,33190)		

**Table A.139**

Actual and Predicted Cases with 95% Confidence Intervals for Portugal using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	28810	8546 (-31171,48263)	28583 (28138,29028)	25565 (19204,31926)	32522 (25246,39798)	28319 (27357,29281)	28583 (28583,28583)	28816 (28359,29273)	
5/17/2020	29036	8546 (-31394,48486)	28583 (27695,29471)	25853 (19553,32153)	33026 (25473,40579)	28319 (27115,29523)	28583 (28583,28583)	29053 (11395,46710)	
5/18/2020	29209	8546 (-31581,48673)	28583 (27356,29810)	26142 (19936,32347)	33527 (25659,41395)	28319 (26911,29727)	28583 (28583,28583)	29289 (-9858,68436)	
5/19/2020	29432	8546 (-31785,48877)	28583 (26919,30247)	26430 (20303,32557)	34025 (25858,42191)	28319 (26683,29955)	28583 (28583,28583)	29525 (-35742,94793)	
5/20/2020	29660	8546 (-31998,49090)	28583 (26472,30694)	26718 (20662,32775)	34519 (26064,42974)	28319 (26442,30196)	28583 (28583,28583)	29762 (-65588,125112)	
5/21/2020	29912	8546 (-32223,49315)	28583 (25978,31188)	27007 (21010,33004)	35009 (26279,43739)	28319 (26184,30454)	28583 (28583,28583)	29998 (-98941,158938)	
5/22/2020	30200	8546 (-32466,49558)	28583 (25414,31752)	27295 (21341,33250)	35496 (26512,44480)	28319 (25900,30738)	28583 (28583,28583)	30235 (-135472,19542)	
5/23/2020	30471	8546 (-32716,49808)	28583 (24883,32283)	27584 (21665,33502)	35978 (26748,45208)	28319 (25609,31029)	28583 (28583,28583)	30471 (-174929,235872)	
5/24/2020	30623	8546 (-32944,50036)	28583 (24585,32581)	27872 (22010,33735)	36457 (26957,45957)	28319 (25354,31284)	28583 (28583,28583)	30708 (-217113,278528)	
5/25/2020	30788	8546 (-33160,50251)	28583 (24261,32905)	28161 (22366,33956)	36931 (27147,46714)	28319 (25117,31521)	28583 (28583,28583)	30944 (-261858,323746)	
5/26/2020	31007	8546 (-33376,50468)	28583 (23832,33334)	28449 (22721,34178)	37400 (27335,47464)	28319 (24877,31761)	28583 (28583,28583)	31181 (-309027,371389)	
5/27/2020	31292	8546 (-33604,50696)	28583 (23273,33893)	28738 (23066,34409)	37864 (27536,48193)	28319 (24619,32019)	28583 (28583,28583)	31417 (-358503,421337)	
5/28/2020	31596	8546 (-33844,50936)	28583 (22678,34488)	29026 (23401,34652)	38324 (27748,48899)	28319 (24343,32295)	28583 (28583,28583)	31654 (-410182,473490)	
5/29/2020	31946	8546 (-34102,51194)	28583 (21992,35174)	29315 (23721,34908)	38778 (27977,49579)	28319 (24042,32596)	28583 (28583,28583)	31890 (-463976,527757)	
5/30/2020	32203	8546 (-34360,51452)	28583 (21488,35678)	29603 (24042,35165)	39227 (28203,50250)	28319 (23744,32894)	28583 (28583,28583)	32127 (-519805,584058)	
5/31/2020	32500	8546 (-34624,51716)	28583 (20906,36260)	29891 (24357,35426)	39670 (28433,50907)	28319 (23438,33200)	28583 (28583,28583)	32363 (-577598,642324)	
6/1/2020	32700	8546 (-34880,51972)	28583 (20514,36652)	30180 (24679,35681)	40107 (28651,51563)	28319 (23146,33492)	28583 (28583,28583)	32599 (-637290,702489)	
6/2/2020	32895	8546 (-35130,52222)	28583 (20131,37035)	30468 (25006,35931)	40539 (28859,52219)	28319 (22865,33773)	28583 (28583,28583)	32836 (-698823,764495)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3148	28810	28802 (28373,29230)	28817 (28490,29144)	27384 (24588,30179)	28811 (28364,29257)	28811 (28484,29139)	14521 (-13486,42528)		
	29036	29024 (13400,44649)	29053 (28496,29609)	27334 (24257,30412)	29038 (-8857,66934)	29039 (28482,29597)	14640 (-13472,42752)		
	29209	29245 (-5252,63743)	29291 (28493,30088)	27300 (23987,30614)	29266 (-55045,113578)	29268 (28469,30066)	14765 (-13412,42943)		
	29432	29464 (-27841,86769)	29531 (28475,30587)	27260 (23688,30833)	29494 (-111308,170296)	29496 (28437,30554)	14870 (-13399,43139)		
	29660	29681 (-53740,113103)	29773 (28440,31106)	27219 (23373,31064)	29722 (-176155,235599)	29724 (28387,31060)	14991 (-13376,43357)		
	29912	29986 (-82521,142313)	30017 (28389,31645)	27178 (23041,31314)	29949 (-248601,308500)	29952 (28319,31584)	15113 (-13361,43587)		
	30200	30109 (-113868,174086)	30263 (28323,32204)	27139 (22688,31589)	30177 (-327925,388279)	30180 (28233,32126)	15249 (-13345,43843)		
	30471	30320 (-147537,208177)	30512 (28242,32781)	27102 (22329,31875)	30405 (-413568,474377)	30408 (28131,32685)	15384 (-13333,44102)		
	30623	30529 (-183332,244391)	30762 (28148,33376)	27069 (22005,32133)	30632 (-505117,566381)	30636 (28013,33259)	15517 (-13301,44335)		
	30788	30737 (-221089,282562)	31015 (28040,33989)	27036 (21699,32373)	30860 (-602203,663922)	30864 (27879,33849)	15626 (-13283,44536)		
	31007	30942 (-260671,322555)	31269 (27920,34619)	27005 (21393,32617)	31088 (-704545,766720)	31092 (27730,34454)	15733 (-13271,44737)		
	31292	31145 (-301957,364248)	31526 (27787,35265)	26975 (21073,32877)	31315 (-811877,874507)	31320 (27567,35073)	15853 (-13259,44964)		
	31596	31347 (-344844,407538)	31785 (27643,35926)	26947 (20739,33155)	31543 (-923976,987061)	31548 (27390,35706)	16004 (-13221,45229)		
	31946	31547 (-389238,452332)	32045 (27487,36603)	26921 (20385,33457)	31770 (-1040644,1104184)	31776 (27200,36352)	16158 (-13193,45509)		
	32203	31745 (-435057,498547)	32308 (27321,37296)	26897 (20035,33758)	31997 (-1161697,1225692)	32004 (26997,37012)	16311 (-13163,45786)		
	32500	31942 (-482225,546108)	32573 (27144,38002)	26874 (19681,34067)	32225 (-1286998,1351448)	32232 (26781,37684)	16439 (-13164,46043)		
	32700	32136 (-530675,594947)	32840 (26957,38724)	26852 (19340,34363)	32452 (-1416398,1481302)	32460 (26553,38368)	16572 (-13154,46297)		
	32895	32329 (-580345,645002)	33109 (26760,39459)	26831 (19012,34650)	32680 (-1549783,1615143)	32688 (26312,39065)	16681 (-13162,46524)		

**Table A.140**

Actual and Predicted Cases with 95% Confidence Intervals for Qatar using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	30972	4164 (-48379,56707)	29425 (26393,32457)	14023 (-19196,47243)	30463 (29464,31461)	23623 (9219,38027)
5/17/2020	32604	4164 (-50002,58330)	29425 (23194,35656)	14191 (-20494,48875)	31756 (30385,33127)	23623 (7540,39706)
5/18/2020	33969	4164 (-51455,59783)	29425 (20519,38331)	14358 (-21622,50337)	33084 (31582,34586)	26539 (10946,42132)
5/19/2020	35606	4164 (-53016,61344)	29425 (17310,41540)	14525 (-22861,51911)	34447 (32720,36174)	26539 (10374,42704)
5/20/2020	37097	4164 (-54563,62892)	29425 (14388,44462)	14692 (-24088,53471)	35845 (33950,37740)	26539 (9372,43706)
5/21/2020	38651	4164 (-56131,64460)	29425 (11342,47508)	14859 (-25336,55054)	37279 (35230,39328)	26539 (8113,44965)
5/22/2020	40481	4164 (-57804,66132)	29425 (7755,51095)	15026 (-26692,56745)	38749 (36458,41039)	26539 (6597,46481)
5/23/2020	42213	4164 (-59516,67845)	29425 (4361,54489)	15193 (-28090,58477)	40255 (37719,42791)	26539 (4953,48125)
5/24/2020	43714	4164 (-61198,69527)	29425 (1419,57431)	15360 (-29456,60176)	41799 (39100,44497)	26539 (3299,49779)
5/25/2020	45465	4164 (-62920,71249)	29425 (-2013,60863)	15527 (-30861,61916)	43380 (40512,46247)	26539 (1565,51513)
5/26/2020	47207	4164 (-64670,72999)	29425 (-5428,64278)	15694 (-32296,63685)	44998 (41969,48028)	26539 (-222,53300)
5/27/2020	48947	4164 (-66443,74772)	29425 (-8838,67688)	15862 (-33753,65476)	46656 (43478,49833)	26539 (-2048,55126)
5/28/2020	50914	4164 (-68277,76606)	29425 (-12693,71543)	16029 (-35273,67330)	48352 (44996,51707)	26539 (-3956,57034)
5/29/2020	52907	4164 (-70165,78494)	29425 (-16600,75450)	16196 (-36849,69240)	50087 (46532,53642)	26539 (-5931,59009)
5/30/2020	55262	4164 (-72159,80487)	29425 (-21216,80066)	16363 (-38534,71260)	51861 (48020,55703)	26539 (-8034,61112)
5/31/2020	56910	4164 (-74124,82453)	29425 (-24446,83296)	16530 (-40187,73247)	53676 (49633,57719)	26539 (-10095,63173)
6/1/2020	58433	4164 (-76048,84377)	29425 (-27431,86281)	16697 (-41794,75188)	55531 (51374,59689)	26539 (-12100,65178)
6/2/2020	60259	4164 (-77983,86312)	29425 (-31010,89860)	16864 (-43410,77139)	57428 (53181,61675)	26539 (-14115,67193)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SES	HLT	DT	ARIMA	
5/16/2020	30972	29425 (29425,29425)	30697 (28204,33189)	30697 (28204,33189)	30879 (30684,31074)	
5/17/2020	32604	29425 (29425,29425)	31970 (-477800,541740)	31970 (-477800,541740)	32280 (31938,32621)	
5/18/2020	33969	29425 (29425,29425)	33243 (-1104844,1171331)	33243 (-1104844,1171331)	33693 (33171,34215)	
5/19/2020	35606	29425 (29425,29425)	34517 (-1868586,1937620)	34517 (-1868586,1937620)	35119 (34389,35848)	
5/20/2020	37097	29425 (29425,29425)	35790 (-2749026,2820606)	35790 (-2749026,2820606)	36556 (35596,37516)	
5/21/2020	38651	29425 (29425,29425)	37064 (-3732698,3806825)	37064 (-3732698,3806825)	38006 (36795,39217)	
5/22/2020	40481	29425 (29425,29425)	38337 (-4809876,4886550)	38337 (-4809876,4886550)	39468 (37987,40950)	
5/23/2020	42213	29425 (29425,29425)	39610 (-5973131,6052352)	39610 (-5973131,6052352)	40943 (39173,42712)	
5/24/2020	43714	29425 (29425,29425)	40884 (-7216557,7298325)	40884 (-7216557,7298325)	42429 (40355,44504)	
5/25/2020	45465	29425 (29425,29425)	42157 (-8535312,8619627)	42157 (-8535312,8619627)	43928 (41533,46323)	
5/26/2020	47207	29425 (29425,29425)	43431 (-9925337,10012199)	43431 (-9925337,10012199)	45439 (42708,48170)	
5/27/2020	48947	29425 (29425,29425)	44704 (-11383164,11472572)	44704 (-11383164,11472572)	46962 (43881,50044)	
5/28/2020	50914	29425 (29425,29425)	45978 (-12905784,12997739)	45978 (-12905784,12997739)	48498 (45053,51943)	
5/29/2020	52907	29425 (29425,29425)	47251 (-14490558,14585060)	47251 (-14490558,14585060)	50046 (46223,53868)	
5/30/2020	55262	29425 (29425,29425)	48524 (-16135144,16232192)	48524 (-16135144,16232192)	51606 (47393,55818)	
5/31/2020	56910	29425 (29425,29425)	49798 (-17837445,17937041)	49798 (-17837445,17937041)	53178 (48563,57793)	
6/1/2020	58433	29425 (29425,29425)	51071 (-19595572,19697714)	51071 (-19595572,19697714)	54762 (49732,59792)	
6/2/2020	60259	29425 (29425,29425)	52345 (-21407808,21512498)	52345 (-21407808,21512498)	56359 (50903,61815)	

(continued on next page)

**Table A.140** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		LSTM	HWA	SSM	Sutte-Arima	
3150	5/16/2020	30972	11365 (-27064,49795)	30854 (28053,33655)	30853 (30654,31052)	16171 (-12838,45181)
	5/17/2020	32604	9709 (-32067,51485)	32212 (-2429743,2494167)	32210 (31854,32566)	16898 (-13011,46808)
	5/18/2020	33969	8169 (-36730,53067)	33555 (-5445961,5513072)	33567 (33014,34120)	17586 (-13075,48247)
	5/19/2020	35606	6833 (-41198,54865)	34909 (-9130906,9200725)	34924 (34142,35705)	18335 (-13154,49824)
	5/20/2020	37097	5716 (-45296,56728)	36252 (-13366905,13439408)	36281 (35244,37317)	19069 (-13226,51363)
	5/21/2020	38651	4797 (-49076,58670)	37617 (-18122292,18197527)	37638 (36322,38953)	19768 (-13359,52896)
	5/22/2020	40481	4073 (-52629,60776)	38972 (-23329123,23407067)	38994 (37379,40610)	20531 (-13514,54576)
	5/23/2020	42213	3517 (-55916,62950)	40328 (-28953824,29034481)	40351 (38415,42288)	21301 (-13687,56290)
	5/24/2020	43714	3090 (-58911,65092)	41686 (-34968833,35052205)	41708 (39432,43984)	22086 (-13801,57972)
	5/25/2020	45465	2761 (-61740,67262)	43030 (-41336115,41422174)	43065 (40432,45698)	22825 (-13998,59649)
	5/26/2020	47207	2508 (-64424,69440)	44383 (-48048481,48137248)	44422 (41414,47430)	23566 (-14221,61353)
	5/27/2020	48947	2313 (-66989,71615)	45726 (-55078843,55170295)	45779 (42380,49178)	24329 (-14438,63096)
	5/28/2020	50914	2163 (-69501,73826)	47092 (-62434333,62528517)	47136 (43331,50941)	25138 (-14657,64932)
	5/29/2020	52907	2046 (-71973,76064)	48446 (-70090704,70187596)	48493 (44266,52719)	25948 (-14917,66813)
	5/30/2020	55262	1955 (-74473,78383)	49803 (-78038052,78137657)	49850 (45187,54512)	26771 (-15259,68801)
	5/31/2020	56910	1883 (-76877,80644)	51161 (-86267027,86369348)	51207 (46094,56319)	27663 (-15482,70808)
	6/1/2020	58433	1827 (-79181,82836)	52504 (-94757234,94862242)	52563 (46988,58139)	28399 (-15825,72624)
	6/2/2020	60259	1783 (-81449,85015)	53858 (-103509195,103616911)	53920 (47868,59973)	29116 (-16206,74439)

**Table A.141**

Actual and Predicted Cases with 95% Confidence Intervals for Romania using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	16704	3978 (-20965,28921)	16437 (15914,16960)	12394 (3945,20842)	19132 (14373,23892)	16437 (15914,16960)	16437 (16437,16437)	16696 (16188,17205)	
5/17/2020	16871	3978 (-21129,29085)	16437 (15586,17288)	12536 (4064,21009)	19643 (14535,24751)	16437 (15731,17143)	16437 (16437,16437)	16941 (-3382,37265)	
5/18/2020	17036	3978 (-21292,29248)	16437 (15263,17611)	12679 (4184,21174)	20162 (14693,25630)	16437 (15547,17327)	16437 (16437,16437)	17186 (-27884,62256)	
5/19/2020	17191	3978 (-21450,29407)	16437 (14959,17915)	12821 (4309,21334)	20688 (14842,26533)	16437 (15369,17505)	16437 (16437,16437)	17431 (-57722,92583)	
5/20/2020	17387	3978 (-21623,29579)	16437 (14575,18299)	12964 (4420,21508)	21222 (15006,27438)	16437 (15170,17704)	16437 (16437,16437)	17676 (-92123,127474)	
5/21/2020	17585	3978 (-21804,29761)	16437 (14187,18687)	13107 (4524,21690)	21764 (15178,28350)	16437 (14960,17914)	16437 (16437,16437)	17920 (-130564,166405)	
5/22/2020	17712	3978 (-21970,29926)	16437 (13938,18936)	13249 (4643,21856)	22314 (15328,29300)	16437 (14775,18099)	16437 (16437,16437)	18165 (-172665,208996)	
5/23/2020	17857	3978 (-22130,30086)	16437 (13654,19220)	13392 (4767,22017)	22872 (15471,30273)	16437 (14597,18277)	16437 (16437,16437)	18410 (-218138,254958)	
5/24/2020	18070	3978 (-22302,30258)	16437 (13236,19638)	13535 (4880,22189)	23438 (15628,31248)	16437 (14401,18473)	16437 (16437,16437)	18655 (-266750,304060)	
5/25/2020	18283	3978 (-22483,30439)	16437 (12819,20055)	13677 (4985,22370)	24012 (15796,32228)	16437 (14192,18682)	16437 (16437,16437)	18900 (-318313,356113)	
5/26/2020	18429	3978 (-22658,30614)	16437 (12533,20341)	13820 (5096,22544)	24594 (15955,33233)	16437 (13994,18880)	16437 (16437,16437)	19144 (-372669,410958)	
5/27/2020	18594	3978 (-22831,30787)	16437 (12209,20665)	13963 (5208,22717)	25184 (16111,34258)	16437 (13799,19075)	16437 (16437,16437)	19389 (-429681,468459)	
5/28/2020	18791	3978 (-23009,30965)	16437 (11823,21051)	14105 (5317,22893)	25783 (16273,35293)	16437 (13597,19277)	16437 (16437,16437)	19634 (-489231,528499)	
5/29/2020	18982	3978 (-23189,31145)	16437 (11449,21425)	14248 (5424,23072)	26390 (16438,36341)	16437 (13393,19481)	16437 (16437,16437)	19879 (-551217,590975)	
5/30/2020	19133	3978 (-23365,31321)	16437 (11513,21721)	14390 (5534,23247)	27005 (16598,37411)	16437 (13195,19679)	16437 (16437,16437)	20124 (-615548,655795)	
5/31/2020	19257	3978 (-23535,31491)	16437 (10910,21964)	14533 (5651,23415)	27628 (16749,38507)	16437 (13008,19866)	16437 (16437,16437)	20368 (-682139,722876)	
6/1/2020	19398	3978 (-23702,31658)	16437 (10633,22241)	14676 (5771,23580)	28260 (16896,39624)	16437 (12824,20050)	16437 (16437,16437)	20613 (-750919,792146)	
6/2/2020	19517	3978 (-23864,31820)	16437 (10400,22474)	14818 (5897,23740)	28900 (17036,40764)	16437 (12649,20225)	16437 (16437,16437)	20858 (-821820,863536)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3151	16704	16696 (16188,17205)	16671 (16541,16800)	15703 (13741,17665)	16662 (16221,17103)	16662 (16532,16792)	8446 (-7740,24632)		
	16871	16941 (-3382,37265)	16906 (16693,17120)	15741 (13648,17833)	16887 (-14928,48703)	16887 (16672,17103)	8571 (-7656,24798)		
	17036	17186 (-27884,62256)	17145 (16846,17443)	15772 (13544,18000)	17112 (-53620,87845)	17112 (16809,17416)	8677 (-7602,24956)		
	17191	17431 (-57722,92583)	17385 (16996,17773)	15792 (13425,18159)	17337 (-100733,135408)	17338 (16942,17734)	8793 (-7532,25118)		
	17387	17676 (-92123,127474)	17627 (17144,18110)	15803 (13272,18335)	17563 (-155042,190167)	17563 (17069,18057)	8895 (-7494,25284)		
	17585	17920 (-130564,166405)	17871 (17288,18455)	15809 (13096,18522)	17788 (-215715,251291)	17788 (17190,18386)	9022 (-7434,25478)		
	17712	18165 (-172665,208996)	18118 (17429,18806)	15811 (12932,18691)	18013 (-282152,318177)	18013 (17306,18721)	9151 (-7351,25653)		
	17857	18410 (-218138,254958)	18366 (17567,19165)	15810 (12766,18855)	18238 (-353894,390370)	18239 (17416,19061)	9270 (-7273,25814)		
	18070	18655 (-266750,304060)	18617 (17702,19531)	15809 (12582,19037)	18463 (-430580,467506)	18464 (17521,19407)	9387 (-7210,25984)		
	18283	18900 (-318313,356113)	18870 (17835,19904)	15809 (12384,19233)	18688 (-511907,549282)	18689 (17621,19757)	9516 (-7141,26173)		
	18429	19144 (-372669,410958)	19124 (17965,20284)	15808 (12194,19422)	18912 (-597628,635453)	18914 (17716,20113)	9658 (-7048,26364)		
	18594	19389 (-429681,468459)	19381 (18092,20670)	15807 (12005,19610)	19137 (-687531,725805)	19139 (17806,20473)	9786 (-6967,26539)		
	18791	19634 (-489231,528499)	19640 (18218,21063)	15806 (11809,19804)	19362 (-781426,820151)	19365 (17892,20838)	9908 (-6897,26712)		
	18982	19879 (-551217,590975)	19901 (18341,21462)	15805 (11609,20001)	19587 (-879150,918325)	19590 (17973,21207)	10036 (-6822,26893)		
	19133	20124 (-615548,655795)	20164 (18462,21867)	15804 (11414,20194)	19812 (-980558,1020182)	19815 (18050,21580)	10175 (-6730,27080)		
	19257	20368 (-682139,722876)	20430 (18581,22278)	15803 (11227,20378)	20037 (-1085521,1125594)	20040 (18122,21958)	10305 (-6641,27251)		
	19398	20613 (-750919,792146)	20697 (18699,22695)	15802 (11045,20558)	20262 (-1193919,1234442)	20265 (18191,22340)	10427 (-6558,27411)		
	19517	20858 (-821820,863536)	20967 (18815,23118)	15801 (10870,20732)	20486 (-1305650,1346623)	20491 (18255,22726)	10553 (-6464,27570)		

**Table A.142**

Actual and Predicted Cases with 95% Confidence Intervals for Russia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	272043	34485 (-431128,500099)	262843 (244811,280875)	119884 (-178347,418116)	280736 (263698,297774)	242271 (183918,300624)
5/17/2020	281752	34485 (-440738,509709)	262843 (225781,299905)	121332 (-185103,427766)	293389 (273258,313519)	242271 (173739,310803)
5/18/2020	290678	34485 (-449876,518846)	262843 (208286,317400)	122779 (-191386,436944)	306391 (282177,330604)	242271 (163966,320576)
5/19/2020	299941	34485 (-459104,528075)	262843 (190131,335555)	124226 (-197764,446217)	319746 (291173,348320)	242271 (153994,330548)
5/20/2020	308705	34485 (-468187,537158)	262843 (172953,352733)	125674 (-203994,455342)	333460 (299934,366987)	242271 (144163,340379)
5/21/2020	317554	34485 (-477247,546217)	262843 (155609,370077)	127121 (-210202,464444)	347537 (308649,386425)	242271 (134337,350205)
5/22/2020	326448	34485 (-486323,555293)	262843 (138177,387509)	128569 (-216425,473562)	361981 (317381,406581)	242271 (124482,360060)
5/23/2020	335882	34485 (-495569,564539)	262843 (119687,405999)	130016 (-222821,482853)	376797 (326355,427238)	242271 (114412,370130)
5/24/2020	344481	34485 (-504735,573705)	262843 (102833,422853)	131464 (-229133,492060)	391988 (335199,448778)	242271 (104464,380078)
5/25/2020	353427	34485 (-513931,582902)	262843 (85298,440388)	132911 (-235474,501296)	407561 (344092,471030)	242271 (94494,390048)
5/26/2020	362342	34485 (-523151,592121)	262843 (67825,457861)	134359 (-241836,510554)	423519 (353027,494011)	242271 (84512,400030)
5/27/2020	370680	34485 (-532285,601256)	262843 (51482,474204)	135806 (-248107,519719)	439866 (361844,517888)	242271 (74663,409879)
5/28/2020	379051	34485 (-541365,610335)	262843 (35075,490611)	137253 (-254319,528826)	456608 (370604,542611)	242271 (64901,419641)
5/29/2020	387623	34485 (-550439,619410)	262843 (18274,507412)	138701 (-260523,537924)	473748 (379389,568107)	242271 (55161,429381)
5/30/2020	396575	34485 (-559573,628544)	262843 (728,524958)	140148 (-266785,547081)	491291 (388298,594285)	242271 (45360,439182)
5/31/2020	405843	34485 (-568806,637776)	262843 (-17437,543123)	141596 (-273145,556337)	509247 (397387,621098)	242271 (35450,449092)
6/1/2020	414328	34485 (-578014,646984)	262843 (-34068,559754)	143043 (-279476,565563)	527606 (406464,648748)	242271 (25595,458947)
6/2/2020	423186	34485 (-587253,656223)	262843 (-51429,577115)	144491 (-285837,574818)	546386 (415621,677151)	242271 (15720,468822)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
SES	HLT	DT	ARIMA			
5/16/2020	272043	262843 (262843,262843)	273268 (252835,293700)	273268 (252835,293700)	273477 (272667,274288)	
5/17/2020	281752	262843 (262843,262843)	283701 (-33842079,34409482)	283701 (-33842079,34409482)	284268 (282504,286031)	
5/18/2020	290678	262843 (262843,262843)	294135 (-75998799,76587069)	294135 (-75998799,76587069)	295151 (292173,298130)	
5/19/2020	299941	262843 (262843,262843)	304568 (-127347440,127956577)	304568 (-127347440,127956577)	306129 (301731,310527)	
5/20/2020	308705	262843 (262843,262843)	315002 (-186539876,187169880)	315002 (-186539876,187169880)	317200 (311208,323193)	
5/21/2020	317554	262843 (262843,262843)	325436 (-252669918,253320789)	325436 (-252669918,253320789)	328365 (320621,336109)	
5/22/2020	326448	262843 (262843,262843)	335869 (-325083324,325755063)	335869 (-325083324,325755063)	339624 (329985,349264)	
5/23/2020	335882	262843 (262843,262843)	346303 (-403280579,403973184)	346303 (-403280579,403973184)	350977 (339308,362645)	
5/24/2020	344481	262843 (262843,262843)	356736 (-486864547,487578020)	356736 (-486864547,487578020)	362423 (348601,376245)	
5/25/2020	353427	262843 (262843,262843)	367170 (-575509828,576244168)	367170 (-575509828,576244168)	373963 (357868,390058)	
5/26/2020	362342	262843 (262843,262843)	377603 (-668943529,669698736)	377603 (-668943529,669698736)	385597 (367117,404076)	
5/27/2020	370680	262843 (262843,262843)	388037 (-766932541,767708615)	388037 (-766932541,767708615)	397324 (376353,418295)	
5/28/2020	379051	262843 (262843,262843)	398471 (-869274743,870071684)	398471 (-869274743,870071684)	409145 (385580,432711)	
5/29/2020	387623	262843 (262843,262843)	408904 (-975792698,976610507)	408904 (-975792698,976610507)	421060 (394801,447319)	
5/30/2020	396575	262843 (262843,262843)	419338 (-1086329018,1087167693)	419338 (-1086329018,1087167693)	433069 (404021,462117)	
5/31/2020	405843	262843 (262843,262843)	429771 (-1200742849,1201602391)	429771 (-1200742849,1201602391)	445171 (413242,477100)	
6/1/2020	414328	262843 (262843,262843)	440205 (-1318907171,1319787581)	440205 (-1318907171,1319787581)	457367 (422468,492267)	
6/2/2020	423186	262843 (262843,262843)	450638 (-1440706675,1441607952)	450638 (-1440706675,1441607952)	469657 (431700,507614)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
LSTM	HWA	SSM	Sutte-Arima			
5/16/2020	272043	270847 (268502,273191)	273440 (252670,294209)	273417 (272588,274246)	141944 (-113050,396938)	
5/17/2020	281752	282654 (280578,284730)	284036 (-219765210,220333281)	284089 (282261,285918)	147192 (-112211,406595)	
5/18/2020	290678	294801 (289837,299766)	294630 (-491702641,492291901)	294762 (291633,297891)	152585 (-110625,415794)	
5/19/2020	299941	307300 (298904,315696)	305224 (-822921286,823531734)	305434 (300778,310091)	157782 (-109367,424930)	

**Table A.142** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/20/2020	308705	320196 (307632,332760)	315816 (-1204707118,1205338750)	316107 (309729,322484)	163326 (-107476,434127)
5/21/2020	317554	333504 (316345,350662)	326408 (-1631216031,1631868846)	326779 (318508,335050)	168743 (-105646,443133)
5/22/2020	326448	347265 (325125,369405)	336998 (-2098217493,2098891490)	337452 (327129,347774)	174358 (-103543,452258)
5/23/2020	335882	361505 (334226,388785)	347588 (-2602485778,2603180954)	348124 (335604,360644)	179969 (-101542,461479)
5/24/2020	344481	376281 (343219,409344)	358176 (-3141456213,3142172566)	358797 (343942,373652)	185805 (-99134,470743)
5/25/2020	353427	391633 (352332,430934)	368763 (-3713020476,3713758003)	369469 (352150,386788)	191530 (-96810,479870)
5/26/2020	362342	407571 (361543,453599)	379349 (-4315422306,4316181005)	380142 (360236,400048)	197354 (-94345,489054)
5/27/2020	370680	424157 (370701,477613)	389934 (-4947151244,4947931113)	390814 (368204,413424)	203128 (-91804,498060)
5/28/2020	379051	441443 (379896,502990)	400519 (-5606905334,5607706371)	401487 (376060,426913)	208993 (-89068,507053)
5/29/2020	387623	459487 (389240,529734)	411102 (-6293534126,6294356330)	412159 (383808,440510)	214851 (-86289,515990)
5/30/2020	396575	478340 (398855,557825)	421684 (-7006020063,7006863431)	422832 (391452,454211)	220795 (-83430,525020)
5/31/2020	405843	498096 (408841,587351)	432265 (-7743452663,7744317192)	433504 (398995,468013)	226950 (-80381,534281)
6/1/2020	414328	518851 (419018,618683)	442844 (-8505005683,8505891372)	444177 (406440,481913)	233200 (-77138,543538)
6/2/2020	423186	540704 (429527,651881)	453423 (-9289938325,9290845172)	454849 (413791,495907)	239329 (-73998,552656)

**Table A.143**

Actual and Predicted Cases with 95% Confidence Intervals for Rwanda using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	289	78 (-336,492)	287 (283,291)	235 (129,341)	337 (243,430)	287 (283,291)	287 (287,287)	290 (285,295)
5/17/2020	292	78 (-339,495)	287 (277,297)	237 (131,344)	344 (246,443)	287 (280,294)	287 (287,287)	291 (284,299)
5/18/2020	297	78 (-344,499)	287 (267,307)	240 (132,348)	352 (251,454)	287 (274,300)	287 (287,287)	293 (283,304)
5/19/2020	308	78 (-351,507)	287 (246,328)	243 (129,356)	360 (258,462)	287 (264,310)	287 (287,287)	295 (282,309)
5/20/2020	314	78 (-358,514)	287 (234,340)	245 (127,363)	368 (266,471)	287 (255,319)	287 (287,287)	297 (280,314)
5/21/2020	320	78 (-365,520)	287 (222,352)	248 (126,370)	377 (272,481)	287 (248,326)	287 (287,287)	299 (279,319)
5/22/2020	321	78 (-370,526)	287 (220,354)	251 (126,375)	385 (277,492)	287 (243,331)	287 (287,287)	301 (277,325)
5/23/2020	325	78 (-375,530)	287 (213,361)	253 (127,380)	393 (282,504)	287 (238,336)	287 (287,287)	303 (275,331)
5/24/2020	327	78 (-379,534)	287 (209,365)	256 (128,384)	402 (286,517)	287 (234,340)	287 (287,287)	305 (272,337)
5/25/2020	336	78 (-384,540)	287 (191,383)	259 (128,389)	410 (291,529)	287 (228,346)	287 (287,287)	307 (270,344)
5/26/2020	339	78 (-389,544)	287 (185,389)	261 (129,394)	419 (296,542)	287 (223,351)	287 (287,287)	309 (267,350)
5/27/2020	346	78 (-394,550)	287 (171,403)	264 (129,399)	428 (301,554)	287 (217,357)	287 (287,287)	311 (264,357)
5/28/2020	349	78 (-399,554)	287 (165,409)	267 (129,404)	437 (306,567)	287 (212,362)	287 (287,287)	312 (261,364)
5/29/2020	355	78 (-404,560)	287 (154,420)	269 (130,409)	445 (311,580)	287 (206,368)	287 (287,287)	314 (257,371)
5/30/2020	359	78 (-409,565)	287 (146,428)	272 (130,414)	454 (316,593)	287 (201,373)	287 (287,287)	316 (254,379)
5/31/2020	370	78 (-415,570)	287 (124,450)	275 (130,420)	464 (322,605)	287 (194,380)	287 (287,287)	318 (250,386)
6/1/2020	377	78 (-421,576)	287 (111,463)	277 (129,426)	473 (328,618)	287 (187,387)	287 (287,287)	320 (247,394)
6/2/2020	384	78 (-427,583)	287 (97,477)	280 (128,432)	482 (334,630)	287 (180,394)	287 (287,287)	322 (243,401)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	289	289 (285,293)	288 (281,294)	271 (235,306)	288 (286,289)	288 (281,294)	144 (-140,428)
5/17/2020	292	291 (285,296)	288 (277,298)	269 (228,310)	287 (286,289)	288 (277,298)	144 (-143,431)
5/18/2020	297	292 (284,300)	288 (274,302)	267 (219,315)	287 (286,289)	288 (273,302)	145 (-146,436)
5/19/2020	308	293 (284,303)	288 (268,308)	265 (206,324)	286 (284,288)	288 (268,308)	146 (-152,444)
5/20/2020	314	295 (283,307)	288 (262,314)	263 (194,332)	286 (284,287)	288 (262,314)	147 (-157,451)
5/21/2020	320	296 (282,310)	289 (256,321)	261 (182,340)	285 (283,287)	288 (256,321)	148 (-162,458)
5/22/2020	321	297 (281,314)	289 (249,328)	259 (172,345)	286 (284,288)	289 (249,328)	148 (-166,462)
5/23/2020	325	299 (280,318)	289 (242,336)	257 (163,350)	286 (284,288)	289 (242,336)	147 (-172,465)
5/24/2020	327	300 (278,321)	289 (235,344)	255 (155,355)	286 (284,287)	289 (235,344)	146 (-176,469)
5/25/2020	336	301 (277,325)	289 (227,352)	253 (145,361)	286 (284,287)	289 (227,352)	146 (-182,474)
5/26/2020	339	302 (276,329)	290 (219,361)	252 (136,367)	285 (283,287)	290 (218,361)	147 (-185,480)
5/27/2020	346	303 (274,333)	290 (210,370)	250 (127,373)	284 (283,286)	290 (210,370)	147 (-190,485)
5/28/2020	349	305 (272,337)	290 (201,379)	248 (118,379)	284 (282,286)	290 (201,379)	148 (-194,491)
5/29/2020	355	306 (271,341)	290 (192,389)	247 (109,385)	285 (283,287)	290 (191,389)	147 (-200,495)
5/30/2020	359	307 (269,344)	291 (182,399)	246 (101,390)	285 (283,287)	290 (182,399)	148 (-204,500)
5/31/2020	370	308 (267,348)	291 (172,410)	244 (91,398)	285 (282,287)	291 (172,409)	148 (-210,506)
6/1/2020	377	309 (265,352)	291 (162,420)	243 (82,405)	285 (282,287)	291 (162,420)	149 (-215,513)
6/2/2020	384	310 (263,356)	291 (151,431)	242 (72,412)	284 (281,287)	291 (151,431)	149 (-220,519)

**Table A.144**

Actual and Predicted Cases with 95% Confidence Intervals for Saint Kitts and Levis using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	15	6 (-13,24)	15 (15,15)	16 (14,18)	17 (14,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/17/2020	15	6 (-13,24)	15 (15,15)	16 (14,19)	17 (14,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/18/2020	15	6 (-13,24)	15 (15,15)	16 (14,19)	17 (14,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/19/2020	15	6 (-13,24)	15 (15,15)	17 (14,19)	16 (14,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/20/2020	15	6 (-13,24)	15 (15,15)	17 (14,20)	16 (14,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/21/2020	15	6 (-13,24)	15 (15,15)	17 (14,20)	16 (13,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/22/2020	15	6 (-13,24)	15 (15,15)	17 (14,20)	16 (13,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/23/2020	15	6 (-13,24)	15 (15,15)	17 (14,21)	16 (13,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/24/2020	15	6 (-13,24)	15 (15,15)	17 (14,21)	16 (13,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/25/2020	15	6 (-13,24)	15 (15,15)	18 (14,21)	16 (13,19)	15 (15,15)	15 (15,15)	15 (15,15)
5/26/2020	15	6 (-13,24)	15 (15,15)	18 (14,22)	16 (13,18)	15 (15,15)	15 (15,15)	15 (15,15)
5/27/2020	15	6 (-13,24)	15 (15,15)	18 (14,22)	16 (13,18)	15 (15,15)	15 (15,15)	15 (15,15)
5/28/2020	15	6 (-13,24)	15 (15,15)	18 (14,23)	16 (13,18)	15 (15,15)	15 (15,15)	15 (15,15)
5/29/2020	15	6 (-13,24)	15 (15,15)	18 (14,23)	15 (13,18)	15 (15,15)	15 (15,15)	15 (15,15)
5/30/2020	15	6 (-13,24)	15 (15,15)	19 (14,23)	15 (13,18)	15 (15,15)	15 (15,15)	15 (15,15)
5/31/2020	15	6 (-13,24)	15 (15,15)	19 (14,24)	15 (13,17)	15 (15,15)	15 (15,15)	15 (15,15)
6/1/2020	15	6 (-13,24)	15 (15,15)	19 (14,24)	15 (13,17)	15 (15,15)	15 (15,15)	15 (15,15)
6/2/2020	15	6 (-13,24)	15 (15,15)	19 (14,24)	15 (12,17)	15 (15,15)	15 (15,15)	15 (15,15)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	15	15 (15,15)	15 (14,16)	15 (15,15)	15 (14,16)	15 (14,16)	8 (-7,22)	
5/17/2020	15	15 (15,15)	15 (14,17)	15 (15,15)	15 (14,15)	15 (13,17)	8 (-7,22)	
5/18/2020	15	15 (15,15)	16 (14,18)	15 (15,15)	15 (15,15)	15 (13,17)	8 (-7,22)	
5/19/2020	15	15 (15,15)	16 (14,18)	15 (15,15)	15 (15,16)	15 (12,18)	8 (-6,22)	
5/20/2020	15	15 (15,15)	16 (14,19)	15 (15,16)	15 (15,16)	15 (12,18)	8 (-6,22)	
5/21/2020	15	15 (15,15)	16 (14,19)	15 (15,16)	15 (14,16)	15 (12,18)	8 (-6,22)	
5/22/2020	15	15 (15,15)	17 (14,20)	15 (15,16)	15 (14,16)	15 (11,19)	8 (-6,22)	
5/23/2020	15	15 (15,15)	17 (14,20)	15 (15,16)	15 (14,16)	15 (11,19)	8 (-5,22)	
5/24/2020	15	15 (15,15)	17 (14,21)	15 (15,16)	15 (14,16)	15 (10,20)	9 (-5,22)	
5/25/2020	15	15 (15,15)	17 (14,21)	15 (15,16)	15 (14,16)	15 (10,20)	9 (-5,22)	
5/26/2020	15	15 (15,15)	18 (14,21)	15 (15,16)	15 (14,16)	15 (9,21)	9 (-5,22)	
5/27/2020	15	15 (15,15)	18 (14,22)	15 (15,16)	15 (14,16)	15 (9,21)	9 (-4,22)	
5/28/2020	15	15 (15,15)	18 (14,22)	15 (15,16)	15 (14,16)	15 (8,22)	9 (-4,22)	
5/29/2020	15	15 (15,15)	18 (14,23)	15 (15,16)	15 (14,16)	15 (8,22)	9 (-4,22)	
5/30/2020	15	15 (15,15)	19 (14,23)	15 (15,16)	15 (14,16)	15 (7,23)	9 (-4,22)	
5/31/2020	15	15 (15,15)	19 (14,24)	15 (15,16)	15 (14,16)	15 (7,23)	9 (-3,22)	
6/1/2020	15	15 (15,15)	19 (14,24)	15 (15,16)	15 (14,16)	15 (6,24)	10 (-3,22)	
6/2/2020	15	15 (15,15)	19 (15,24)	15 (15,16)	15 (14,16)	15 (6,24)	10 (-3,22)	

**Table A.145**

Actual and Predicted Cases with 95% Confidence Intervals for Saint Lucia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	18	7 (-15,29)	18 (18,18)	19 (17,21)	18 (18,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/17/2020	18	7 (-15,29)	18 (18,18)	19 (17,21)	18 (18,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/18/2020	18	7 (-15,29)	18 (18,18)	19 (17,22)	18 (18,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/19/2020	18	7 (-15,29)	18 (18,18)	20 (17,22)	18 (18,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/20/2020	18	7 (-15,29)	18 (18,18)	20 (17,23)	18 (18,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/21/2020	18	7 (-15,29)	18 (18,18)	20 (17,23)	18 (17,19)	18 (18,18)	18 (18,18)	18 (18,18)
5/22/2020	18	7 (-15,29)	18 (18,18)	20 (17,23)	18 (17,18)	18 (18,18)	18 (18,18)	18 (18,18)
5/23/2020	18	7 (-15,29)	18 (18,18)	20 (17,24)	18 (17,18)	18 (18,18)	18 (18,18)	18 (18,18)
5/24/2020	18	7 (-15,29)	18 (18,18)	21 (17,24)	18 (17,18)	18 (18,18)	18 (18,18)	18 (18,18)
5/25/2020	18	7 (-15,29)	18 (18,18)	21 (17,25)	17 (17,18)	18 (18,18)	18 (18,18)	18 (18,18)
5/26/2020	18	7 (-15,29)	18 (18,18)	21 (17,25)	17 (16,18)	18 (18,18)	18 (18,18)	18 (18,18)
5/27/2020	18	7 (-15,29)	18 (18,18)	21 (17,26)	17 (16,18)	18 (18,18)	18 (18,18)	18 (18,18)
5/28/2020	18	7 (-15,29)	18 (18,18)	21 (17,26)	17 (15,18)	18 (18,18)	18 (18,18)	18 (18,18)
5/29/2020	18	7 (-15,29)	18 (18,18)	22 (17,26)	16 (15,18)	18 (18,18)	18 (18,18)	18 (18,19)
5/30/2020	18	7 (-15,29)	18 (18,18)	22 (17,27)	16 (14,18)	18 (18,18)	18 (18,18)	18 (18,19)
5/31/2020	18	7 (-15,29)	18 (18,18)	22 (17,27)	16 (14,18)	18 (18,18)	18 (18,18)	18 (18,19)
6/1/2020	18	7 (-15,29)	18 (18,18)	22 (17,28)	15 (13,18)	18 (18,18)	18 (18,18)	18 (18,19)
6/2/2020	18	7 (-15,29)	18 (18,18)	22 (17,28)	15 (13,18)	18 (18,18)	18 (18,18)	18 (18,19)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	18	18 (18,18)	18 (17,19)	18 (17,18)	18 (18,18)	18 (17,19)	9 (-8,27)	
5/17/2020	18	18 (18,18)	18 (16,20)	18 (17,18)	18 (18,18)	18 (16,20)	9 (-8,27)	
5/18/2020	18	18 (18,18)	18 (16,21)	18 (17,18)	18 (18,18)	18 (15,21)	9 (-8,27)	
5/19/2020	18	18 (18,18)	19 (15,22)	18 (17,18)	18 (18,18)	18 (15,21)	9 (-8,27)	
5/20/2020	18	18 (18,18)	19 (15,22)	18 (17,18)	18 (18,18)	18 (14,22)	9 (-8,27)	
5/21/2020	18	18 (18,18)	19 (15,23)	18 (17,18)	18 (18,18)	18 (14,22)	9 (-8,27)	
5/22/2020	18	18 (18,18)	19 (14,24)	18 (17,18)	18 (18,18)	18 (13,23)	10 (-8,27)	
5/23/2020	18	18 (18,18)	19 (14,24)	18 (17,18)	18 (18,18)	18 (13,23)	10 (-7,27)	
5/24/2020	18	18 (18,18)	19 (14,25)	18 (17,18)	18 (18,18)	18 (12,24)	10 (-7,27)	
5/25/2020	18	18 (18,18)	19 (14,25)	18 (17,18)	18 (18,18)	18 (12,24)	10 (-7,27)	
5/26/2020	18	18 (18,18)	20 (14,26)	18 (17,18)	18 (18,18)	18 (12,24)	10 (-7,27)	
5/27/2020	18	18 (18,18)	20 (13,26)	18 (17,18)	18 (18,18)	18 (12,25)	10 (-7,27)	
5/28/2020	18	18 (18,18)	20 (13,27)	18 (17,18)	18 (18,18)	18 (11,25)	10 (-7,27)	
5/29/2020	18	18 (18,18)	20 (13,27)	18 (17,18)	18 (18,18)	18 (11,25)	10 (-7,27)	
5/30/2020	18	18 (18,18)	20 (13,27)	18 (17,18)	18 (18,18)	18 (11,25)	10 (-6,27)	
5/31/2020	18	18 (18,18)	20 (13,28)	17 (17,18)	18 (18,18)	18 (10,26)	10 (-6,27)	
6/1/2020	18	18 (18,18)	21 (13,28)	17 (17,18)	18 (18,18)	18 (10,26)	10 (-6,27)	
6/2/2020	18	18 (18,18)	21 (13,29)	17 (17,18)	18 (18,18)	18 (10,26)	10 (-6,27)	

**Table A.146**

Actual and Predicted Cases with 95% Confidence Intervals for Saint Vincent and the Grenadine using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	17	5 (-18,28)	17 (17,17)	16 (13,18)	20 (14,27)	17 (17,17)	17 (17,17)	17 (17,17)
5/17/2020	17	5 (-18,28)	17 (17,17)	16 (14,18)	21 (14,28)	17 (17,17)	17 (17,17)	17 (17,17)
5/18/2020	17	5 (-18,28)	17 (17,17)	16 (14,18)	21 (14,29)	17 (17,17)	17 (17,17)	17 (17,17)
5/19/2020	17	5 (-18,28)	17 (17,17)	16 (14,18)	22 (14,29)	17 (17,17)	17 (17,17)	17 (17,17)
5/20/2020	18	5 (-18,29)	17 (15,19)	16 (14,19)	22 (14,30)	17 (16,18)	17 (17,17)	17 (17,17)
5/21/2020	18	5 (-19,29)	17 (15,19)	17 (14,19)	22 (14,30)	17 (16,18)	17 (17,17)	17 (17,17)
5/22/2020	18	5 (-19,29)	17 (15,19)	17 (14,19)	23 (14,31)	17 (16,18)	17 (17,17)	17 (17,17)
5/23/2020	18	5 (-19,29)	17 (15,19)	17 (15,19)	23 (15,31)	17 (16,18)	17 (17,17)	17 (17,17)
5/24/2020	18	5 (-19,29)	17 (15,19)	17 (15,19)	23 (15,32)	17 (16,18)	17 (17,17)	17 (17,17)
5/25/2020	18	5 (-19,30)	17 (15,19)	17 (15,19)	24 (15,32)	17 (15,19)	17 (17,17)	17 (17,17)
5/26/2020	18	5 (-19,30)	17 (15,19)	18 (15,20)	24 (15,33)	17 (15,19)	17 (17,17)	17 (17,18)
5/27/2020	18	5 (-19,30)	17 (15,19)	18 (16,20)	24 (15,33)	17 (15,19)	17 (17,17)	17 (17,18)
5/28/2020	25	5 (-21,31)	17 (1,33)	18 (14,22)	24 (16,33)	17 (12,22)	17 (17,17)	17 (17,18)
5/29/2020	26	5 (-22,32)	17 (-1,35)	18 (12,24)	25 (16,33)	17 (11,23)	17 (17,17)	17 (17,18)
5/30/2020	26	5 (-23,33)	17 (-1,35)	18 (11,25)	25 (17,33)	17 (9,25)	17 (17,17)	17 (17,18)
5/31/2020	26	5 (-24,34)	17 (-1,35)	18 (11,26)	25 (17,34)	17 (8,26)	17 (17,17)	17 (17,18)
6/1/2020	26	5 (-25,35)	17 (-1,35)	19 (10,27)	26 (18,34)	17 (8,26)	17 (17,17)	17 (17,18)
6/2/2020	26	5 (-25,36)	17 (-1,35)	19 (10,27)	26 (18,34)	17 (7,27)	17 (17,17)	17 (17,18)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
3157	17	17 (17,17)	17 (16,18)	17 (17,18)	17 (17,17)	17 (16,18)	9 (-8,25)
5/16/2020	17	17 (17,17)	18 (16,19)	17 (17,18)	17 (17,17)	17 (16,19)	9 (-7,25)
5/18/2020	17	17 (17,17)	18 (16,20)	17 (17,18)	17 (16,17)	17 (15,19)	9 (-7,25)
5/19/2020	17	17 (17,17)	18 (16,21)	17 (17,18)	17 (16,17)	17 (15,20)	9 (-7,25)
5/20/2020	18	17 (17,17)	19 (16,21)	17 (17,18)	17 (16,17)	18 (15,21)	9 (-7,25)
5/21/2020	18	17 (17,17)	19 (16,22)	17 (17,18)	17 (16,18)	18 (14,21)	10 (-6,26)
5/22/2020	18	17 (17,17)	19 (16,22)	17 (17,18)	17 (16,18)	18 (14,22)	10 (-6,26)
5/23/2020	18	17 (17,17)	20 (17,23)	18 (17,18)	17 (16,18)	18 (14,22)	10 (-6,26)
5/24/2020	18	17 (17,17)	20 (17,23)	18 (17,18)	17 (16,18)	18 (13,23)	10 (-6,26)
5/25/2020	18	17 (17,17)	20 (17,24)	18 (17,18)	17 (16,18)	18 (13,23)	10 (-6,26)
5/26/2020	18	17 (17,17)	21 (17,25)	18 (17,18)	17 (16,18)	18 (13,24)	10 (-5,26)
5/27/2020	18	17 (17,17)	21 (17,25)	18 (17,18)	17 (16,18)	18 (12,24)	11 (-5,26)
5/28/2020	25	17 (17,17)	22 (17,26)	18 (14,22)	17 (16,18)	18 (12,25)	11 (-6,28)
5/29/2020	26	17 (17,17)	22 (18,26)	18 (12,24)	17 (16,18)	19 (12,26)	12 (-6,30)
5/30/2020	26	17 (17,17)	22 (18,27)	18 (11,25)	17 (16,18)	19 (11,26)	13 (-6,31)
5/31/2020	26	17 (17,17)	23 (18,27)	18 (10,26)	17 (16,18)	19 (11,27)	13 (-6,32)
6/1/2020	26	17 (17,17)	23 (18,28)	18 (9,26)	17 (16,18)	19 (10,27)	12 (-8,31)
6/2/2020	26	17 (17,17)	23 (19,28)	18 (8,27)	17 (16,18)	19 (10,28)	12 (-9,32)

**Table A.147**

Actual and Predicted Cases with 95% Confidence Intervals for San Marino using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	653	215 (-643,1073)	652 (650,654)	604 (507,700)	708 (600,815)	628 (579,677)	652 (652,652)	657 (647,668)
5/17/2020	654	215 (-644,1074)	652 (648,656)	610 (519,702)	717 (601,832)	628 (578,678)	652 (652,652)	662 (643,682)
5/18/2020	654	215 (-644,1075)	652 (648,656)	617 (531,702)	725 (601,849)	628 (578,678)	652 (652,652)	667 (636,699)
5/19/2020	655	215 (-645,1075)	652 (646,658)	623 (543,704)	734 (602,866)	628 (577,679)	652 (652,652)	672 (626,719)
5/20/2020	656	215 (-645,1076)	652 (644,660)	630 (555,705)	742 (602,882)	628 (576,680)	652 (652,652)	677 (615,740)
5/21/2020	658	215 (-647,1077)	652 (640,664)	637 (566,708)	750 (602,898)	628 (575,681)	652 (652,652)	682 (603,762)
5/22/2020	661	215 (-648,1079)	652 (634,670)	643 (576,710)	758 (604,913)	628 (573,683)	652 (652,652)	688 (588,787)
5/23/2020	665	215 (-651,1081)	652 (627,677)	650 (586,713)	766 (606,927)	628 (571,685)	652 (652,652)	693 (573,812)
5/24/2020	665	215 (-652,1083)	652 (627,677)	656 (596,717)	774 (607,942)	628 (569,687)	652 (652,652)	698 (556,839)
5/25/2020	666	215 (-654,1084)	652 (625,679)	663 (606,720)	782 (607,956)	628 (567,689)	652 (652,652)	703 (538,867)
5/26/2020	666	215 (-655,1086)	652 (625,679)	669 (615,724)	789 (608,971)	628 (566,690)	652 (652,652)	708 (519,896)
5/27/2020	667	215 (-656,1087)	652 (623,681)	676 (624,729)	797 (608,985)	628 (564,692)	652 (652,652)	713 (499,926)
5/28/2020	670	215 (-658,1089)	652 (617,687)	683 (632,734)	804 (608,999)	628 (563,693)	652 (652,652)	718 (478,957)
5/29/2020	671	215 (-659,1090)	652 (615,689)	689 (639,739)	811 (609,1013)	628 (561,695)	652 (652,652)	723 (456,989)
5/30/2020	671	215 (-661,1091)	652 (615,689)	696 (646,746)	818 (609,1027)	628 (560,696)	652 (652,652)	728 (433,1022)
5/31/2020	671	215 (-662,1092)	652 (615,689)	702 (652,753)	824 (609,1040)	628 (559,697)	652 (652,652)	733 (409,1056)
6/1/2020	671	215 (-663,1093)	652 (615,689)	709 (657,761)	831 (608,1054)	628 (558,698)	652 (652,652)	738 (384,1091)
6/2/2020	672	215 (-664,1094)	652 (613,691)	716 (661,770)	837 (608,1067)	628 (557,699)	652 (652,652)	743 (359,1127)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	653	657 (647,666)	659 (642,676)	619 (551,686)	655 (649,662)	658 (641,675)	332 (-298,961)
5/17/2020	654	661 (644,679)	665 (642,688)	616 (545,687)	660 (649,672)	664 (640,687)	334 (-294,962)
5/18/2020	654	666 (638,693)	671 (642,701)	614 (540,687)	661 (646,677)	669 (640,699)	337 (-290,963)
5/19/2020	655	670 (631,710)	678 (642,713)	611 (535,688)	666 (645,687)	675 (639,711)	339 (-285,964)
5/20/2020	656	675 (622,727)	684 (643,725)	609 (529,689)	671 (643,698)	680 (639,722)	342 (-280,965)
5/21/2020	658	679 (612,746)	691 (643,738)	606 (522,690)	679 (642,717)	686 (638,734)	346 (-275,966)
5/22/2020	661	683 (601,766)	697 (644,751)	604 (515,692)	684 (637,731)	692 (637,746)	349 (-270,969)
5/23/2020	665	688 (589,786)	704 (644,764)	601 (507,695)	687 (630,743)	697 (636,759)	353 (-266,971)
5/24/2020	665	692 (576,808)	710 (644,777)	599 (500,697)	691 (625,758)	703 (635,771)	357 (-260,974)
5/25/2020	666	696 (563,830)	717 (644,790)	596 (493,699)	692 (617,767)	709 (633,784)	360 (-255,975)
5/26/2020	666	700 (548,852)	724 (644,804)	594 (487,701)	697 (612,782)	714 (632,797)	363 (-251,976)
5/27/2020	667	704 (533,876)	731 (644,818)	592 (481,703)	701 (606,796)	720 (630,810)	366 (-246,977)
5/28/2020	670	708 (517,899)	738 (643,832)	590 (474,705)	709 (602,817)	725 (628,823)	369 (-241,979)
5/29/2020	671	712 (500,924)	745 (643,846)	588 (468,707)	714 (594,834)	731 (626,836)	373 (-235,981)
5/30/2020	671	716 (483,949)	752 (643,861)	586 (462,709)	716 (584,848)	737 (624,850)	377 (-229,983)
5/31/2020	671	720 (465,974)	759 (642,876)	584 (457,710)	721 (576,865)	742 (621,863)	380 (-224,984)
6/1/2020	671	723 (447,1000)	766 (641,891)	582 (452,712)	721 (565,877)	748 (619,877)	383 (-218,985)
6/2/2020	672	727 (428,1026)	773 (640,906)	580 (447,713)	725 (557,894)	754 (616,891)	387 (-213,986)

**Table A.148**

Actual and Predicted Cases with 95% Confidence Intervals for Sao Tome and Principe using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	235	21 (-397,440)	235 (235,235)	80 (-225,384)	243 (227,260)	208 (155,261)	235 (235,235)	246 (225,267)
5/17/2020	235	21 (-397,440)	235 (235,235)	81 (-223,384)	257 (224,289)	208 (155,261)	235 (235,235)	255 (203,306)
5/18/2020	246	21 (-405,447)	235 (213,257)	82 (-228,391)	270 (232,308)	208 (147,269)	235 (235,235)	264 (171,357)
5/19/2020	251	21 (-411,454)	235 (204,266)	83 (-232,398)	284 (238,330)	208 (140,276)	235 (235,235)	273 (130,415)
5/20/2020	251	21 (-415,457)	235 (204,266)	84 (-234,401)	298 (240,357)	208 (137,279)	235 (235,235)	282 (83,480)
5/21/2020	251	21 (-417,460)	235 (204,266)	85 (-234,404)	313 (240,386)	208 (134,282)	235 (235,235)	290 (30,550)
5/22/2020	251	21 (-419,461)	235 (204,266)	86 (-234,405)	329 (240,417)	208 (133,283)	235 (235,235)	299 (-28,626)
5/23/2020	251	21 (-420,463)	235 (204,266)	87 (-233,407)	344 (239,449)	208 (132,284)	235 (235,235)	308 (-91,707)
5/24/2020	251	21 (-421,464)	235 (204,266)	88 (-232,408)	360 (238,483)	208 (131,285)	235 (235,235)	317 (-158,793)
5/25/2020	299	21 (-432,475)	235 (110,360)	89 (-242,419)	377 (251,503)	208 (115,301)	235 (235,235)	326 (-231,883)
5/26/2020	441	21 (-477,520)	235 (-169,639)	90 (-288,467)	394 (271,517)	208 (44,372)	235 (235,235)	335 (-307,977)
5/27/2020	443	21 (-512,555)	235 (-173,643)	91 (-322,503)	411 (292,530)	208 (3,413)	235 (235,235)	344 (-387,1075)
5/28/2020	458	21 (-544,586)	235 (-202,672)	92 (-352,535)	429 (314,545)	208 (-32,448)	235 (235,235)	353 (-471,1177)
5/29/2020	463	21 (-570,613)	235 (-212,682)	93 (-377,562)	448 (336,559)	208 (-59,475)	235 (235,235)	362 (-558,1282)
5/30/2020	479	21 (-595,638)	235 (-243,713)	94 (-400,587)	467 (359,575)	208 (-84,500)	235 (235,235)	371 (-649,1391)
5/31/2020	483	21 (-617,660)	235 (-251,721)	95 (-420,609)	486 (381,591)	208 (-105,521)	235 (235,235)	380 (-744,1503)
6/1/2020	484	21 (-636,679)	235 (-253,723)	96 (-437,628)	506 (404,608)	208 (-123,539)	235 (235,235)	389 (-841,1619)
6/2/2020	484	21 (-652,695)	235 (-253,723)	97 (-451,644)	526 (425,627)	208 (-138,554)	235 (235,235)	398 (-942,1737)

## Predicted Cases (95% Confidence Interval)

Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	235	238 (232,245)	242 (215,270)	208 (156,261)	237 (233,240)	243 (215,272)	126 (-88,340)
5/17/2020	235	241 (231,251)	250 (210,289)	201 (142,261)	238 (233,242)	252 (211,292)	127 (-85,340)
5/18/2020	246	243 (228,257)	257 (209,305)	193 (116,270)	239 (233,245)	260 (208,311)	129 (-90,347)
5/19/2020	251	245 (226,263)	265 (209,320)	183 (89,277)	249 (239,258)	268 (207,329)	134 (-87,355)
5/20/2020	251	246 (223,269)	272 (210,334)	172 (63,281)	249 (237,262)	276 (206,346)	139 (-82,360)
5/21/2020	251	247 (220,274)	280 (212,348)	161 (38,284)	251 (236,266)	285 (205,364)	143 (-77,362)
5/22/2020	251	248 (217,279)	288 (214,361)	150 (13,286)	252 (234,269)	293 (205,381)	145 (-73,363)
5/23/2020	251	248 (214,283)	296 (217,374)	139 (-11,288)	251 (232,270)	301 (205,397)	148 (-68,364)
5/24/2020	251	249 (211,287)	304 (220,387)	128 (-34,290)	250 (229,271)	309 (204,414)	152 (-62,366)
5/25/2020	299	249 (207,291)	312 (224,400)	118 (-73,308)	249 (227,272)	317 (204,431)	156 (-66,377)
5/26/2020	441	250 (204,295)	320 (228,412)	108 (-160,376)	258 (233,283)	326 (204,448)	169 (-97,434)
5/27/2020	443	250 (201,299)	328 (232,425)	99 (-223,421)	257 (230,284)	334 (203,464)	201 (-88,490)
5/28/2020	458	250 (198,302)	336 (236,437)	90 (-278,459)	258 (228,287)	342 (203,481)	205 (-104,515)
5/29/2020	463	250 (196,305)	345 (241,449)	83 (-324,490)	258 (226,289)	350 (203,498)	204 (-124,531)
5/30/2020	479	251 (193,308)	353 (246,461)	76 (-368,519)	256 (223,289)	359 (202,515)	180 (-170,531)
5/31/2020	483	251 (190,311)	362 (251,473)	69 (-405,544)	254 (220,289)	367 (201,532)	187 (-182,556)
6/1/2020	484	251 (187,314)	371 (256,486)	64 (-438,565)	253 (218,289)	375 (201,550)	190 (-195,574)
6/2/2020	484	251 (185,317)	380 (261,498)	58 (-467,584)	261 (224,299)	383 (200,567)	193 (-204,591)

**Table A.149**

Actual and Predicted Cases with 95% Confidence Intervals for Saudi Arabia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	52016	7060 (-81053,95173)	49176 (43610,54742)	23958 (-31036,78952)	52429 (51619,53239)	49176 (43610,54742)
5/17/2020	54752	7060 (-83774,97894)	49176 (38247,60105)	24244 (-33200,81689)	54664 (54078,55250)	49176 (40503,57849)
5/18/2020	57345	7060 (-86419,100540)	49176 (33165,65187)	24531 (-35292,84353)	56958 (56310,57606)	49176 (37531,60821)
5/19/2020	59854	7060 (-89016,103136)	49176 (28247,70105)	24817 (-37336,86970)	59313 (58540,60085)	49176 (34643,63709)
5/20/2020	62545	7060 (-91681,105801)	49176 (22973,75379)	25104 (-39453,89660)	61728 (60733,62723)	49176 (31675,66677)
5/21/2020	65077	7060 (-94330,108450)	49176 (18010,80342)	25390 (-41553,92333)	64205 (63060,65350)	49176 (28752,69600)
5/22/2020	67719	7060 (-97010,111131)	49176 (12832,85520)	25676 (-43687,95039)	66745 (65462,68027)	49176 (25804,72548)
5/23/2020	70161	7060 (-99658,113779)	49176 (8045,90307)	25963 (-45786,97712)	69347 (68021,70673)	49176 (22919,75433)
5/24/2020	72560	7060 (-102277,116398)	49176 (3343,95009)	26249 (-47854,100353)	72014 (70714,73314)	49176 (20086,78266)
5/25/2020	74795	7060 (-104840,118961)	49176 (-1037,99389)	26536 (-49864,102935)	74745 (73511,75979)	49176 (17337,81015)
5/26/2020	76726	7060 (-107300,121421)	49176 (-4822,103174)	26822 (-51766,105410)	77542 (76270,78813)	49176 (14728,83624)
5/27/2020	78541	7060 (-109662,123783)	49176 (-8379,106731)	27108 (-53565,107782)	80404 (78794,82015)	49176 (12246,86106)
5/28/2020	80185	7060 (-111920,126041)	49176 (-11602,109954)	27395 (-55256,110045)	83334 (81027,85641)	49176 (9894,88458)
5/29/2020	81766	7060 (-114087,128207)	49176 (-14700,113052)	27681 (-56852,112214)	86331 (83066,89597)	49176 (7652,90700)
5/30/2020	83384	7060 (-116188,130308)	49176 (-17872,116224)	27968 (-58380,114315)	89397 (85014,93780)	49176 (5484,92868)
5/31/2020	85261	7060 (-118275,132396)	49176 (-21551,119903)	28254 (-59895,116403)	92532 (86991,98073)	49176 (3325,95027)
6/1/2020	87142	7060 (-120353,134473)	49176 (-25237,123589)	28540 (-61399,118480)	95737 (88985,102489)	49176 (1172,97180)
6/2/2020	89011	7060 (-122421,136542)	49176 (-28901,127253)	28827 (-62895,120548)	99012 (90987,107038)	49176 (-974,99326)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SES	HLT	DT	ARIMA	
5/16/2020	52016	49176 (49176,49176)	50994 (47430,54558)	50994 (47430,54558)	51606 (51602,51863)	
5/17/2020	54752	49176 (49176,49176)	52917 (-1046569,1152404)	52917 (-1046569,1152404)	54150 (54143,54412)	
5/18/2020	57345	49176 (49176,49176)	54841 (-2401125,2510806)	54841 (-2401125,2510806)	56825 (56807,57098)	
5/19/2020	59854	49176 (49176,49176)	56764 (-4051021,4164549)	56764 (-4051021,4164549)	59635 (59608,59916)	
5/20/2020	62545	49176 (49176,49176)	58687 (-5953005,6070380)	58687 (-5953005,6070380)	62591 (62553,62882)	
5/21/2020	65077	49176 (49176,49176)	60610 (-8077978,8199198)	60610 (-8077978,8199198)	65700 (65652,66002)	
5/22/2020	67719	49176 (49176,49176)	62533 (-10404920,10529987)	62533 (-10404920,10529987)	68973 (68914,69287)	
5/23/2020	70161	49176 (49176,49176)	64457 (-12917783,13046697)	64457 (-12917783,13046697)	72422 (72351,72747)	
5/24/2020	72560	49176 (49176,49176)	66380 (-15603806,15736565)	66380 (-15603806,15736565)	76057 (75973,76395)	
5/25/2020	74795	49176 (49176,49176)	68303 (-18452530,18589136)	68303 (-18452530,18589136)	79889 (79792,80242)	
5/26/2020	76726	49176 (49176,49176)	70226 (-21455186,21595638)	70226 (-21455186,21595638)	83933 (83821,84300)	
5/27/2020	78541	49176 (49176,49176)	72149 (-24604281,24748580)	72149 (-24604281,24748580)	88202 (88075,88584)	
5/28/2020	80185	49176 (49176,49176)	74073 (-27893320,28041465)	74073 (-27893320,28041465)	92710 (92567,93109)	
5/29/2020	81766	49176 (49176,49176)	75996 (-31316599,31468591)	75996 (-31316599,31468591)	97473 (97312,97890)	
5/30/2020	83384	49176 (49176,49176)	77919 (-34869060,35024898)	77919 (-34869060,35024898)	102508 (102328,102943)	
5/31/2020	85261	49176 (49176,49176)	79842 (-38546174,38705859)	79842 (-38546174,38705859)	107831 (107631,108286)	
6/1/2020	87142	49176 (49176,49176)	81765 (-42343860,42507391)	81765 (-42343860,42507391)	113462 (113241,113938)	
6/2/2020	89011	49176 (49176,49176)	83689 (-46258411,46425788)	83689 (-46258411,46425788)	119420 (119177,119920)	

**Table A.149 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	52016	44008 (28312,59704)	51483 (46962,56004)	51546 (51418,51675)	26868 (-22421,76158)
5/17/2020	54752	44726 (26941,62510)	53789 (-10377197,10484776)	53961 (53658,54263)	28303 (-22278,78884)
5/18/2020	57345	45396 (25555,65238)	56096 (-23263128,23375319)	56429 (55911,56947)	29761 (-22007,81529)
5/19/2020	59854	45989 (24083,67895)	58402 (-38957584,39074388)	58946 (58170,59722)	31214 (-21679,84108)
5/20/2020	62545	46521 (22413,70629)	60708 (-57048321,57169736)	61514 (60440,62587)	32632 (-21457,86722)
5/21/2020	65077	47007 (20675,73339)	63013 (-77258221,77384247)	64130 (62722,65539)	34178 (-21043,89399)
5/22/2020	67719	47457 (18828,76087)	65319 (-99386712,99517349)	66796 (65016,68577)	35803 (-20525,92130)
5/23/2020	70161	47879 (16966,78792)	67624 (-123281200,123416448)	69511 (67322,71701)	37549 (-19783,94880)
5/24/2020	72560	48278 (15095,81461)	69929 (-148820080,148959937)	72274 (69640,74909)	39322 (-18930,97574)
5/25/2020	74795	48658 (13254,84062)	72233 (-175903603,176048069)	75086 (71969,78202)	41215 (-17837,100266)
5/26/2020	76726	49033 (11519,86547)	74538 (-204448232,204597307)	77945 (74311,81579)	43166 (-16529,102860)
5/27/2020	78541	49409 (9890,88927)	76842 (-234382662,234536346)	80851 (76663,85040)	45212 (-14972,105396)
5/28/2020	80185	49780 (8371,91190)	79146 (-265645083,265803375)	83805 (79026,88584)	47365 (-13147,107878)
5/29/2020	81766	50141 (6936,93347)	81450 (-298180881,298343780)	86806 (81400,92211)	49646 (-11045,110336)
5/30/2020	83384	50491 (5554,95429)	83753 (-331942003,332109510)	89853 (83784,95921)	52103 (-8629,112835)
5/31/2020	85261	50831 (4165,97498)	86057 (-366885255,367057369)	92946 (86177,99715)	54731 (-5946,115407)
6/1/2020	87142	51160 (2763,99556)	88360 (-402971606,403148325)	96085 (88579,103591)	57586 (-2933,118104)
6/2/2020	89011	51480 (1353,101607)	90663 (-440165710,440347035)	99269 (90989,107549)	60616 (357,120874)

**Table A.150**

Actual and Predicted Cases with 95% Confidence Intervals for Senegal using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	2429	328 (-3791,4446)	2310 (2077,2543)	1085 (-1550,3720)	2316 (2095,2537)	2310 (2077,2543)	2310 (2310,2310)	2407 (2217,2598)
5/17/2020	2480	328 (-3841,4496)	2310 (1977,2643)	1097 (-1575,3770)	2414 (2232,2595)	2310 (2022,2598)	2310 (2310,2310)	2508 (-735,5751)
5/18/2020	2544	328 (-3900,4556)	2310 (1851,2769)	1110 (-1609,3829)	2514 (2362,2666)	2310 (1956,2664)	2310 (2310,2310)	2610 (-4496,9715)
5/19/2020	2617	328 (-3966,4622)	2310 (1708,2912)	1123 (-1650,3896)	2617 (2485,2748)	2310 (1881,2739)	2310 (2310,2310)	2711 (-9079,14501)
5/20/2020	2714	328 (-4046,4701)	2310 (1518,3102)	1136 (-1704,3976)	2722 (2604,2840)	2310 (1788,2832)	2310 (2310,2310)	2812 (-14365,19990)
5/21/2020	2812	328 (-4132,4788)	2310 (1326,3294)	1149 (-1765,4063)	2831 (2722,2939)	2310 (1686,2934)	2310 (2310,2310)	2914 (-20275,26103)
5/22/2020	2909	328 (-4222,4878)	2310 (1136,3484)	1162 (-1831,4154)	2942 (2838,3045)	2310 (1582,3038)	2310 (2310,2310)	3015 (-26751,32781)
5/23/2020	2976	328 (-4307,4963)	2310 (1005,3615)	1174 (-1890,4239)	3055 (2944,3167)	2310 (1487,3133)	2310 (2310,2310)	3116 (-33749,39981)
5/24/2020	3047	328 (-4390,5045)	2310 (865,3755)	1187 (-1947,4322)	3172 (3039,3305)	2310 (1397,3223)	2310 (2310,2310)	3217 (-41231,47666)
5/25/2020	3130	328 (-4473,5128)	2310 (703,3917)	1200 (-2005,4405)	3291 (3130,3452)	2310 (1306,3314)	2310 (2310,2310)	3319 (-49170,55808)
5/26/2020	3161	328 (-4546,5201)	2310 (642,3978)	1213 (-2053,4479)	3414 (3199,3628)	2310 (1228,3392)	2310 (2310,2310)	3420 (-57542,64382)
5/27/2020	3253	328 (-4623,5279)	2310 (462,4158)	1226 (-2105,4556)	3539 (3278,3800)	2310 (1145,3475)	2310 (2310,2310)	3521 (-66324,73366)
5/28/2020	3348	328 (-4704,5360)	2310 (276,4344)	1239 (-2160,4638)	3667 (3362,3972)	2310 (1057,3563)	2310 (2310,2310)	3623 (-75499,82744)
5/29/2020	3429	328 (-4786,5442)	2310 (117,4503)	1251 (-2217,4720)	3798 (3446,4150)	2310 (967,3653)	2310 (2310,2310)	3724 (-85051,92498)
5/30/2020	3535	328 (-4873,5528)	2310 (-91,4711)	1264 (-2278,4807)	3932 (3537,4327)	2310 (872,3748)	2310 (2310,2310)	3825 (-94966,102616)
5/31/2020	3645	328 (-4963,5619)	2310 (-307,4927)	1277 (-2344,4898)	4069 (3634,4504)	2310 (772,3848)	2310 (2310,2310)	3926 (-105231,113083)
6/1/2020	3739	328 (-5005,5711)	2310 (-491,5111)	1290 (-2411,4991)	4209 (3732,4687)	2310 (671,3949)	2310 (2310,2310)	4028 (-115834,123889)
6/2/2020	3836	328 (-5149,5805)	2310 (-681,5301)	1303 (-2479,5085)	4353 (3831,4874)	2310 (568,4052)	2310 (2310,2310)	4129 (-126766,135024)

## Predicted Cases (95% Confidence Interval)

Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	2429	2407 (2217,2598)	2431 (2405,2457)	2178 (1685,2670)	2420 (2204,2635)	2415 (2388,2442)	1269 (-1004,3542)
5/17/2020	2480	2508 (-735,5751)	2537 (2491,2583)	2254 (1785,2723)	2521 (-7885,12926)	2525 (2480,2570)	1324 (-946,3593)
5/18/2020	2544	2610 (-4496,9715)	2658 (2594,2722)	2331 (1878,2783)	2639 (-22109,27388)	2632 (2567,2698)	1379 (-896,3653)
5/19/2020	2617	2711 (-9079,14501)	2768 (2683,2853)	2408 (1966,2850)	2735 (-37850,43321)	2741 (2653,2829)	1424 (-867,3714)
5/20/2020	2714	2812 (-14365,19990)	2890 (2783,2996)	2486 (2044,2929)	2843 (-56366,62052)	2849 (2736,2962)	1477 (-842,3795)
5/21/2020	2812	2914 (-20275,26103)	3003 (2873,3133)	2565 (2115,3015)	2941 (-76571,82453)	2957 (2818,3097)	1541 (-807,3889)
5/22/2020	2909	3015 (-26751,32781)	3125 (2971,3279)	2645 (2185,3105)	3058 (-99588,105704)	3066 (2898,3233)	1608 (-770,3986)
5/23/2020	2976	3116 (-33749,39981)	3241 (3062,3421)	2726 (2262,3190)	3169 (-124638,130975)	3174 (2976,3371)	1670 (-731,4071)
5/24/2020	3047	3217 (-41231,47666)	3365 (3159,3571)	2810 (2346,3274)	3269 (-150971,157510)	3282 (3053,3511)	1727 (-696,4150)
5/25/2020	3130	3319 (-49170,55808)	3484 (3249,3718)	2895 (2432,3359)	3388 (-179562,186338)	3390 (3129,3652)	1782 (-664,4227)
5/26/2020	3161	3420 (-57542,64382)	3609 (3345,3872)	2983 (2528,3437)	3484 (-209014,215981)	3498 (3202,3794)	1842 (-617,4300)
5/27/2020	3253	3521 (-66324,73366)	3730 (3436,4024)	3072 (2625,3519)	3591 (-239973,247156)	3607 (3275,3938)	1896 (-580,4372)
5/28/2020	3348	3623 (-75499,82744)	3857 (3532,4182)	3164 (2723,3605)	3689 (-271919,279298)	3715 (3346,4083)	1963 (-532,4458)
5/29/2020	3429	3724 (-85051,92498)	3981 (3623,4338)	3258 (2824,3692)	3806 (-305695,313307)	3823 (3416,4230)	2027 (-487,4541)
5/30/2020	3535	3825 (-94966,102616)	4109 (3718,4499)	3354 (2924,3783)	3917 (-340914,348747)	3931 (3485,4377)	2100 (-435,4635)
5/31/2020	3645	3926 (-105231,113083)	4235 (3810,4660)	3451 (3025,3878)	4017 (-377072,385106)	4039 (3553,4526)	2165 (-394,4725)
6/1/2020	3739	4028 (-115834,123889)	4365 (3905,4825)	3551 (3128,3974)	4136 (-414911,423182)	4148 (3619,4676)	2233 (-352,4817)
6/2/2020	3836	4129 (-126766,135024)	4493 (3998,4989)	3653 (3233,4073)	4231 (-453420,461883)	4256 (3684,4828)	2299 (-311,4909)

**Table A.151**

Actual and Predicted Cases with 95% Confidence Intervals for Serbia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	10496	2644 (-12745,18034)	10438 (10324,10552)	8353 (4152,12553)	13057 (8038,18076)	10032 (9123,10941)	10438 (10438,10438)	10525 (10354,10696)	
5/17/2020	10610	2644 (-12857,18146)	10438 (10101,10775)	8450 (4232,12667)	13408 (8151,18665)	10032 (9005,11059)	10438 (10438,10438)	10607 (8231,12983)	
5/18/2020	10699	2644 (-12953,18242)	10438 (9926,10950)	8546 (4328,12764)	13765 (8246,19284)	10032 (8904,11160)	10438 (10438,10438)	10689 (5509,15869)	
5/19/2020	10733	2644 (-13017,18306)	10438 (9860,11016)	8643 (4455,12831)	14127 (8304,19950)	10032 (8837,11227)	10438 (10438,10438)	10770 (2194,19347)	
5/20/2020	10833	2644 (-13096,18384)	10438 (9664,11212)	8740 (4569,12911)	14494 (8377,20611)	10032 (8754,11310)	10438 (10438,10438)	10852 (-1630,23335)	
5/21/2020	10919	2644 (-13176,18465)	10438 (9495,11381)	8837 (4680,12993)	14866 (8451,21282)	10032 (8666,11398)	10438 (10438,10438)	10934 (-5905,27774)	
5/22/2020	11024	2644 (-13264,18553)	10438 (9289,11587)	8933 (4785,13081)	15244 (8532,21957)	10032 (8569,11495)	10438 (10438,10438)	11016 (-10589,32621)	
5/23/2020	11092	2644 (-13347,18635)	10438 (9156,11720)	9030 (4895,13165)	15628 (8606,22649)	10032 (8479,11585)	10438 (10438,10438)	11098 (-15650,37846)	
5/24/2020	11159	2644 (-13426,18714)	10438 (9025,11851)	9127 (5009,13245)	16016 (8675,23358)	10032 (8393,11671)	10438 (10438,10438)	11180 (-21062,43421)	
5/25/2020	11193	2644 (-13495,18784)	10438 (8958,11918)	9224 (5131,13317)	16411 (8732,24090)	10032 (8319,11745)	10438 (10438,10438)	11261 (-26804,49327)	
5/26/2020	11227	2644 (-13559,18847)	10438 (8892,11984)	9320 (5258,13382)	16810 (8780,24841)	10374 (8665,12083)	10438 (10438,10438)	11343 (-32859,55545)	
5/27/2020	11275	2644 (-13619,18908)	10438 (8797,12079)	9417 (5389,13446)	17216 (8824,25607)	10374 (8660,12088)	10438 (10438,10438)	11425 (-39211,62061)	
5/28/2020	11300	2644 (-13674,18963)	10438 (8748,12128)	9514 (5523,13504)	17626 (8861,26391)	10374 (8652,12096)	10438 (10438,10438)	11507 (-45847,68861)	
5/29/2020	11354	2644 (-13729,19018)	10438 (8643,12233)	9611 (5658,13563)	18043 (8899,27187)	10374 (8637,12111)	10438 (10438,10438)	11589 (-52757,75934)	
5/30/2020	11381	2644 (-13780,19069)	10438 (8590,12286)	9707 (5796,13618)	18464 (8931,27998)	10438 (8693,12183)	10438 (10438,10438)	11670 (-59928,83269)	
5/31/2020	11412	2644 (-13829,19118)	10438 (8529,12347)	9804 (5936,13672)	18892 (8960,28824)	10438 (8683,12193)	10438 (10438,10438)	11752 (-67353,90858)	
6/1/2020	11430	2644 (-13874,19162)	10438 (8494,12382)	9901 (6079,13723)	19325 (8985,29666)	10438 (8671,12205)	10438 (10438,10438)	11834 (-75023,98691)	
6/2/2020	11454	2644 (-13916,19205)	10438 (8447,12429)	9998 (6223,13773)	19764 (9006,30521)	10438 (8658,12218)	10438 (10438,10438)	11916 (-82931,106762)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	10496	10518 (10361,10675)	10505 (10401,10609)	10513 (10479,10548)	10525 (10354,10696)	10504 (10400,10608)	5285 (-4928,15498)		
5/17/2020	10610	10594 (8561,12627)	10571 (10404,10737)	10563 (10494,10632)	10586 (4894,16279)	10569 (10402,10735)	5319 (-4973,15611)		
5/18/2020	10699	10669 (6263,15074)	10637 (10381,10893)	10609 (10492,10726)	10661 (-3085,24407)	10633 (10377,10889)	5358 (-4993,15709)		
5/19/2020	10733	10743 (3484,18001)	10704 (10339,11068)	10651 (10521,10780)	10732 (-12694,34157)	10697 (10333,11062)	5395 (-4984,15774)		
5/20/2020	10833	10816 (298,21333)	10771 (10283,11258)	10689 (10518,10860)	10806 (-23993,45604)	10762 (10274,11250)	5425 (-4998,15849)		
5/21/2020	10919	10888 (-3240,25016)	10839 (10215,11462)	10725 (10504,10945)	10866 (-35907,57639)	10826 (10202,11450)	5457 (-5014,15928)		
5/22/2020	11024	10960 (-7091,29011)	10907 (10136,11678)	10757 (10473,11041)	10928 (-48668,70524)	10891 (10119,11662)	5490 (-5035,16016)		
5/23/2020	11092	11031 (-11226,33288)	10976 (10048,11904)	10787 (10447,11126)	11012 (-63417,85441)	10955 (10026,11884)	5537 (-5035,16108)		
5/24/2020	11159	11101 (-15619,37821)	11046 (9950,12141)	10814 (10422,11205)	11069 (-78471,100608)	11019 (9923,12116)	5566 (-5049,16182)		
5/25/2020	11193	11171 (-20250,42591)	11116 (9843,12388)	10838 (10406,11270)	11139 (-94590,116869)	11084 (9810,12357)	5598 (-5053,16249)		
5/26/2020	11227	11239 (-25101,47580)	11186 (9729,12644)	10861 (10395,11326)	11206 (-111519,133931)	11148 (9689,12607)	5621 (-5061,16304)		
5/27/2020	11275	11307 (-30159,52773)	11258 (9606,12909)	10881 (10383,11379)	11276 (-129375,151927)	11213 (9560,12866)	5651 (-5059,16362)		
5/28/2020	11300	11375 (-35408,58157)	11330 (9476,13183)	10899 (10374,11425)	11332 (-147535,170200)	11277 (9422,13132)	5684 (-5050,16418)		
5/29/2020	11354	11441 (-40838,63721)	11402 (9340,13465)	10916 (10360,11473)	11391 (-166118,188899)	11341 (9277,13406)	5719 (-5038,16475)		
5/30/2020	11381	11507 (-46438,69452)	11475 (9196,13754)	10932 (10348,11515)	11471 (-185985,208926)	11406 (9125,13687)	5759 (-5015,16533)		
5/31/2020	11412	11572 (-52199,75344)	11549 (9046,14052)	10946 (10336,11555)	11523 (-206026,229073)	11470 (8965,13976)	5792 (-4997,16581)		
6/1/2020	11430	11637 (-58112,81386)	11623 (8889,14356)	10958 (10326,11591)	11590 (-226774,249955)	11535 (8799,14271)	5830 (-4970,16631)		
6/2/2020	11454	11701 (-64169,87571)	11697 (8726,14668)	10970 (10316,11624)	11653 (-248075,271381)	11599 (8625,14573)	5861 (-4948,16671)		

**Table A.152**

Actual and Predicted Cases with 95% Confidence Intervals for Seychelles using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	11	5 (-6,17)	11 (11,11)	14 (9,18)	9 (6,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/17/2020	11	5 (-6,17)	11 (11,11)	14 (9,19)	9 (5,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/18/2020	11	5 (-6,17)	11 (11,11)	14 (9,19)	9 (5,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/19/2020	11	5 (-6,17)	11 (11,11)	14 (9,19)	8 (4,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/20/2020	11	5 (-6,17)	11 (11,11)	14 (9,20)	8 (3,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/21/2020	11	5 (-6,17)	11 (11,11)	14 (9,20)	7 (2,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/22/2020	11	5 (-6,17)	11 (11,11)	14 (9,20)	7 (1,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/23/2020	11	5 (-6,17)	11 (11,11)	15 (9,20)	7 (1,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/24/2020	11	5 (-6,17)	11 (11,11)	15 (9,21)	6 (0,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/25/2020	11	5 (-6,17)	11 (11,11)	15 (9,21)	6 (-1,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/26/2020	11	5 (-6,17)	11 (11,11)	15 (9,21)	5 (-2,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/27/2020	11	5 (-6,17)	11 (11,11)	15 (9,22)	5 (-3,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/28/2020	11	5 (-6,17)	11 (11,11)	15 (9,22)	4 (-4,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/29/2020	11	5 (-6,17)	11 (11,11)	15 (9,22)	4 (-6,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/30/2020	11	5 (-6,17)	11 (11,11)	15 (9,22)	3 (-7,13)	11 (11,11)	11 (11,11)	11 (11,11)
5/31/2020	11	5 (-6,17)	11 (11,11)	16 (9,23)	2 (-8,13)	11 (11,11)	11 (11,11)	11 (11,11)
6/1/2020	11	5 (-6,17)	11 (11,11)	16 (8,23)	2 (-9,13)	11 (11,11)	11 (11,11)	11 (11,11)
6/2/2020	11	5 (-6,17)	11 (11,11)	16 (8,23)	1 (-10,13)	11 (11,11)	11 (11,11)	11 (11,11)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	11	11 (11,11)	11 (10,12)	11 (11,12)	11 (11,11)	11 (10,12)	6 (-5,16)	
5/17/2020	11	11 (11,11)	11 (10,12)	11 (11,12)	11 (11,11)	11 (10,12)	6 (-5,16)	
5/18/2020	11	11 (11,11)	11 (10,12)	11 (11,12)	11 (11,11)	11 (10,12)	6 (-5,16)	
5/19/2020	11	11 (11,11)	11 (10,13)	11 (11,12)	11 (11,11)	11 (9,13)	6 (-5,16)	
5/20/2020	11	11 (11,11)	11 (9,13)	11 (11,12)	11 (11,11)	11 (9,13)	6 (-5,16)	
5/21/2020	11	11 (11,11)	11 (9,14)	11 (11,12)	11 (11,11)	11 (9,13)	6 (-5,16)	
5/22/2020	11	11 (11,11)	11 (9,14)	11 (11,12)	11 (11,11)	11 (8,14)	6 (-5,16)	
5/23/2020	11	11 (11,11)	12 (9,14)	11 (11,12)	11 (11,12)	11 (8,14)	6 (-5,16)	
5/24/2020	11	11 (11,11)	12 (9,15)	11 (11,12)	11 (11,11)	11 (8,14)	6 (-5,16)	
5/25/2020	11	11 (11,11)	12 (8,15)	11 (11,12)	11 (11,12)	11 (7,15)	6 (-5,16)	
5/26/2020	11	11 (11,11)	12 (8,15)	11 (11,12)	11 (11,12)	11 (7,15)	6 (-5,16)	
5/27/2020	11	11 (11,11)	12 (8,16)	11 (11,12)	11 (11,12)	11 (7,15)	6 (-4,16)	
5/28/2020	11	11 (11,11)	12 (8,16)	11 (11,12)	11 (11,12)	11 (7,15)	6 (-4,16)	
5/29/2020	11	11 (11,11)	12 (8,16)	11 (11,12)	11 (11,12)	11 (6,16)	6 (-4,16)	
5/30/2020	11	11 (11,11)	12 (8,17)	11 (11,12)	11 (11,12)	11 (6,16)	6 (-4,16)	
5/31/2020	11	11 (11,11)	12 (8,17)	11 (11,12)	11 (10,12)	11 (6,16)	6 (-4,16)	
6/1/2020	11	11 (11,11)	12 (7,17)	11 (11,12)	11 (10,12)	11 (6,16)	6 (-4,16)	
6/2/2020	11	11 (11,11)	12 (7,17)	11 (11,12)	11 (11,12)	11 (5,17)	6 (-4,16)	

**Table A.153**

Actual and Predicted Cases with 95% Confidence Intervals for Sierra Leone using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	462	45 (-772,862)	447 (418,476)	161 (-430,751)	418 (333,504)	338 (95,581)	447 (447,447)	469 (425,514)
5/17/2020	505	45 (-816,906)	447 (333,561)	163 (-469,795)	439 (329,549)	338 (50,626)	447 (447,447)	495 (274,717)
5/18/2020	519	45 (-839,929)	447 (306,588)	165 (-489,818)	460 (348,572)	338 (26,650)	447 (447,447)	521 (64,978)
5/19/2020	534	45 (-858,948)	447 (276,618)	167 (-504,837)	482 (372,591)	338 (6,670)	447 (447,447)	547 (-193,1287)
5/20/2020	570	45 (-885,975)	447 (206,688)	169 (-527,864)	504 (390,618)	338 (-22,698)	447 (447,447)	573 (-490,1636)
5/21/2020	585	45 (-907,997)	447 (177,717)	171 (-546,887)	527 (413,641)	338 (-45,721)	447 (447,447)	599 (-824,2021)
5/22/2020	606	45 (-930,1020)	447 (135,759)	173 (-564,909)	550 (437,663)	338 (-69,745)	447 (447,447)	624 (-1191,2440)
5/23/2020	621	45 (-950,1040)	447 (106,788)	175 (-581,930)	574 (464,685)	338 (-90,766)	447 (447,447)	650 (-1589,2889)
5/24/2020	707	45 (-988,1078)	447 (-63,957)	176 (-616,969)	599 (473,725)	338 (-132,808)	447 (447,447)	676 (-2014,3367)
5/25/2020	735	45 (-1025,1115)	447 (-117,1011)	178 (-648,1005)	625 (487,762)	338 (-171,847)	447 (447,447)	702 (-2467,3871)
5/26/2020	754	45 (-1058,1147)	447 (-155,1049)	180 (-678,1039)	651 (506,795)	338 (-206,882)	447 (447,447)	728 (-2945,4400)
5/27/2020	782	45 (-1090,1180)	447 (-210,1104)	182 (-706,1071)	678 (527,828)	338 (-240,916)	447 (447,447)	753 (-3447,4954)
5/28/2020	812	45 (-1122,1212)	447 (-268,1162)	184 (-735,1104)	705 (549,861)	338 (-275,951)	447 (447,447)	779 (-3972,5530)
5/29/2020	829	45 (-1153,1243)	447 (-302,1196)	186 (-762,1134)	733 (575,892)	338 (-306,982)	447 (447,447)	805 (-4519,6129)
5/30/2020	852	45 (-1182,1272)	447 (-347,1241)	188 (-787,1164)	762 (602,922)	338 (-336,1012)	447 (447,447)	831 (-5087,6749)
5/31/2020	861	45 (-1208,1298)	447 (-364,1258)	190 (-810,1190)	792 (633,950)	338 (-363,1039)	447 (447,447)	857 (-5676,7390)
6/1/2020	865	45 (-1232,1322)	447 (-372,1266)	192 (-829,1214)	822 (667,977)	338 (-387,1063)	447 (447,447)	883 (-6285,8050)
6/2/2020	896	45 (-1257,1347)	447 (-433,1327)	194 (-850,1239)	853 (701,1005)	338 (-412,1088)	447 (447,447)	908 (-6913,8730)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		DT	ARIMA	LSTM	HWA	SSM
5/16/2020	462	469 (425,514)	469 (460,478)	366 (179,554)	471 (424,517)	468 (459,478)
5/17/2020	505	495 (274,717)	501 (490,512)	374 (150,599)	500 (102,898)	500 (489,511)
5/18/2020	519	521 (64,978)	533 (519,547)	381 (141,622)	529 (-343,1402)	532 (517,546)
5/19/2020	534	547 (-193,1287)	566 (548,584)	387 (133,640)	558 (-886,2003)	563 (545,582)
5/20/2020	570	573 (-490,1636)	599 (575,622)	391 (115,667)	591 (-1541,2723)	595 (571,619)
5/21/2020	585	599 (-824,2021)	632 (603,660)	394 (100,689)	620 (-2261,3501)	627 (597,657)
5/22/2020	606	624 (-1191,2440)	665 (630,700)	397 (83,710)	651 (-3061,4363)	658 (622,695)
5/23/2020	621	650 (-1589,2889)	698 (657,740)	398 (67,730)	681 (-3924,5287)	690 (646,734)
5/24/2020	707	676 (-2014,3367)	732 (684,781)	400 (28,771)	710 (-4840,6260)	722 (670,773)
5/25/2020	735	702 (-2467,3871)	766 (710,823)	401 (-8,810)	740 (-5809,7289)	753 (694,813)
5/26/2020	754	728 (-2945,4400)	801 (737,865)	402 (-40,844)	769 (-6829,8367)	785 (717,853)
5/27/2020	782	753 (-3447,4954)	836 (763,908)	403 (-72,877)	801 (-7913,9516)	817 (740,894)
5/28/2020	812	779 (-3972,5530)	871 (790,951)	403 (-104,910)	830 (-9042,10702)	848 (762,935)
5/29/2020	829	805 (-4519,6129)	906 (816,995)	404 (-132,941)	861 (-10223,11946)	880 (784,976)
5/30/2020	852	831 (-5087,6749)	941 (842,1040)	405 (-161,971)	892 (-11450,13233)	912 (806,1017)
5/31/2020	861	857 (-5676,7390)	977 (869,1086)	406 (-185,997)	920 (-12714,14555)	943 (827,1059)
6/1/2020	865	883 (-6285,8050)	1013 (895,1132)	407 (-207,1021)	950 (-14018,15918)	975 (848,1102)
6/2/2020	896	908 (-6913,8730)	1050 (921,1178)	408 (-229,1046)	979 (-15360,17318)	1007 (869,1144)

**Table A.154**

Actual and Predicted Cases with 95% Confidence Intervals for Singapore using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HTL	
5/16/2020	27356	4596 (-40012,49205)	26891 (25980,27802)	15297 (-8339,38933)	31395 (23478,39313)	26098 (23632,28564)	26891 (26891,26891)	27611 (26200,29023)	
5/17/2020	28038	4596 (-40686,49879)	26891 (24643,29139)	15478 (-8654,39610)	32649 (24153,41145)	26098 (22893,29303)	26891 (26891,26891)	28346 (-138854,195547)	
5/18/2020	28343	4596 (-41110,50303)	26891 (24045,29737)	15659 (-8717,40036)	33935 (24545,43324)	26098 (22451,29745)	26891 (26891,26891)	29082 (-343769,401933)	
5/19/2020	28794	4596 (-41546,50739)	26891 (23161,30621)	15841 (-8793,40474)	35252 (24948,45557)	26098 (21980,30216)	26891 (26891,26891)	29817 (-593355,652989)	
5/20/2020	29364	4596 (-42037,51229)	26891 (22044,31738)	16022 (-8922,40966)	36602 (25143,47791)	26098 (21433,30763)	26891 (26891,26891)	30552 (-881088,942192)	
5/21/2020	29812	4596 (-42513,51706)	26891 (21166,32616)	16204 (-9037,41444)	37985 (25856,50113)	26098 (20905,31291)	26891 (26891,26891)	31288 (-1202570,1265145)	
5/22/2020	30426	4596 (-43031,52224)	26891 (19962,33820)	16385 (-9194,41964)	39401 (26351,52450)	26098 (20319,31877)	26891 (26891,26891)	32023 (-1554625,1618671)	
5/23/2020	31068	4596 (-43584,52777)	26891 (18704,35078)	16566 (-9385,42518)	40850 (26888,54812)	26098 (19689,32507)	26891 (26891,26891)	32758 (-1934825,2000341)	
5/24/2020	31616	4596 (-44138,53331)	26891 (17630,36152)	16748 (-9577,43073)	42333 (27423,57244)	26098 (19062,33134)	26891 (26891,26891)	33493 (-2341239,2408226)	
5/25/2020	31960	4596 (-44650,53843)	26891 (16956,36826)	16929 (-9726,43584)	43851 (27901,59801)	26098 (18498,33698)	26891 (26891,26891)	34229 (-2772285,2840742)	
5/26/2020	32343	4596 (-45139,54331)	26891 (16205,37577)	17110 (-9852,44072)	45403 (28349,62457)	26098 (17966,34230)	26891 (26891,26891)	34964 (-3226636,3296564)	
5/27/2020	32876	4596 (-45638,54831)	26891 (15160,38622)	17292 (-9987,44570)	46990 (28814,65167)	26098 (17419,34777)	26891 (26891,26891)	35699 (-3703159,3774557)	
5/28/2020	33249	4596 (-46118,55311)	26891 (14429,39353)	17473 (-10103,45049)	48613 (29255,67971)	26098 (16898,35298)	26891 (26891,26891)	36434 (-4200869,4273738)	
5/29/2020	33860	4596 (-46621,55814)	26891 (13232,40550)	17654 (-10241,45550)	50272 (29732,70811)	26098 (16345,35851)	26891 (26891,26891)	37170 (-4718904,4793243)	
5/30/2020	34366	4596 (-47127,56320)	26891 (12240,41542)	17836 (-10382,46054)	51967 (30216,73717)	26098 (15788,36408)	26891 (26891,26891)	37905 (-5256499,5332308)	
5/31/2020	34884	4596 (-47637,56830)	26891 (11225,42557)	18017 (-10528,46562)	53698 (30709,76687)	26098 (15227,36969)	26891 (26891,26891)	38640 (-5812967,5890247)	
6/1/2020	35292	4596 (-48137,57330)	26891 (10425,43357)	18199 (-10662,47059)	55466 (31189,79743)	26098 (14682,37514)	26891 (26891,26891)	39375 (-6387691,6466442)	
6/2/2020	35836	4596 (-48644,57837)	26891 (9359,44423)	18380 (-10803,47563)	57272 (31685,82859)	26098 (14126,38070)	26891 (26891,26891)	40111 (-6980110,7060331)	

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	27356	27611 (26200,29023)	27665 (27450,27881)	25802 (22757,28848)	27643 (26169,29116)	27656 (27439,27872)	14208 (-11562,39978)
5/17/2020	28038	28346 (-138854,195547)	28470 (28121,28819)	26464 (23398,29529)	28413 (-589103,645930)	28448 (28097,28800)	14574 (-11507,40656)
5/18/2020	28343	29082 (-343769,401933)	29282 (28735,29828)	27166 (24331,30002)	29184 (-1350631,1408998)	29241 (28689,29792)	14968 (-11158,41094)
5/19/2020	28794	29817 (-593355,652989)	30100 (29314,30886)	27912 (25309,30515)	29955 (-2278701,2338611)	30033 (29238,30828)	15295 (-10915,41504)
5/20/2020	29364	30552 (-881088,942192)	30926 (29866,31986)	28692 (26291,31094)	30718 (-3343515,3404950)	30825 (29753,31898)	15705 (-10618,42028)
5/21/2020	29812	31288 (-1202570,1265145)	31759 (30396,33121)	29517 (27312,31722)	31488 (-4535043,4598019)	31618 (30238,32997)	16102 (-10313,42517)
5/22/2020	30426	32023 (-1554625,1618671)	32598 (30908,34289)	30381 (28339,32422)	32259 (-5841248,5905767)	32410 (30697,34123)	16546 (-9983,43075)
5/23/2020	31068	32758 (-1934825,2000341)	33445 (31402,35488)	31291 (29375,33207)	33028 (-7251604,7317661)	33203 (31132,35273)	16997 (-9666,43660)
5/24/2020	31616	33493 (-2341239,2408226)	34299 (31882,36716)	32246 (30393,34098)	33798 (-8759485,8827081)	33995 (31545,36445)	17436 (-9355,44227)
5/25/2020	31960	34229 (-2772285,2840742)	35159 (32347,37971)	33242 (31313,35171)	34568 (-10358920,10428057)	34787 (31936,37639)	17883 (-8989,44755)
5/26/2020	32343	34964 (-3226636,3296564)	36027 (32800,39253)	34288 (32120,36457)	35339 (-12045253,12115931)	35580 (32308,38852)	18271 (-8666,45208)
5/27/2020	32876	35699 (-3703159,3774557)	36901 (33241,40561)	35390 (32873,37908)	36101 (-13810682,13882884)	36372 (32660,40085)	18665 (-8350,45679)
5/28/2020	33249	36434 (-4200869,4273738)	37783 (33671,41894)	36558 (33544,39572)	36871 (-15655123,15728864)	37165 (32994,41335)	19103 (-7967,46173)
5/29/2020	33860	37170 (-4718904,4793243)	38671 (34091,43251)	37791 (34230,41351)	37642 (-17575617,17650900)	37957 (33310,42604)	19552 (-7589,46693)
5/30/2020	34366	37905 (-5256499,5332308)	39567 (34501,44632)	39130 (34930,43331)	38410 (-19568409,19645229)	38749 (33610,43889)	20038 (-7166,47243)
5/31/2020	34884	38640 (-5812967,5890247)	40469 (34903,46036)	40569 (35639,45498)	39180 (-21631347,21709706)	39542 (33893,45190)	20485 (-6784,47754)
6/1/2020	35292	39375 (-6387691,6466442)	41379 (35295,47462)	42139 (36354,47923)	39949 (-23762097,23841995)	40334 (34161,46508)	20964 (-6354,48282)
6/2/2020	35836	40111 (-6980110,7060331)	42295 (35679,48911)	43856 (37123,50589)	40719 (-25958802,26040240)	41127 (34413,47841)	21388 (-5986,48762)

**Table A.155**

Actual and Predicted Cases with 95% Confidence Intervals for Slovakia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1493	464 (-1553,2481)	1480 (1455,1505)	1381 (1162,1600)	1759 (1238,2279)	1457 (1386,1528)	1480 (1480,1480)	1486 (1474,1497)	
5/17/2020	1494	464 (-1554,2482)	1480 (1453,1507)	1397 (1191,1602)	1786 (1239,2333)	1457 (1385,1529)	1480 (1480,1480)	1491 (1469,1514)	
5/18/2020	1495	464 (-1555,2483)	1480 (1451,1509)	1412 (1220,1604)	1814 (1240,2388)	1457 (1384,1530)	1480 (1480,1480)	1497 (1460,1534)	
5/19/2020	1495	464 (-1556,2483)	1480 (1451,1509)	1428 (1249,1607)	1841 (1239,2442)	1457 (1384,1530)	1480 (1480,1480)	1502 (1448,1556)	
5/20/2020	1496	464 (-1556,2484)	1480 (1449,1511)	1443 (1277,1610)	1868 (1239,2497)	1457 (1383,1531)	1480 (1480,1480)	1508 (1434,1581)	
5/21/2020	1502	464 (-1559,2487)	1480 (1437,1523)	1459 (1303,1615)	1895 (1240,2550)	1457 (1381,1533)	1480 (1480,1480)	1513 (1418,1608)	
5/22/2020	1503	464 (-1561,2489)	1480 (1435,1525)	1474 (1329,1620)	1922 (1241,2602)	1457 (1379,1535)	1480 (1480,1480)	1519 (1401,1636)	
5/23/2020	1504	464 (-1563,2490)	1480 (1433,1527)	1490 (1353,1627)	1948 (1241,2655)	1457 (1377,1537)	1480 (1480,1480)	1524 (1382,1666)	
5/24/2020	1509	464 (-1565,2493)	1480 (1423,1537)	1506 (1377,1635)	1974 (1241,2707)	1457 (1374,1540)	1480 (1480,1480)	1529 (1361,1698)	
5/25/2020	1511	464 (-1567,2495)	1480 (1419,1541)	1521 (1399,1644)	2001 (1242,2759)	1457 (1371,1543)	1480 (1480,1480)	1535 (1339,1731)	
5/26/2020	1513	464 (-1570,2497)	1480 (1415,1545)	1537 (1419,1654)	2026 (1242,2811)	1457 (1369,1545)	1480 (1480,1480)	1540 (1316,1765)	
5/27/2020	1515	464 (-1572,2500)	1480 (1411,1549)	1552 (1438,1667)	2052 (1242,2862)	1457 (1367,1547)	1480 (1480,1480)	1546 (1291,1800)	
5/28/2020	1520	464 (-1575,2502)	1480 (1402,1558)	1568 (1455,1681)	2078 (1242,2913)	1457 (1364,1550)	1480 (1480,1480)	1551 (1265,1837)	
5/29/2020	1520	464 (-1577,2505)	1480 (1402,1558)	1583 (1469,1697)	2103 (1242,2964)	1457 (1361,1553)	1480 (1480,1480)	1557 (1238,1875)	
5/30/2020	1521	464 (-1579,2507)	1480 (1400,1560)	1599 (1482,1716)	2128 (1241,3014)	1457 (1359,1555)	1480 (1480,1480)	1562 (1210,1914)	
5/31/2020	1521	464 (-1581,2509)	1480 (1400,1560)	1614 (1492,1737)	2152 (1240,3065)	1457 (1357,1557)	1480 (1480,1480)	1567 (1180,1955)	
6/1/2020	1522	464 (-1583,2510)	1480 (1398,1562)	1630 (1501,1759)	2177 (1238,3115)	1457 (1355,1559)	1480 (1480,1480)	1573 (1150,1996)	
6/2/2020	1522	464 (-1584,2512)	1480 (1398,1562)	1646 (1508,1783)	2201 (1236,3165)	1457 (1354,1560)	1480 (1480,1480)	1578 (1118,2038)	

## Predicted Cases (95% Confidence Interval)

Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	1493	1485 (1475,1495)	1485 (1454,1516)	1417 (1268,1566)	1484 (1476,1492)	1485 (1453,1516)	745 (-721,2211)
5/17/2020	1494	1490 (1471,1508)	1490 (1437,1543)	1411 (1255,1567)	1488 (1467,1509)	1490 (1436,1543)	749 (-714,2212)
5/18/2020	1495	1494 (1465,1524)	1495 (1421,1570)	1406 (1243,1568)	1492 (1454,1529)	1495 (1420,1569)	750 (-711,2212)
5/19/2020	1495	1499 (1457,1541)	1501 (1405,1597)	1400 (1232,1569)	1495 (1440,1551)	1500 (1403,1596)	753 (-707,2213)
5/20/2020	1496	1503 (1447,1559)	1506 (1387,1624)	1395 (1220,1570)	1499 (1423,1574)	1505 (1386,1623)	753 (-706,2213)
5/21/2020	1502	1508 (1436,1579)	1511 (1370,1653)	1390 (1207,1573)	1502 (1405,1598)	1510 (1368,1651)	756 (-704,2216)
5/22/2020	1503	1512 (1424,1599)	1517 (1351,1683)	1385 (1195,1576)	1505 (1386,1623)	1515 (1348,1681)	760 (-700,2219)
5/23/2020	1504	1516 (1411,1621)	1522 (1331,1714)	1381 (1184,1578)	1507 (1366,1649)	1519 (1328,1711)	762 (-696,2221)
5/24/2020	1509	1520 (1397,1643)	1528 (1310,1746)	1377 (1172,1582)	1510 (1345,1675)	1524 (1306,1743)	765 (-693,2224)
5/25/2020	1511	1524 (1383,1665)	1533 (1288,1779)	1373 (1160,1586)	1513 (1323,1702)	1529 (1284,1775)	768 (-690,2226)
5/26/2020	1513	1528 (1367,1689)	1539 (1265,1813)	1369 (1150,1589)	1515 (1301,1729)	1534 (1260,1808)	771 (-687,2229)
5/27/2020	1515	1532 (1351,1712)	1545 (1242,1848)	1366 (1140,1593)	1517 (1278,1757)	1539 (1236,1843)	774 (-684,2231)
5/28/2020	1520	1536 (1334,1737)	1550 (1217,1884)	1363 (1129,1597)	1519 (1255,1784)	1544 (1211,1878)	776 (-681,2234)
5/29/2020	1520	1539 (1317,1761)	1556 (1192,1921)	1360 (1120,1601)	1522 (1231,1812)	1549 (1185,1914)	780 (-677,2237)
5/30/2020	1521	1543 (1299,1787)	1562 (1166,1959)	1358 (1112,1604)	1523 (1208,1839)	1554 (1158,1951)	782 (-674,2239)
5/31/2020	1521	1546 (1281,1812)	1568 (1139,1997)	1356 (1104,1608)	1525 (1184,1867)	1559 (1130,1989)	785 (-671,2241)
6/1/2020	1522	1550 (1262,1838)	1574 (1111,2037)	1354 (1096,1611)	1527 (1160,1895)	1564 (1101,2028)	787 (-668,2242)
6/2/2020	1522	1553 (1242,1864)	1580 (1082,2077)	1352 (1090,1614)	1529 (1135,1922)	1569 (1071,2067)	790 (-663,2244)

**Table A.156**

Actual and Predicted Cases with 95% Confidence Intervals for Slovenia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1465	582 (-1147,2312)	1465 (1465,1465)	1598 (1337,1860)	1479 (1451,1507)	1464 (1462,1466)	1465 (1465,1465)	1467 (1463,1472)	
5/17/2020	1466	582 (-1148,2313)	1465 (1463,1467)	1616 (1338,1894)	1470 (1450,1491)	1464 (1461,1467)	1465 (1465,1465)	1470 (1462,1477)	
5/18/2020	1466	582 (-1149,2314)	1465 (1463,1467)	1633 (1338,1928)	1460 (1442,1478)	1464 (1461,1467)	1465 (1465,1465)	1472 (1462,1482)	
5/19/2020	1467	582 (-1149,2314)	1465 (1461,1469)	1650 (1338,1963)	1448 (1423,1472)	1464 (1460,1468)	1465 (1465,1465)	1474 (1460,1487)	
5/20/2020	1468	582 (-1150,2315)	1465 (1459,1471)	1667 (1338,1997)	1434 (1398,1471)	1464 (1459,1469)	1465 (1465,1465)	1476 (1459,1493)	
5/21/2020	1468	582 (-1151,2316)	1465 (1459,1471)	1685 (1337,2032)	1419 (1368,1471)	1464 (1458,1470)	1465 (1465,1465)	1478 (1457,1499)	
5/22/2020	1468	582 (-1151,2316)	1465 (1459,1471)	1702 (1337,2067)	1403 (1335,1471)	1464 (1458,1470)	1465 (1465,1465)	1480 (1455,1505)	
5/23/2020	1468	582 (-1151,2316)	1465 (1459,1471)	1719 (1336,2102)	1385 (1299,1470)	1464 (1458,1470)	1465 (1465,1465)	1482 (1453,1511)	
5/24/2020	1468	582 (-1152,2316)	1465 (1459,1471)	1736 (1335,2138)	1365 (1260,1470)	1464 (1458,1470)	1465 (1465,1465)	1484 (1451,1518)	
5/25/2020	1469	582 (-1152,2317)	1465 (1457,1473)	1753 (1334,2173)	1343 (1217,1470)	1464 (1457,1471)	1465 (1465,1465)	1486 (1448,1524)	
5/26/2020	1469	582 (-1152,2317)	1465 (1457,1473)	1771 (1332,2209)	1320 (1171,1470)	1464 (1457,1471)	1465 (1465,1465)	1488 (1445,1531)	
5/27/2020	1471	582 (-1153,2318)	1465 (1453,1477)	1788 (1332,2244)	1295 (1121,1469)	1464 (1456,1472)	1465 (1465,1465)	1490 (1442,1539)	
5/28/2020	1473	582 (-1154,2318)	1465 (1449,1481)	1805 (1331,2279)	1269 (1068,1469)	1464 (1455,1473)	1465 (1465,1465)	1493 (1439,1546)	
5/29/2020	1473	582 (-1154,2319)	1465 (1449,1481)	1822 (1330,2314)	1240 (1012,1469)	1464 (1454,1474)	1465 (1465,1465)	1495 (1436,1554)	
5/30/2020	1473	582 (-1155,2320)	1465 (1449,1481)	1840 (1329,2350)	1210 (952,1468)	1464 (1453,1475)	1465 (1465,1465)	1497 (1432,1561)	
5/31/2020	1473	582 (-1155,2320)	1465 (1449,1481)	1857 (1328,2385)	1178 (889,1466)	1464 (1453,1475)	1465 (1465,1465)	1499 (1429,1569)	
6/1/2020	1473	582 (-1156,2321)	1465 (1449,1481)	1874 (1327,2421)	1144 (823,1465)	1464 (1452,1476)	1465 (1465,1465)	1501 (1425,1577)	
6/2/2020	1475	582 (-1156,2321)	1465 (1445,1485)	1891 (1326,2457)	1108 (753,1463)	1464 (1452,1476)	1465 (1465,1465)	1503 (1421,1585)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Surtte-Arima		
3168	1465	1467 (1463,1471)	1466 (1449,1484)	1447 (1413,1482)	1466 (1464,1468)	1466 (1449,1484)	734 (-699,2167)		
5/17/2020	1466	1469 (1463,1475)	1468 (1435,1501)	1446 (1409,1483)	1467 (1463,1471)	1468 (1435,1501)	734 (-699,2168)		
5/18/2020	1466	1471 (1462,1480)	1469 (1421,1518)	1444 (1405,1483)	1468 (1462,1474)	1469 (1421,1518)	735 (-698,2168)		
5/19/2020	1467	1473 (1461,1484)	1471 (1406,1536)	1442 (1400,1484)	1469 (1461,1477)	1471 (1406,1536)	736 (-698,2169)		
5/20/2020	1468	1474 (1460,1489)	1472 (1390,1555)	1440 (1395,1485)	1470 (1459,1480)	1472 (1389,1555)	737 (-697,2170)		
5/21/2020	1468	1476 (1459,1493)	1474 (1372,1575)	1438 (1391,1485)	1470 (1458,1483)	1473 (1372,1575)	737 (-696,2171)		
5/22/2020	1468	1478 (1458,1498)	1475 (1354,1597)	1436 (1386,1486)	1471 (1456,1486)	1475 (1353,1596)	738 (-695,2171)		
5/23/2020	1468	1480 (1456,1503)	1477 (1335,1619)	1434 (1382,1486)	1472 (1454,1489)	1476 (1334,1619)	739 (-694,2171)		
5/24/2020	1468	1481 (1454,1508)	1479 (1314,1643)	1432 (1378,1487)	1472 (1452,1493)	1478 (1313,1642)	739 (-693,2171)		
5/25/2020	1469	1483 (1453,1514)	1480 (1293,1667)	1431 (1374,1488)	1473 (1450,1496)	1479 (1292,1667)	740 (-692,2172)		
5/26/2020	1469	1485 (1451,1519)	1482 (1270,1693)	1429 (1370,1488)	1474 (1448,1499)	1481 (1269,1692)	741 (-690,2172)		
5/27/2020	1471	1486 (1448,1524)	1483 (1247,1719)	1428 (1366,1489)	1474 (1446,1502)	1482 (1246,1718)	742 (-689,2173)		
5/28/2020	1473	1488 (1446,1530)	1485 (1223,1747)	1426 (1362,1491)	1475 (1444,1506)	1483 (1221,1745)	743 (-688,2174)		
5/29/2020	1473	1490 (1444,1535)	1487 (1198,1775)	1425 (1358,1492)	1475 (1441,1509)	1485 (1196,1773)	744 (-687,2175)		
5/30/2020	1473	1491 (1441,1541)	1488 (1172,1804)	1424 (1355,1493)	1476 (1439,1512)	1486 (1170,1802)	745 (-686,2175)		
5/31/2020	1473	1493 (1438,1547)	1490 (1146,1834)	1423 (1352,1494)	1476 (1437,1515)	1488 (1143,1832)	745 (-685,2176)		
6/1/2020	1473	1494 (1436,1553)	1491 (1118,1865)	1422 (1349,1495)	1477 (1434,1519)	1489 (1116,1862)	746 (-684,2176)		
6/2/2020	1475	1496 (1433,1558)	1493 (1090,1896)	1421 (1345,1497)	1477 (1432,1522)	1491 (1087,1894)	747 (-683,2177)		

**Table A.157**

Actual and Predicted Cases with 95% Confidence Intervals for Somalia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1357	172 (-2151,2495)	1284 (1141,1427)	603 (-873,2080)	1442 (1275,1608)	1284 (1141,1427)	1284 (1284,1284)	1340 (1231,1449)	
5/17/2020	1421	172 (-2215,2558)	1284 (1015,1553)	611 (-923,2144)	1508 (1340,1676)	1284 (1069,1499)	1284 (1284,1284)	1385 (496,2274)	
5/18/2020	1455	172 (-2258,2602)	1284 (949,1619)	618 (-952,2188)	1575 (1382,1769)	1284 (1023,1545)	1284 (1284,1284)	1431 (-467,3329)	
5/19/2020	1502	172 (-2304,2647)	1284 (857,1711)	625 (-983,2234)	1645 (1427,1864)	1284 (973,1595)	1284 (1284,1284)	1476 (-1640,4593)	
5/20/2020	1573	172 (-2360,2704)	1284 (718,1850)	633 (-1025,2291)	1716 (1484,1949)	1284 (908,1660)	1284 (1284,1284)	1522 (-2993,6037)	
5/21/2020	1594	172 (-2405,2748)	1284 (676,1892)	640 (-1055,2335)	1790 (1526,2053)	1284 (860,1708)	1284 (1284,1284)	1567 (-4506,7641)	
5/22/2020	1594	172 (-2436,2779)	1284 (676,1892)	647 (-1071,2366)	1865 (1549,2181)	1284 (829,1739)	1284 (1284,1284)	1613 (-6163,9389)	
5/23/2020	1594	172 (-2459,2803)	1284 (676,1892)	655 (-1080,2389)	1942 (1561,2324)	1284 (808,1760)	1284 (1284,1284)	1658 (-7955,11271)	
5/24/2020	1594	172 (-2477,2820)	1284 (676,1892)	662 (-1083,2407)	2021 (1566,2477)	1284 (791,1777)	1284 (1284,1284)	1704 (-9871,13278)	
5/25/2020	1689	172 (-2511,2855)	1284 (490,2078)	669 (-1103,2441)	2103 (1600,2605)	1284 (753,1815)	1284 (1284,1284)	1749 (-11904,15402)	
5/26/2020	1711	172 (-2543,2887)	1284 (447,2121)	677 (-1120,2473)	2186 (1631,2741)	1284 (719,1849)	1284 (1284,1284)	1795 (-14048,17638)	
5/27/2020	1731	172 (-2573,2917)	1284 (408,2160)	684 (-1135,2503)	2271 (1658,2884)	1284 (687,1881)	1284 (1284,1284)	1841 (-16297,19978)	
5/28/2020	1828	172 (-2615,2959)	1284 (218,2350)	691 (-1163,2545)	2358 (1703,3014)	1284 (638,1930)	1284 (1284,1284)	1886 (-18648,22420)	
5/29/2020	1828	172 (-2650,2994)	1284 (218,2350)	699 (-1183,2581)	2448 (1737,3158)	1284 (600,1968)	1284 (1284,1284)	1932 (-21095,24958)	
5/30/2020	1916	172 (-2694,3038)	1284 (45,2523)	706 (-1213,2624)	2539 (1784,3294)	1284 (550,2018)	1284 (1284,1284)	1977 (-23636,27590)	
5/31/2020	1976	172 (-2740,3084)	1284 (-72,2640)	713 (-1245,2671)	2633 (1834,3432)	1284 (496,2072)	1284 (1284,1284)	2023 (-26267,30312)	
6/1/2020	2023	172 (-2787,3131)	1284 (-164,2732)	721 (-1277,2718)	2729 (1884,3573)	1284 (443,2125)	1284 (1284,1284)	2068 (-28984,33121)	
6/2/2020	2089	172 (-2837,3181)	1284 (-294,2862)	728 (-1313,2769)	2827 (1938,3715)	1284 (386,2182)	1284 (1284,1284)	2114 (-31787,36014)	

## Predicted Cases (95% Confidence Interval)

Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	1357	1340 (1231,1449)	1340 (1315,1366)	1292 (1164,1420)	1355 (1216,1493)	1340 (1312,1368)	690 (-618,1998)
5/17/2020	1421	1385 (496,2274)	1399 (1365,1432)	1330 (1175,1485)	1417 (186,2648)	1384 (1345,1423)	723 (-615,2061)
5/18/2020	1455	1431 (-467,3329)	1450 (1411,1489)	1368 (1208,1528)	1471 (-1078,4020)	1427 (1375,1478)	748 (-606,2102)
5/19/2020	1502	1476 (-1640,4593)	1496 (1450,1542)	1405 (1237,1573)	1553 (-3006,6112)	1474 (1409,1539)	777 (-594,2148)
5/20/2020	1573	1522 (-2993,6037)	1542 (1486,1598)	1442 (1252,1631)	1601 (-4939,8142)	1516 (1438,1595)	796 (-607,2198)
5/21/2020	1594	1567 (-4506,7641)	1588 (1518,1657)	1478 (1282,1674)	1653 (-7002,10308)	1563 (1469,1656)	820 (-603,2242)
5/22/2020	1594	1613 (-6163,9389)	1634 (1549,1719)	1513 (1322,1705)	1655 (-8710,12020)	1606 (1497,1715)	841 (-590,2271)
5/23/2020	1594	1658 (-7955,11271)	1681 (1578,1784)	1549 (1367,1731)	1731 (-10860,14323)	1652 (1527,1777)	856 (-576,2289)
5/24/2020	1594	1704 (-9871,13278)	1728 (1606,1850)	1584 (1413,1755)	1794 (-13292,16879)	1696 (1554,1837)	868 (-564,2299)
5/25/2020	1689	1749 (-11904,15402)	1776 (1633,1919)	1619 (1451,1787)	1847 (-15884,19578)	1741 (1582,1900)	888 (-558,2334)
5/26/2020	1711	1795 (-14048,17638)	1824 (1659,1989)	1654 (1490,1818)	1929 (-18865,22724)	1785 (1608,1962)	928 (-526,2382)
5/27/2020	1731	1841 (-16297,19978)	1873 (1684,2061)	1689 (1530,1847)	1978 (-21918,25874)	1830 (1634,2026)	956 (-503,2416)
5/28/2020	1828	1886 (-18648,22420)	1921 (1709,2134)	1723 (1560,1886)	2030 (-25056,29115)	1874 (1659,2090)	984 (-491,2460)
5/29/2020	1828	1932 (-21095,24958)	1971 (1733,2209)	1757 (1596,1919)	2032 (-27920,31983)	1919 (1684,2154)	1009 (-476,2494)
5/30/2020	1916	1977 (-23636,27590)	2020 (1756,2285)	1791 (1623,1959)	2108 (-31052,35268)	1964 (1708,2219)	1030 (-473,2533)
5/31/2020	1976	2023 (-26267,30312)	2070 (1778,2362)	1825 (1646,2004)	2170 (-34387,38727)	2009 (1732,2285)	1067 (-455,2589)
6/1/2020	2023	2068 (-28984,33121)	2121 (1800,2441)	1858 (1668,2049)	2224 (-37843,42290)	2053 (1755,2351)	1085 (-457,2628)
6/2/2020	2089	2114 (-31787,36014)	2171 (1821,2521)	1891 (1685,2098)	2306 (-41595,46207)	2098 (1778,2418)	1119 (-446,2683)

**Table A.158**

Actual and Predicted Cases with 95% Confidence Intervals for South Africa using the Time Series Models.

Predicted Cases (95% Confidence Interval)									
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	14355	2059 (-22041,26159)	13524 (11895,15153)	6666 (-8404,21736)	13069 (10547,15590)	12739 (9572,15906)	13524 (13524,13524)	14110 (12961,15259)	
5/17/2020	15515	2059 (-23203,27322)	13524 (9622,17426)	6744 (-9421,22909)	13574 (10347,16801)	12739 (8287,17191)	13524 (13524,13524)	14740 (-101991,131471)	
5/18/2020	16433	2059 (-24209,28328)	13524 (7822,19226)	6822 (-10280,23924)	14092 (10357,17828)	12739 (7200,18278)	13524 (13524,13524)	15370 (-244817,275557)	
5/19/2020	17200	2059 (-25102,29220)	13524 (6319,20729)	6901 (-11023,24824)	14624 (10519,18728)	12739 (6248,19230)	13524 (13524,13524)	16000 (-418783,450783)	
5/20/2020	18003	2059 (-25967,30085)	13524 (4745,22303)	6979 (-11740,25697)	15168 (10734,19601)	12739 (5323,20155)	13524 (13524,13524)	16630 (-619347,652606)	
5/21/2020	19137	2059 (-26946,31064)	13524 (2523,24525)	7057 (-12575,26689)	15725 (10843,20606)	12739 (4252,21226)	13524 (13524,13524)	17260 (-843442,877962)	
5/22/2020	20125	2059 (-27945,32063)	13524 (586,26462)	7135 (-13431,27701)	16295 (10959,21631)	12739 (3164,22314)	13524 (13524,13524)	17890 (-1088856,1124635)	
5/23/2020	21343	2059 (-29026,33144)	13524 (-1801,28849)	7213 (-14373,28799)	16879 (11006,22751)	12739 (1979,23499)	13524 (13524,13524)	18519 (-1353894,1390933)	
5/24/2020	22583	2059 (-30170,34288)	13524 (-4232,31280)	7291 (-15381,29963)	17476 (11012,23941)	12739 (728,24750)	13524 (13524,13524)	19149 (-1637212,1675510)	
5/25/2020	23615	2059 (-31308,35426)	13524 (-6254,33302)	7369 (-16380,31118)	18087 (11062,25112)	12739 (-501,25979)	13524 (13524,13524)	19779 (-1937705,1977264)	
5/26/2020	24264	2059 (-32355,36473)	13524 (-7526,34574)	7447 (-17281,32176)	18712 (11254,26170)	12739 (-1605,27083)	13524 (13524,13524)	20409 (-2254450,2295268)	
5/27/2020	25937	2059 (-33552,37670)	13524 (-10805,37853)	7525 (-18341,33391)	19351 (11297,27406)	12739 (-2893,28371)	13524 (13524,13524)	21039 (-2586654,2628732)	
5/28/2020	27403	2059 (-34825,38943)	13524 (-13679,40727)	7603 (-19479,34685)	20004 (11283,28726)	12739 (-4264,29742)	13524 (13524,13524)	21669 (-2933634,2976972)	
5/29/2020	29240	2059 (-36229,40347)	13524 (-17279,44327)	7681 (-20754,36117)	20672 (11144,30199)	12739 (-5786,31264)	13524 (13524,13524)	22299 (-3294787,3339384)	
5/30/2020	30967	2059 (-37719,41837)	13524 (-20664,47712)	7760 (-22117,37636)	21354 (10942,31765)	12739 (-7395,32873)	13524 (13524,13524)	22929 (-3669578,3715435)	
5/31/2020	32683	2059 (-39276,43394)	13524 (-24028,51076)	7838 (-23548,39223)	22050 (10703,33398)	12739 (-9068,34546)	13524 (13524,13524)	23558 (-4057531,4104648)	
6/1/2020	34357	2059 (-40880,44998)	13524 (-27309,54357)	7916 (-25025,40856)	22762 (10450,35073)	12739 (-10781,36259)	13524 (13524,13524)	24188 (-4458214,4506591)	
6/2/2020	35812	2059 (-42489,46607)	13524 (-30160,57208)	7994 (-26502,42490)	23488 (10238,36738)	12739 (-12481,37959)	13524 (13524,13524)	24818 (-4871237,4920873)	
Predicted Cases (95% Confidence Interval)									
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3170	14355	14110 (12961,15259)	14292 (14186,14398)	12036 (7491,16581)	14270 (12808,15731)	14286 (14178,14395)	7519 (-5880,20918)		
5/17/2020	15515	14740 (-101991,131471)	15045 (14832,15258)	12351 (6914,17788)	15016 (-674841,704872)	15028 (14807,15249)	7914 (-6255,22082)		
5/18/2020	16433	15370 (-244817,275557)	15804 (15482,16127)	12669 (6517,18821)	15761 (-1525400,1556923)	15770 (15430,16110)	8380 (-6346,23107)		
5/19/2020	17200	16000 (-418783,450783)	16571 (16131,17011)	12975 (6228,19723)	16507 (-2561288,2594301)	16512 (16043,16982)	8786 (-6401,23973)		
5/20/2020	18003	16630 (-619347,652606)	17343 (16777,17910)	13275 (5955,20596)	17252 (-3755333,3789838)	17254 (16644,17864)	9161 (-6478,24800)		
5/21/2020	19137	17260 (-843442,877962)	18123 (17421,18825)	13573 (5543,21603)	17998 (-5089259,5125254)	17996 (17235,18758)	9486 (-6745,25718)		
5/22/2020	20125	17890 (-1088856,1124635)	18909 (18062,19755)	13872 (5113,22632)	18743 (-6549841,6587327)	18738 (17815,19661)	9917 (-6906,26739)		
5/23/2020	21343	18519 (-1353894,1390933)	19702 (18703,20700)	14176 (4594,23757)	19488 (-8126958,8165935)	19480 (18386,20574)	10351 (-7131,27834)		
5/24/2020	22583	19149 (-1637212,1675510)	20501 (19342,21660)	14486 (4018,24955)	20234 (-9812648,9853115)	20222 (18948,21496)	10823 (-7363,29009)		
5/25/2020	23615	19779 (-1937705,1977264)	21307 (19980,22633)	14807 (3474,26140)	20979 (-11600309,11642267)	20964 (19501,22426)	11244 (-7636,30123)		
5/26/2020	24264	20409 (-2254450,2295268)	22119 (20617,23621)	15138 (3062,27215)	21724 (-13484427,13527875)	21706 (20046,23365)	11657 (-7825,31139)		
5/27/2020	25937	21039 (-2586654,2628732)	22938 (21255,24622)	15481 (2493,28469)	22469 (-15460295,15505233)	22448 (20583,24313)	11967 (-8291,32225)		
5/28/2020	27403	21669 (-2933634,2976972)	23764 (21892,25636)	15835 (1862,29808)	23214 (-17523833,17570261)	23190 (21112,25267)	12456 (-8636,33547)		
5/29/2020	29240	22299 (-3294787,3339384)	24596 (22529,26663)	16200 (1102,31299)	23959 (-19671443,19719360)	23932 (21634,26229)	12947 (-9097,34990)		
5/30/2020	30967	22929 (-3669578,3715435)	25435 (23167,27703)	16577 (274,32881)	24703 (-21899915,21949321)	24674 (22149,27199)	13573 (-9471,36616)		
5/31/2020	32683	23558 (-4057531,4104648)	26281 (23805,28756)	16967 (-597,34531)	25448 (-24206441,24257337)	25416 (22656,28175)	14004 (-10113,38120)		
6/1/2020	34357	24188 (-4458214,4506591)	27133 (24444,29822)	17369 (-1487,36225)	26193 (-26588435,26640820)	26158 (23157,29159)	14472 (-10761,39706)		
6/2/2020	35812	24818 (-4871237,4920873)	27992 (25084,30900)	17786 (-2342,37914)	26937 (-29043561,29097435)	26900 (23651,30148)	14872 (-11490,41233)		

**Table A.159**

Actual and Predicted Cases with 95% Confidence Intervals for South Sudan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	236	17 (-413,447)	236 (236,236)	62 (-280,403)	188 (93,283)	120 (-107,347)	236 (236,236)	250 (222,278)
5/17/2020	290	17 (-469,502)	236 (130,342)	62 (-335,460)	198 (53,342)	120 (-165,405)	236 (236,236)	267 (165,370)
5/18/2020	290	17 (-486,520)	236 (130,342)	63 (-350,477)	208 (58,358)	120 (-182,422)	236 (236,236)	285 (81,488)
5/19/2020	290	17 (-495,528)	236 (130,342)	64 (-357,485)	219 (71,366)	120 (-190,430)	236 (236,236)	302 (-22,626)
5/20/2020	290	17 (-500,533)	236 (130,342)	65 (-360,490)	230 (88,372)	120 (-195,435)	236 (236,236)	319 (-143,781)
5/21/2020	481	17 (-584,617)	236 (-244,716)	66 (-446,577)	241 (10,473)	120 (-288,528)	236 (236,236)	336 (-279,950)
5/22/2020	563	17 (-671,704)	236 (-405,877)	66 (-533,666)	253 (-61,567)	120 (-380,620)	236 (236,236)	353 (-428,1134)
5/23/2020	655	17 (-764,797)	236 (-585,1057)	67 (-626,760)	265 (-134,664)	120 (-477,717)	236 (236,236)	370 (-590,1331)
5/24/2020	655	17 (-829,863)	236 (-585,1057)	68 (-690,826)	277 (-172,727)	120 (-542,782)	236 (236,236)	387 (-764,1539)
5/25/2020	806	17 (-923,957)	236 (-881,1353)	69 (-783,920)	290 (-243,824)	120 (-639,879)	236 (236,236)	405 (-949,1758)
5/26/2020	806	17 (-994,1027)	236 (-881,1353)	69 (-852,991)	303 (-286,892)	120 (-709,949)	236 (236,236)	422 (-1145,1988)
5/27/2020	994	17 (-1098,1131)	236 (-1250,1722)	70 (-955,1096)	317 (-365,998)	120 (-815,1055)	236 (236,236)	439 (-1351,2229)
5/28/2020	994	17 (-1179,1212)	236 (-1250,1722)	71 (-1035,1177)	331 (-417,1078)	120 (-897,1137)	236 (236,236)	456 (-1567,2479)
5/29/2020	994	17 (-1244,1277)	236 (-1250,1722)	72 (-1098,1242)	345 (-452,1141)	120 (-961,1201)	236 (236,236)	473 (-1791,2738)
5/30/2020	994	17 (-1298,1331)	236 (-1250,1722)	72 (-1150,1295)	359 (-475,1193)	120 (-1014,1254)	236 (236,236)	490 (-2025,3006)
5/31/2020	994	17 (-1343,1376)	236 (-1250,1722)	73 (-1194,1340)	374 (-489,1237)	120 (-1059,1299)	236 (236,236)	507 (-2268,3282)
6/1/2020	994	17 (-1382,1415)	236 (-1250,1722)	74 (-1231,1379)	389 (-496,1274)	120 (-1097,1337)	236 (236,236)	525 (-2518,3567)
6/2/2020	994	17 (-1416,1449)	236 (-1250,1722)	75 (-1262,1412)	405 (-497,1307)	120 (-1130,1370)	236 (236,236)	542 (-2777,3861)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Surtte-Arima	
5/16/2020	236	250 (222,278)	279 (269,289)	209 (157,262)	239 (233,246)	279 (269,289)	147 (-28,322)	
5/17/2020	290	267 (165,370)	298 (281,314)	223 (122,323)	254 (227,280)	298 (281,314)	155 (-70,379)	
5/18/2020	290	285 (81,488)	303 (281,326)	236 (133,338)	278 (212,343)	302 (280,325)	168 (-62,397)	
5/19/2020	290	302 (-22,626)	327 (295,360)	248 (151,346)	300 (188,413)	325 (293,358)	174 (-56,403)	
5/20/2020	290	319 (-143,781)	368 (320,415)	261 (169,352)	308 (156,461)	365 (318,413)	194 (-28,416)	
5/21/2020	481	336 (-279,950)	396 (334,458)	273 (86,459)	321 (126,516)	393 (331,454)	198 (-106,502)	
5/22/2020	563	353 (-428,1134)	407 (332,482)	285 (16,553)	349 (96,602)	402 (327,476)	243 (-124,611)	
5/23/2020	655	370 (-590,1331)	425 (336,515)	297 (-57,650)	354 (50,658)	418 (329,507)	267 (-169,704)	
5/24/2020	655	387 (-764,1539)	461 (355,568)	309 (-94,711)	368 (11,726)	453 (346,559)	302 (-170,773)	
5/25/2020	806	405 (-949,1758)	495 (370,620)	321 (-166,807)	392 (-28,813)	484 (359,609)	279 (-276,833)	
5/26/2020	806	422 (-1145,1988)	512 (370,655)	333 (-209,874)	415 (-77,906)	499 (357,642)	301 (-307,908)	
5/27/2020	994	439 (-1351,2229)	529 (368,690)	345 (-290,981)	423 (-136,981)	513 (353,674)	292 (-412,996)	
5/28/2020	994	456 (-1567,2479)	560 (379,741)	358 (-343,1059)	436 (-191,1062)	542 (361,722)	342 (-421,1106)	
5/29/2020	994	473 (-1791,2738)	595 (393,798)	371 (-380,1121)	464 (-241,1169)	575 (373,776)	332 (-481,1145)	
5/30/2020	994	490 (-2025,3006)	619 (395,843)	384 (-404,1172)	469 (-310,1247)	595 (372,818)	344 (-508,1196)	
5/31/2020	994	507 (-2268,3282)	637 (392,882)	398 (-420,1215)	483 (-371,1337)	609 (365,853)	318 (-570,1207)	
6/1/2020	994	525 (-2518,3567)	664 (396,931)	411 (-428,1251)	507 (-430,1444)	633 (366,899)	332 (-586,1250)	
6/2/2020	994	542 (-2777,3861)	698 (407,990)	425 (-432,1282)	529 (-496,1554)	664 (374,955)	349 (-591,1290)	

**Table A.160**

Actual and Predicted Cases with 95% Confidence Intervals for Spain using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	230698	81065 (-212215,374345)	230183 (229174,231192)	232375 (229088,235661)	246518 (215511,277524)	224350 (211908,236792)
5/17/2020	230698	81065 (-212215,374345)	230183 (229174,231192)	234939 (228618,241260)	247382 (215517,279246)	224350 (211908,236792)
5/18/2020	231606	81065 (-212809,374940)	230183 (227394,232972)	237504 (229067,245941)	248095 (216078,280111)	224350 (211288,237412)
5/19/2020	232037	81065 (-213318,375449)	230183 (226549,233817)	240069 (229329,250808)	248653 (216498,280808)	224350 (210759,237941)
5/20/2020	232555	81065 (-213827,375958)	230183 (225534,234832)	242633 (229583,255683)	249053 (216862,281244)	224350 (210226,238474)
5/21/2020	233037	81065 (-214324,376455)	230183 (224589,235777)	245198 (229816,260580)	249292 (217156,281428)	224350 (209702,238998)
5/22/2020	234824	81065 (-215186,377316)	230183 (221087,239279)	247762 (230596,264928)	249365 (217723,281008)	224350 (208726,239974)
5/23/2020	235290	81065 (-215946,378077)	230183 (220173,240193)	250327 (231185,269469)	249271 (218127,280415)	224350 (207886,240814)
5/24/2020	235772	81065 (-216643,378774)	230183 (219229,241137)	252891 (231659,274123)	249004 (218395,279614)	224350 (207127,241573)
5/25/2020	235400	81065 (-217125,379256)	230183 (219958,240408)	255456 (231786,279125)	248563 (218400,278725)	224350 (206633,242067)
5/26/2020	236259	81065 (-217674,379805)	230183 (218274,242092)	258021 (232046,283995)	247943 (218366,277519)	224350 (206050,242650)
5/27/2020	236259	81065 (-218132,380262)	230183 (218274,242092)	260585 (232161,289009)	247140 (218162,276119)	224350 (205578,243122)
5/28/2020	237906	81065 (-218771,380902)	230183 (215046,245320)	263150 (232587,293712)	246153 (217952,274353)	224350 (204867,243833)
5/29/2020	238564	81065 (-219413,381543)	230183 (213756,246610)	265714 (233009,298419)	244976 (217595,272357)	224350 (204153,244547)
5/30/2020	239228	81065 (-220057,382188)	230183 (212455,247911)	268279 (233430,303128)	243607 (217061,270152)	224350 (203436,245264)
5/31/2020	239479	81065 (-220651,382782)	230183 (211963,248403)	270843 (233766,307921)	242042 (216309,267775)	224350 (202786,245914)
6/1/2020	239638	81065 (-221193,383324)	230183 (211651,248715)	273408 (234018,312798)	240278 (215311,265245)	224350 (202203,246497)
6/2/2020	239932	81065 (-221707,383838)	230183 (211075,249291)	275972 (234228,317717)	238312 (214037,262587)	224350 (201655,247045)
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SES	HLT	DT	ARIMA	
5/16/2020	230698	230183 (230183,230183)	231318 (229093,233544)	231214 (229194,233234)	231080 (227646,234515)	
5/17/2020	230698	230183 (230183,230183)	232341 (-133403,598084)	232138 (-68407,532684)	231906 (226616,237195)	
5/18/2020	231606	230183 (230183,230183)	233363 (-582860,1049586)	233050 (-433551,899650)	232738 (225260,240216)	
5/19/2020	232037	230183 (230183,230183)	234385 (-1130272,1599041)	233947 (-874079,1341973)	233578 (223637,243518)	
5/20/2020	232555	230183 (230183,230183)	235407 (-1761316,2232129)	234831 (-1377174,1846837)	234424 (221782,247067)	
5/21/2020	233037	230183 (230183,230183)	236429 (-2466345,2939203)	235702 (-1934042,2405447)	235279 (219171,250840)	
5/22/2020	234824	230183 (230183,230183)	237451 (-3238390,3713292)	236560 (-2538209,3011330)	236140 (217458,254822)	
5/23/2020	235290	230183 (230183,230183)	238473 (-4072129,4549075)	237405 (-3184646,3659456)	237009 (215018,258999)	
5/24/2020	235772	230183 (230183,230183)	239495 (-4963327,5442318)	238238 (-3869287,4345763)	237884 (212409,263360)	
5/25/2020	235400	230183 (230183,230183)	240517 (-5908517,6389552)	239058 (-4588754,5066870)	238767 (209638,267897)	
5/26/2020	236259	230183 (230183,230183)	241539 (-6904788,7387867)	239866 (-5340175,5819907)	239658 (206714,272602)	
5/27/2020	236259	230183 (230183,230183)	242561 (-7949655,8434778)	240662 (-6121067,6602391)	240555 (203643,277468)	
5/28/2020	237906	230183 (230183,230183)	243584 (-9040963,9528130)	241446 (-6929251,7412143)	241460 (200430,282490)	
5/29/2020	238564	230183 (230183,230183)	244606 (-10176818,10666030)	242218 (-7762800,8247236)	242372 (197082,287662)	
5/30/2020	239228	230183 (230183,230183)	245628 (-11355544,11846800)	242979 (-8619983,9105942)	243292 (193604,292980)	
5/31/2020	239479	230183 (230183,230183)	246650 (-12575638,13068937)	243729 (-9499244,9986702)	244218 (189998,298439)	
6/1/2020	239638	230183 (230183,230183)	247672 (-13835744,14331088)	244467 (-10399167,10888101)	245152 (186269,304036)	
6/2/2020	239932	230183 (230183,230183)	248694 (-15134633,15632022)	245194 (-11318460,11808848)	246093 (182421,309766)	

**Table A.160** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	230698	221505 (203487,239523)	230786 (229605,231967)	231063 (227251,234875)	115900 (-109105,340904)	
5/17/2020	230698	220889 (202258,239521)	231474 (-77304,540253)	231864 (226011,237718)	116288 (-108337,340913)	
5/18/2020	231606	220370 (200544,240196)	232193 (-469441,933826)	232666 (224398,240933)	116562 (-108350,341474)	
5/19/2020	232037	219846 (198929,240764)	232748 (-891547,1357044)	233467 (222481,244453)	117026 (-108013,342066)	
5/20/2020	232555	219336 (197329,241343)	233856 (-1541329,2009041)	234269 (20298,248239)	117436 (-107723,342594)	
5/21/2020	233037	218847 (195771,241923)	234919 (-2328204,2798041)	235070 (217874,252267)	117949 (-107278,343177)	
5/22/2020	234824	218382 (193790,242975)	235079 (-2967814,3437972)	235872 (215227,256517)	118309 (-107370,343988)	
5/23/2020	235290	217947 (191993,243902)	235655 (-3637723,4109034)	236673 (212372,260974)	118970 (-106999,344939)	
5/24/2020	235772	217541 (190326,244756)	236246 (-4342822,4815315)	237475 (209321,265629)	119399 (-106806,345605)	
5/25/2020	235400	217162 (188978,245347)	236869 (-5089476,5563213)	238276 (206083,270469)	119841 (-106394,346075)	
5/26/2020	236259	216809 (187581,246036)	237331 (-5840329,6314991)	239078 (202668,275487)	119925 (-106472,346322)	
5/27/2020	236259	216487 (186351,246624)	238346 (-6716551,7193243)	239879 (199082,280676)	120440 (-106008,346887)	
5/28/2020	237906	216191 (184923,247460)	239319 (-7693665,8172303)	240681 (195332,286029)	120812 (-105873,347496)	
5/29/2020	238564	215918 (183536,248300)	239391 (-8577700,9056482)	241482 (191424,291540)	121605 (-105263,348473)	
5/30/2020	239228	215660 (182180,249140)	239880 (-9470001,9949761)	242283 (187363,297204)	122031 (-105027,349089)	
5/31/2020	239479	215422 (180928,249916)	240386 (-10376253,10857025)	243085 (183154,303016)	122605 (-104579,349790)	
6/1/2020	239638	215202 (179779,250625)	240925 (-11303481,11785332)	243886 (178800,308973)	122839 (-104449,350126)	
6/2/2020	239932	214993 (178692,251295)	241306 (-12224811,12707423)	244688 (174307,315069)	123226 (-104143,350594)	

**Table A.161**

Actual and Predicted Cases with 95% Confidence Intervals for Sri Lanka using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	960	199 (-1292,1690)	935 (886,984)	625 (-31,1281)	1101 (825,1377)	869 (691,1047)	935 (935,935)	953 (918,988)
5/17/2020	981	199 (-1313,1711)	935 (845,1025)	632 (-38,1302)	1138 (846,1430)	869 (669,1069)	935 (935,935)	969 (845,1093)
5/18/2020	992	199 (-1327,1725)	935 (823,1047)	640 (-37,1317)	1176 (859,1493)	869 (654,1084)	935 (935,935)	985 (742,1228)
5/19/2020	1027	199 (-1352,1750)	935 (755,1115)	647 (-48,1341)	1215 (885,1546)	869 (627,1111)	935 (935,935)	1001 (616,1387)
5/20/2020	1028	199 (-1367,1765)	935 (753,1117)	654 (-48,1356)	1255 (899,1612)	869 (612,1126)	935 (935,935)	1017 (469,1566)
5/21/2020	1055	199 (-1386,1784)	935 (700,1170)	661 (-53,1376)	1296 (918,1674)	869 (591,1147)	935 (935,935)	1033 (305,1762)
5/22/2020	1068	199 (-1403,1801)	935 (674,1196)	668 (-56,1393)	1337 (934,1740)	869 (572,1166)	935 (935,935)	1050 (124,1975)
5/23/2020	1089	199 (-1422,1820)	935 (633,1237)	676 (-60,1412)	1380 (952,1807)	869 (552,1186)	935 (935,935)	1066 (-72,2203)
5/24/2020	1141	199 (-1448,1846)	935 (531,1339)	683 (-73,1439)	1423 (980,1866)	869 (522,1216)	935 (935,935)	1082 (-282,2445)
5/25/2020	1182	199 (-1478,1876)	935 (451,1419)	690 (-89,1469)	1467 (1011,1923)	869 (487,1251)	935 (935,935)	1098 (-505,2700)
5/26/2020	1319	199 (-1532,1930)	935 (182,1688)	697 (-131,1526)	1512 (1063,1962)	869 (418,1320)	935 (935,935)	1114 (-740,2968)
5/27/2020	1469	199 (-1607,2005)	935 (-112,1982)	705 (-199,1608)	1558 (1125,1991)	869 (319,1419)	935 (935,935)	1130 (-987,3248)
5/28/2020	1530	199 (-1681,2079)	935 (-231,2101)	712 (-264,1687)	1605 (1187,2023)	869 (230,1508)	935 (935,935)	1146 (-1246,3539)
5/29/2020	1558	199 (-1747,2146)	935 (-286,2156)	719 (-319,1757)	1653 (1247,2059)	869 (156,1582)	935 (935,935)	1162 (-1516,3841)
5/30/2020	1620	199 (-1814,2212)	935 (-408,2278)	726 (-374,1826)	1702 (1307,2096)	869 (82,1656)	935 (935,935)	1178 (-1796,4153)
5/31/2020	1633	199 (-1873,2271)	935 (-433,2303)	733 (-419,1886)	1751 (1365,2138)	869 (20,1718)	935 (935,935)	1195 (-2086,4476)
6/1/2020	1643	199 (-1925,2323)	935 (-453,2323)	741 (-457,1938)	1802 (1420,2184)	869 (-33,1771)	935 (935,935)	1211 (-2387,4808)
6/2/2020	1683	199 (-1976,2374)	935 (-531,2401)	748 (-493,1989)	1854 (1474,2233)	869 (-85,1823)	935 (935,935)	1227 (-2697,5150)

(continued on next page)

**Table A.161** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	960	951 (920,982)	946 (932,960)	903 (791,1015)	946 (925,967)	946 (931,960)	481 (-458,1420)
5/17/2020	981	965 (863,1068)	957 (930,984)	907 (778,1037)	956 (800,1111)	956 (929,984)	486 (-469,1441)
5/18/2020	992	980 (782,1177)	968 (927,1008)	912 (772,1051)	966 (634,1299)	966 (925,1007)	493 (-469,1456)
5/19/2020	1027	993 (684,1303)	978 (923,1033)	915 (752,1078)	975 (445,1506)	975 (919,1031)	499 (-483,1480)
5/20/2020	1028	1007 (571,1443)	988 (918,1058)	918 (744,1093)	983 (245,1721)	984 (912,1056)	505 (-485,1495)
5/21/2020	1055	1021 (446,1595)	998 (913,1083)	921 (729,1113)	991 (27,1956)	992 (904,1080)	507 (-498,1512)
5/22/2020	1068	1034 (309,1759)	1008 (907,1108)	924 (717,1131)	999 (-206,2204)	1000 (894,1105)	515 (-502,1531)
5/23/2020	1089	1047 (163,1931)	1017 (901,1133)	926 (702,1151)	1006 (-451,2463)	1007 (884,1130)	516 (-515,1546)
5/24/2020	1141	1060 (7,2112)	1027 (895,1159)	928 (675,1181)	1013 (-705,2731)	1014 (874,1154)	524 (-528,1576)
5/25/2020	1182	1072 (-157,2301)	1036 (889,1184)	930 (644,1217)	1021 (-972,3014)	1020 (862,1179)	533 (-543,1609)
5/26/2020	1319	1085 (-328,2497)	1045 (882,1208)	932 (576,1288)	1027 (-1246,3299)	1027 (850,1203)	542 (-582,1666)
5/27/2020	1469	1097 (-506,2700)	1054 (876,1233)	934 (478,1390)	1032 (-1518,3582)	1033 (837,1228)	567 (-624,1758)
5/28/2020	1530	1109 (-691,2908)	1063 (869,1257)	935 (391,1480)	1037 (-1794,3868)	1038 (824,1252)	589 (-664,1842)
5/29/2020	1558	1121 (-881,3122)	1072 (863,1282)	937 (319,1554)	1043 (-2072,4158)	1043 (811,1276)	597 (-712,1905)
5/30/2020	1620	1132 (-1077,3341)	1081 (856,1305)	938 (249,1627)	1048 (-2354,4449)	1048 (797,1299)	582 (-787,1951)
5/31/2020	1633	1144 (-1278,3565)	1090 (850,1329)	940 (191,1688)	1052 (-2637,4741)	1053 (783,1323)	570 (-854,1995)
6/1/2020	1643	1155 (-1484,3794)	1098 (844,1352)	941 (141,1740)	1058 (-2925,5040)	1057 (769,1346)	567 (-907,2040)
6/2/2020	1683	1166 (-1695,4026)	1107 (838,1375)	942 (93,1791)	1062 (-3214,5338)	1061 (754,1369)	568 (-954,2089)

**Table A.162**

Actual and Predicted Cases with 95% Confidence Intervals for Sudan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	2289	178 (-3960,4316)	1964 (1327,2601)	648 (-2568,3864)	1821 (904,2738)	1818 (895,2741)	1964 (1964,1964)	2072 (1860,2285)
5/17/2020	2289	178 (-3960,4316)	1964 (1327,2601)	656 (-2553,3865)	1915 (1084,2745)	1818 (895,2741)	1964 (1964,1964)	2184 (-1769,6136)
5/18/2020	2591	178 (-4167,4522)	1964 (735,3193)	664 (-2745,4073)	2011 (1068,2955)	1818 (663,2973)	1964 (1964,1964)	2295 (-6383,10972)
5/19/2020	2728	178 (-4339,4694)	1964 (467,3461)	672 (-2902,4246)	2111 (1094,3127)	1818 (478,3158)	1964 (1964,1964)	2406 (-12002,16813)
5/20/2020	2728	178 (-4439,4795)	1964 (467,3461)	680 (-2986,4346)	2213 (1198,3228)	1818 (378,3258)	1964 (1964,1964)	2517 (-18484,23517)
5/21/2020	3138	178 (-4657,5013)	1964 (-337,4265)	688 (-3191,4567)	2318 (1183,3454)	1818 (132,3504)	1964 (1964,1964)	2628 (-25730,30985)
5/22/2020	3378	178 (-4887,5243)	1964 (-807,4735)	696 (-3408,4800)	2426 (1161,3692)	1818 (-124,3760)	1964 (1964,1964)	2739 (-33668,39146)
5/23/2020	3628	178 (-5129,5485)	1964 (-1297,5225)	704 (-3637,5045)	2538 (1133,3942)	1818 (-390,4026)	1964 (1964,1964)	2850 (-42246,47945)
5/24/2020	3820	178 (-5363,5718)	1964 (-1674,5602)	712 (-3857,5281)	2652 (1123,4180)	1818 (-640,4276)	1964 (1964,1964)	2961 (-51417,57339)
5/25/2020	3976	178 (-5582,5937)	1964 (-1980,5908)	720 (-4061,5501)	2769 (1138,4401)	1818 (-870,4506)	1964 (1964,1964)	3072 (-61148,67292)
5/26/2020	3976	178 (-5755,6110)	1964 (-1980,5908)	728 (-4219,5674)	2890 (1207,4573)	1818 (-1045,4681)	1964 (1964,1964)	3183 (-71408,77774)
5/27/2020	4346	178 (-5972,6328)	1964 (-2705,6633)	736 (-4422,5893)	3013 (1234,4792)	1818 (-1274,4910)	1964 (1964,1964)	3294 (-82171,88759)
5/28/2020	4346	178 (-6151,6506)	1964 (-2705,6633)	744 (-4585,6072)	3140 (1309,4971)	1818 (-1455,5091)	1964 (1964,1964)	3405 (-93415,100226)
5/29/2020	4521	178 (-6331,6686)	1964 (-3048,6976)	752 (-4749,6253)	3270 (1388,5152)	1818 (-1639,5275)	1964 (1964,1964)	3516 (-105121,112153)
5/30/2020	4800	178 (-6531,6887)	1964 (-3595,7523)	760 (-4935,6454)	3404 (1453,5354)	1818 (-1847,5483)	1964 (1964,1964)	3627 (-117271,124526)
5/31/2020	5026	178 (-6739,7095)	1964 (-4038,7966)	768 (-5127,6663)	3540 (1516,5564)	1818 (-2063,5699)	1964 (1964,1964)	3738 (-129850,137327)
6/1/2020	5173	178 (-6940,7296)	1964 (-4326,8254)	776 (-5314,6865)	3680 (1592,5768)	1818 (-2271,5907)	1964 (1964,1964)	3850 (-142843,150542)
6/2/2020	5310	178 (-7135,7490)	1964 (-4594,8522)	784 (-5493,7060)	3824 (1682,5966)	1818 (-2471,6107)	1964 (1964,1964)	3961 (-156239,164160)

**Table A.162** (continued)

Predicted Cases (95% Confidence Interval)							
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	2289	2072 (1860,2285)	2042 (1997,2086)	1970 (1346,2595)	2045 (1887,2202)	2032 (1987,2077)	1073 (-1309,3456)
5/17/2020	2289	2184 (-1769,6136)	2146 (2081,2211)	2171 (1700,2642)	2128 (-3971,8227)	2129 (2064,2195)	1157 (-1146,3459)
5/18/2020	2591	2295 (-6383,10972)	2242 (2147,2337)	2402 (1962,2842)	2216 (-11594,16026)	2216 (2118,2314)	1205 (-1244,3653)
5/19/2020	2728	2406 (-12002,16813)	2342 (2215,2470)	2671 (2286,3056)	2299 (-20655,25253)	2307 (2174,2440)	1283 (-1267,3833)
5/20/2020	2728	2517 (-18484,23517)	2442 (2278,2606)	2987 (2574,3399)	2382 (-31071,35836)	2396 (2223,2568)	1298 (-1305,3900)
5/21/2020	3138	2628 (-25730,30985)	2543 (2340,2746)	3369 (2950,3789)	2456 (-42230,47143)	2485 (2271,2700)	1348 (-1426,4122)
5/22/2020	3378	2739 (-33668,39146)	2645 (2400,2889)	3851 (3328,4374)	2543 (-54727,59812)	2575 (2314,2836)	1419 (-1531,4369)
5/23/2020	3628	2850 (-42246,47945)	2747 (2459,3036)	4460 (3704,5217)	2618 (-67945,73181)	2664 (2355,2974)	1488 (-1644,4621)
5/24/2020	3820	2961 (-51417,57339)	2851 (2515,3186)	5254 (4077,6431)	2694 (-81893,87280)	2754 (2393,3115)	1583 (-1712,4878)
5/25/2020	3976	3072 (-61148,67292)	2955 (2571,3340)	6331 (4493,8169)	2773 (-96718,102265)	2843 (2429,3258)	1595 (-1862,5052)
5/26/2020	3976	3183 (-71408,77774)	3060 (2625,3496)	7866 (4975,10757)	2849 (-112200,117898)	2933 (2462,3404)	1633 (-1942,5208)
5/27/2020	4346	3294 (-82171,88759)	3166 (2677,3656)	10146 (5853,14439)	2925 (-128355,134205)	3022 (2492,3552)	1643 (-2107,5392)
5/28/2020	4346	3405 (-93415,100226)	3273 (2729,3818)	13846 (7237,20454)	2991 (-144847,150829)	3112 (2521,3703)	1728 (-2145,5601)
5/29/2020	4521	3516 (-105121,112153)	3381 (2779,3983)	20229 (9824,30634)	3070 (-162097,168237)	3201 (2547,3856)	1755 (-2249,5759)
5/30/2020	4800	3627 (-117271,124526)	3490 (2829,4151)	32197 (15072,49322)	3138 (-179747,186023)	3291 (2571,4011)	1839 (-2309,5987)
5/31/2020	5026	3738 (-129850,137327)	3599 (2877,4321)	55996 (26017,85975)	3207 (-197813,204226)	3380 (2593,4168)	1877 (-2425,6180)
6/1/2020	5173	3850 (-142843,150542)	3710 (2925,4494)	103089 (48204,157974)	3279 (-216426,222985)	3470 (2613,4327)	1971 (-2472,6414)
6/2/2020	5310	3961 (-156239,164160)	3821 (2972,4670)	193154 (91292,295015)	3348 (-235448,242144)	3559 (2631,4488)	2022 (-2555,6599)

**Table A.163**

Actual and Predicted Cases with 95% Confidence Intervals for Suriname using the Time Series Models.

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	10	5 (-6,15)	10 (10,10)	12 (8,17)	8 (5,12)	10 (10,10)	10 (10,10)	10 (10,10)
5/17/2020	10	5 (-6,15)	10 (10,10)	12 (8,17)	8 (5,12)	10 (10,10)	10 (10,10)	10 (10,10)
5/18/2020	11	5 (-6,16)	10 (8,12)	13 (8,17)	8 (3,12)	10 (9,11)	10 (10,10)	10 (10,10)
5/19/2020	11	5 (-7,16)	10 (8,12)	13 (9,17)	7 (2,13)	10 (9,11)	10 (10,10)	10 (10,10)
5/20/2020	11	5 (-7,16)	10 (8,12)	13 (9,17)	7 (1,13)	10 (8,12)	10 (10,10)	10 (10,10)
5/21/2020	11	5 (-7,16)	10 (8,12)	13 (9,17)	7 (0,13)	10 (8,12)	10 (10,10)	10 (10,10)
5/22/2020	11	5 (-7,17)	10 (8,12)	13 (9,17)	6 (0,13)	10 (8,12)	10 (10,10)	10 (10,10)
5/23/2020	11	5 (-7,17)	10 (8,12)	13 (9,17)	6 (-1,13)	10 (8,12)	10 (10,10)	10 (10,10)
5/24/2020	11	5 (-7,17)	10 (8,12)	13 (9,17)	6 (-2,13)	10 (8,12)	10 (10,10)	10 (10,10)
5/25/2020	11	5 (-7,17)	10 (8,12)	13 (9,18)	5 (-3,13)	10 (8,12)	10 (10,10)	10 (10,10)
5/26/2020	11	5 (-7,17)	10 (8,12)	14 (9,18)	5 (-4,13)	10 (8,12)	10 (10,10)	10 (10,10)
5/27/2020	12	5 (-8,17)	10 (6,14)	14 (10,18)	4 (-5,14)	10 (8,12)	10 (10,10)	10 (10,10)
5/28/2020	12	5 (-8,17)	10 (6,14)	14 (10,18)	4 (-7,14)	10 (8,12)	10 (10,10)	10 (10,10)
5/29/2020	12	5 (-8,17)	10 (6,14)	14 (10,18)	3 (-8,14)	10 (8,12)	10 (10,10)	10 (10,10)
5/30/2020	14	5 (-8,18)	10 (2,18)	14 (10,18)	3 (-9,14)	10 (7,13)	10 (10,10)	10 (10,10)
5/31/2020	23	5 (-11,20)	10 (-15,35)	14 (8,20)	2 (-14,17)	10 (3,17)	10 (10,10)	10 (10,10)
6/1/2020	44	5 (-19,29)	10 (-57,77)	14 (-1,30)	1 (-24,27)	10 (-8,28)	10 (10,10)	10 (10,10)
6/2/2020	54	5 (-28,37)	10 (-76,96)	14 (-9,38)	1 (-34,35)	10 (-17,37)	10 (10,10)	10 (10,10)

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**Table A.163 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	10	10 (10,10)	10 (9,11)	10 (10,10)	10 (10,10)	10 (9,11)	5 (-5,15)
5/17/2020	10	10 (10,10)	10 (9,11)	10 (10,10)	10 (10,10)	10 (9,11)	5 (-5,15)
5/18/2020	11	10 (10,10)	10 (9,11)	10 (9,11)	10 (10,10)	10 (9,11)	5 (-5,15)
5/19/2020	11	10 (10,10)	10 (8,12)	10 (9,11)	10 (10,10)	10 (8,12)	5 (-6,16)
5/20/2020	11	10 (10,10)	10 (8,12)	10 (9,11)	10 (10,10)	10 (8,12)	5 (-6,16)
5/21/2020	11	10 (10,10)	10 (7,13)	10 (9,12)	10 (10,10)	10 (7,13)	5 (-6,16)
5/22/2020	11	10 (10,10)	10 (7,13)	10 (9,12)	10 (10,10)	10 (7,13)	5 (-6,16)
5/23/2020	11	10 (10,10)	10 (7,13)	10 (9,12)	10 (10,10)	10 (7,13)	5 (-6,16)
5/24/2020	11	10 (10,10)	10 (6,14)	10 (9,12)	10 (10,10)	10 (6,14)	5 (-6,16)
5/25/2020	11	10 (10,10)	10 (6,14)	10 (9,12)	10 (10,10)	10 (6,14)	5 (-6,16)
5/26/2020	11	10 (10,10)	10 (6,14)	10 (9,12)	10 (10,10)	10 (6,14)	5 (-6,16)
5/27/2020	12	10 (10,10)	10 (5,15)	10 (8,12)	10 (10,10)	10 (5,15)	5 (-7,17)
5/28/2020	12	10 (10,10)	10 (5,15)	10 (8,12)	10 (10,10)	10 (5,15)	5 (-7,17)
5/29/2020	12	10 (10,10)	10 (4,16)	10 (8,12)	10 (10,10)	10 (4,16)	5 (-7,17)
5/30/2020	14	10 (10,10)	10 (4,16)	10 (7,13)	10 (10,10)	10 (4,16)	5 (-7,17)
5/31/2020	23	10 (10,10)	10 (3,17)	10 (3,17)	10 (10,10)	10 (3,17)	5 (-9,20)
6/1/2020	44	10 (10,10)	10 (3,17)	10 (-7,28)	10 (10,10)	10 (3,17)	7 (-15,30)
6/2/2020	54	10 (10,10)	10 (3,18)	10 (-16,37)	10 (10,10)	10 (3,18)	12 (-17,41)

**Table A.164**

Actual and Predicted Cases with 95% Confidence Intervals for Sweden using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	29677	6953 (-37585,51492)	29207 (28286,30128)	21331 (4974,37689)	32669 (26805,38532)	29207 (28286,30128)	29207 (29207,29207)	29776 (28661,30891)
5/17/2020	30143	6953 (-38044,51951)	29207 (27372,31042)	21575 (4999,38152)	33542 (27267,39817)	29207 (27755,30659)	29207 (29207,29207)	30361 (-74923,135645)
5/18/2020	30377	6953 (-38351,52257)	29207 (26914,31500)	21819 (5176,38461)	34429 (27553,41304)	29207 (27430,30984)	29207 (29207,29207)	30946 (-203668,265561)
5/19/2020	30799	6953 (-38713,52620)	29207 (26087,32327)	22063 (5298,38827)	35330 (27902,42757)	29207 (27016,31398)	29207 (29207,29207)	31531 (-360479,423542)
5/20/2020	31523	6953 (-39222,53129)	29207 (24668,33746)	22306 (5274,39338)	36244 (28417,44071)	29207 (26385,32029)	29207 (29207,29207)	32117 (-541261,605494)
5/21/2020	32172	6953 (-39780,53687)	29207 (23396,35018)	22550 (5200,39900)	37173 (28984,45362)	29207 (25705,32709)	29207 (29207,29207)	32702 (-743253,808657)
5/22/2020	32809	6953 (-40363,54270)	29207 (22147,36267)	22794 (5100,40487)	38116 (29575,46657)	29207 (25008,33406)	29207 (29207,29207)	33287 (-964460,1031034)
5/23/2020	33188	6953 (-40896,54802)	29207 (21404,37010)	23037 (5054,41021)	39073 (30103,48043)	29207 (24407,34007)	29207 (29207,29207)	33872 (-1203356,1271100)
5/24/2020	33459	6953 (-41369,55275)	29207 (20873,37541)	23281 (5068,41494)	40045 (30556,49533)	29207 (23897,34517)	29207 (29207,29207)	34458 (-1458727,1527642)
5/25/2020	33843	6953 (-41825,55731)	29207 (20120,38294)	23525 (5101,41948)	41030 (30987,51074)	29207 (23408,35006)	29207 (29207,29207)	35043 (-1729580,1799666)
5/26/2020	34440	6953 (-42310,56216)	29207 (18950,39464)	23768 (5104,42432)	42031 (31456,52605)	29207 (22871,35543)	29207 (29207,29207)	35628 (-2015082,2086338)
5/27/2020	35088	6953 (-42826,56733)	29207 (17680,40734)	24012 (5076,42949)	43045 (31965,54126)	29207 (22288,36126)	29207 (29207,29207)	36213 (-2314518,2386945)
5/28/2020	35727	6953 (-43366,57273)	29207 (16428,41986)	24256 (5023,43488)	44075 (32502,55647)	29207 (21674,36740)	29207 (29207,29207)	36799 (-2627272,2700869)
5/29/2020	36476	6953 (-43942,57849)	29207 (14960,43454)	24499 (4933,44065)	45119 (33083,57155)	29207 (21010,37404)	29207 (29207,29207)	37384 (-2952801,3027568)
5/30/2020	37113	6953 (-44531,58437)	29207 (13711,44703)	24743 (4831,44655)	46178 (33678,58678)	29207 (20335,38079)	29207 (29207,29207)	37969 (-3290624,3366562)
5/31/2020	37542	6953 (-45101,59007)	29207 (12870,45544)	24987 (4749,45224)	47252 (34248,60257)	29207 (19695,38719)	29207 (29207,29207)	38554 (-3640310,3717418)
6/1/2020	37814	6953 (-45634,59541)	29207 (12337,46077)	25231 (4706,45755)	48341 (34769,61914)	29207 (19113,39301)	29207 (29207,29207)	39139 (-4001471,4079749)
6/2/2020	38589	6953 (-46201,60108)	29207 (10818,47596)	25474 (4628,46320)	49445 (35334,63557)	29207 (18482,39932)	29207 (29207,29207)	39725 (-4373754,4453203)

**Table A.164 (continued)**

Predicted Cases (95% Confidence Interval)							
Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	29677	29776 (28661,30891)	29797 (29642,29952)	29281 (28504,30057)	29840 (28600,31080)	29831 (29644,30018)	15225 (-13102,43551)
5/17/2020	30143	30361 (-74923,135645)	30323 (30041,30606)	29719 (28915,30523)	30472 (-590091,651036)	30430 (30074,30787)	15459 (-13095,44014)
5/18/2020	30377	30946 (-203668,265561)	30801 (30420,31182)	30150 (29445,30855)	31105 (-1355478,1417688)	31038 (30494,31581)	15663 (-12987,44313)
5/19/2020	30799	31531 (-360479,423542)	31271 (30810,31732)	30567 (29915,31219)	31738 (-2287726,2351201)	31630 (30902,32359)	15832 (-12991,44655)
5/20/2020	31523	32117 (-541261,605494)	31773 (31227,32319)	30970 (30213,31728)	32370 (-3362207,3426947)	32232 (31309,33155)	16075 (-13045,45194)
5/21/2020	32172	32702 (-743253,808657)	32322 (31662,32983)	31360 (30411,32309)	33003 (-4562511,4628516)	32823 (31705,33942)	16393 (-13035,45822)
5/22/2020	32809	33287 (-964460,1031034)	32909 (32086,33731)	31739 (30555,32922)	33635 (-5876706,5943976)	33423 (32101,34744)	16756 (-12971,46484)
5/23/2020	33188	33872 (-1203356,1271100)	33504 (32478,34531)	32108 (30772,33444)	34267 (-7295801,7364336)	34014 (32486,35542)	17091 (-12871,47052)
5/24/2020	33459	34458 (-1458727,1527642)	34086 (32833,35339)	32469 (31052,33885)	34899 (-8812544,8882343)	34612 (32870,36354)	17323 (-12828,47474)
5/25/2020	33843	35043 (-1729580,1799666)	34645 (33162,36128)	32818 (31332,34305)	35532 (-10421100,10492163)	35204 (33245,37164)	17539 (-12798,47875)
5/26/2020	34440	35628 (-2015082,2086338)	35189 (33482,36897)	33158 (31551,34764)	36164 (-12116530,12188858)	35802 (33617,37986)	17768 (-12789,48325)
5/27/2020	35088	36213 (-2314518,2386945)	35736 (33808,37664)	33486 (31701,35272)	36796 (-13894490,13968082)	36394 (33979,38809)	18078 (-12720,48876)
5/28/2020	35727	36799 (-2627272,2700869)	36299 (34146,38452)	33805 (31796,35813)	37428 (-15751310,15826166)	36991 (34339,39643)	18423 (-12626,49472)
5/29/2020	36476	37384 (-2952801,3027568)	36885 (34494,39276)	34114 (31817,36411)	38060 (-17683723,17759842)	37584 (34690,40478)	18759 (-12567,50085)
5/30/2020	37113	37969 (-3290624,3366562)	37486 (34839,40132)	34415 (31809,37020)	38692 (-19688918,19766301)	38180 (35038,41323)	19085 (-12523,50694)
5/31/2020	37542	38554 (-3640310,3717418)	38092 (35173,41011)	34706 (31825,37586)	39323 (-21764310,21842956)	38774 (35377,42170)	19387 (-12485,51259)
6/1/2020	37814	39139 (-4001471,4079749)	38694 (35491,41897)	34988 (31887,38088)	39955 (-23907646,23987556)	39370 (35713,43027)	19652 (-12451,51755)
6/2/2020	38589	39725 (-4373754,4453203)	39290 (35797,42782)	35259 (31876,38643)	40587 (-26116852,26198026)	39963 (36041,43886)	19869 (-12506,52244)

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**Table A.165**

Actual and Predicted Cases with 95% Confidence Intervals for Switzerland using the Time Series Models.

Predicted Cases (95% Confidence Interval)								
Date	Actual Cases	SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	30572	11961 (-24518,48439)	30514 (30400,30628)	33174 (28074,38273)	30894 (30263,31524)	30413 (30101,30725)	30514 (30514,30514)	30567 (30463,30671)
5/17/2020	30587	11961 (-24532,48454)	30514 (30371,30657)	33533 (28086,38981)	30707 (30231,31182)	30413 (30086,30740)	30514 (30514,30514)	30620 (29657,31582)
5/18/2020	30597	11961 (-24544,48465)	30514 (30351,30677)	33893 (28088,39698)	30488 (30081,30896)	30413 (30075,30751)	30514 (30514,30514)	30672 (28605,32739)
5/19/2020	30618	11961 (-24560,48481)	30514 (30310,30718)	34252 (28091,40414)	30238 (29725,30751)	30413 (30058,30768)	30514 (30514,30514)	30724 (27322,34127)
5/20/2020	30658	11961 (-24585,48506)	30514 (30232,30796)	34612 (28102,41122)	29956 (29188,30723)	30413 (30029,30797)	30514 (30514,30514)	30776 (25841,35712)
5/21/2020	30694	11961 (-24614,48535)	30514 (30161,30867)	34972 (28114,41829)	29640 (28543,30737)	30413 (29997,30829)	30514 (30514,30514)	30829 (24184,37474)
5/22/2020	30707	11961 (-24638,48559)	30514 (30136,30892)	35331 (28117,42545)	29291 (27831,30751)	30413 (29970,30856)	30514 (30514,30514)	30881 (22368,39394)
5/23/2020	30725	11961 (-24660,48582)	30514 (30100,30928)	35691 (28116,43266)	28907 (27049,30765)	30413 (29946,30880)	30514 (30514,30514)	30933 (20405,41462)
5/24/2020	30736	11961 (-24680,48602)	30514 (30079,30949)	36050 (28109,43991)	28488 (26203,30774)	30413 (29925,30901)	30514 (30514,30514)	30986 (18305,43667)
5/25/2020	30746	11961 (-24698,48619)	30514 (30059,30969)	36410 (28098,44721)	28034 (25291,30778)	30413 (29906,30920)	30514 (30514,30514)	31038 (16076,46000)
5/26/2020	30761	11961 (-24715,48637)	30514 (30030,30998)	36769 (28086,45453)	27544 (24310,30778)	30413 (29888,30938)	30514 (30514,30514)	31090 (13725,48455)
5/27/2020	30776	11961 (-24732,48654)	30514 (30000,31028)	37129 (28071,46187)	27017 (23261,30773)	30413 (29870,30956)	30514 (30514,30514)	31143 (11259,51027)
5/28/2020	30796	11961 (-24750,48671)	30514 (29961,31067)	37488 (28056,46921)	26453 (22140,30765)	30413 (29851,30975)	30514 (30514,30514)	31195 (8681,53709)
5/29/2020	30828	11961 (-24769,48690)	30514 (29899,31129)	37848 (28043,47653)	25850 (20944,30756)	30463 (29889,31037)	30514 (30514,30514)	31247 (5996,56498)
5/30/2020	30845	11961 (-24788,48709)	30514 (29865,31163)	38207 (28029,48386)	25209 (19678,30741)	30463 (29875,31051)	30514 (30514,30514)	31300 (3210,59390)
5/31/2020	30862	11961 (-24807,48728)	30514 (29832,31196)	38567 (28013,49121)	24529 (18339,30719)	30463 (29861,31065)	30514 (30514,30514)	31352 (324,62380)
6/1/2020	30871	11961 (-24824,48745)	30514 (29814,31214)	38927 (27995,49858)	23809 (16930,30689)	30463 (29848,31078)	30514 (30514,30514)	31404 (-2657,65466)
6/2/2020	30874	11961 (-24840,48761)	30514 (29808,31220)	39286 (27974,50598)	23049 (15448,30649)	30463 (29836,31090)	30514 (30514,30514)	31457 (-5732,68645)

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**Table A.165 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	30572	30561 (30469,30652)	30566 (30265,30868)	30429 (30149,30709)	30567 (30463,30672)	30566 (30264,30867)	15306 (-14617,45228)	
5/17/2020	30587	30607 (29853,31361)	30617 (30078,31156)	30442 (30159,30724)	30571 (30211,30932)	30615 (30076,31154)	15335 (-14573,45243)	
5/18/2020	30597	30652 (29050,32255)	30669 (29805,31533)	30453 (30171,30735)	30548 (29322,31774)	30666 (29802,31529)	15355 (-14541,45252)	
5/19/2020	30618	30697 (28082,33313)	30721 (29527,31914)	30463 (30175,30751)	30513 (26841,34185)	30715 (29521,31909)	15374 (-14518,45266)	
5/20/2020	30658	30741 (26974,34509)	30773 (29198,32349)	30471 (30166,30776)	30543 (26579,34507)	30765 (29190,32341)	15394 (-14503,45291)	
5/21/2020	30694	30785 (25747,35822)	30826 (28853,32799)	30478 (30150,30806)	30581 (26502,34660)	30815 (28842,32787)	15425 (-14477,45327)	
5/22/2020	30707	30827 (24415,37239)	30879 (28472,33287)	30484 (30139,30830)	30630 (24817,36442)	30865 (28457,33272)	15456 (-14445,45357)	
5/23/2020	30725	30869 (22990,38749)	30933 (28071,33795)	30490 (30127,30852)	30678 (21366,39989)	30914 (28053,33776)	15481 (-14416,45379)	
5/24/2020	30736	30911 (21479,40342)	30987 (27641,34333)	30494 (30118,30870)	30679 (18805,42554)	30964 (27619,34310)	15505 (-14388,45398)	
5/25/2020	30746	30951 (19892,42011)	31042 (27192,34892)	30498 (30110,30887)	30654 (17485,43822)	31014 (27164,34864)	15528 (-14358,45414)	
5/26/2020	30761	30991 (18234,43749)	31097 (26717,35477)	30502 (30101,30903)	30616 (17053,44178)	31064 (26684,35444)	15555 (-14324,45434)	
5/27/2020	30776	31031 (16511,45550)	31152 (26223,36082)	30505 (30092,30918)	30644 (16168,45119)	31114 (26185,36043)	15582 (-14288,45453)	
5/28/2020	30796	31069 (14728,47411)	31208 (25707,36710)	30508 (30082,30935)	30679 (14438,46921)	31164 (25663,36665)	15611 (-14251,45473)	
5/29/2020	30828	31108 (12889,49326)	31265 (25172,37357)	30511 (30068,30954)	30726 (11441,50011)	31213 (25121,37306)	15641 (-14215,45496)	
5/30/2020	30845	31145 (10998,51292)	31322 (24617,38026)	30513 (30053,30973)	30772 (7295,54249)	31263 (24559,37967)	15672 (-14176,45520)	
5/31/2020	30862	31182 (9059,53304)	31379 (24045,38713)	30516 (30039,30992)	30771 (3767,57775)	31313 (23979,38647)	15701 (-14139,45540)	
6/1/2020	30871	31218 (7076,55361)	31437 (23453,39420)	30518 (30026,31010)	30743 (1381,60106)	31363 (23380,39346)	15729 (-14101,45559)	
6/2/2020	30874	31254 (5050,57458)	31495 (22845,40145)	30519 (30014,31025)	30704 (8,61400)	31413 (22763,40063)	15755 (-14065,45574)	

**Table A.166**

Actual and Predicted Cases with 95% Confidence Intervals for Syria using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	51	14 (-57,86)	50 (48,52)	44 (30,58)	57 (45,69)	47 (39,55)	50 (50,50)	50 (50,51)
5/17/2020	58	14 (-64,93)	50 (34,66)	44 (23,66)	58 (50,67)	47 (31,63)	50 (50,50)	51 (50,52)
5/18/2020	58	14 (-67,95)	50 (34,66)	45 (22,68)	59 (52,66)	47 (29,65)	50 (50,50)	51 (51,52)
5/19/2020	58	14 (-68,97)	50 (34,66)	45 (22,69)	60 (54,66)	47 (28,66)	50 (50,50)	52 (51,53)
5/20/2020	58	14 (-68,97)	50 (34,66)	46 (23,69)	61 (55,67)	47 (27,67)	50 (50,50)	53 (51,54)
5/21/2020	58	14 (-69,98)	50 (34,66)	46 (23,70)	62 (55,68)	47 (27,67)	50 (50,50)	53 (52,55)
5/22/2020	59	14 (-69,98)	50 (32,68)	47 (24,70)	63 (56,69)	47 (27,67)	50 (50,50)	54 (52,55)
5/23/2020	70	14 (-73,102)	50 (11,89)	47 (21,74)	64 (56,71)	47 (22,72)	50 (50,50)	54 (53,56)
5/24/2020	86	14 (-80,109)	50 (-21,121)	48 (12,83)	64 (49,80)	47 (12,82)	50 (50,50)	55 (53,57)
5/25/2020	106	14 (-92,121)	50 (-60,160)	48 (-1,97)	65 (36,95)	47 (-2,96)	50 (50,50)	56 (53,58)
5/26/2020	121	14 (-105,134)	50 (-89,189)	49 (-14,112)	66 (24,109)	47 (-17,111)	50 (50,50)	56 (54,58)
5/27/2020	121	14 (-115,144)	50 (-89,189)	49 (-23,122)	67 (16,118)	47 (-27,121)	50 (50,50)	57 (54,59)
5/28/2020	122	14 (-123,152)	50 (-91,191)	50 (-30,130)	68 (11,125)	47 (-35,129)	50 (50,50)	57 (55,60)
5/29/2020	122	14 (-129,158)	50 (-91,191)	50 (-36,136)	69 (7,131)	47 (-41,135)	50 (50,50)	58 (55,61)
5/30/2020	122	14 (-135,164)	50 (-91,191)	51 (-40,141)	70 (5,135)	47 (-46,140)	50 (50,50)	59 (55,62)
5/31/2020	122	14 (-139,168)	50 (-91,191)	51 (-43,146)	71 (3,139)	47 (-51,145)	50 (50,50)	59 (56,62)
6/1/2020	123	14 (-143,172)	50 (-93,193)	52 (-46,149)	71 (1,142)	47 (-54,148)	50 (50,50)	60 (56,63)
6/2/2020	123	14 (-147,176)	50 (-93,193)	52 (-48,153)	72 (0,145)	47 (-58,152)	50 (50,50)	60 (57,64)

**Table A.166** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	51	50 (50,51)	50 (48,52)	48 (43,53)	50 (49,50)	50 (48,52)	26 (-24,75)
5/17/2020	58	51 (50,51)	51 (48,54)	49 (35,62)	50 (50,51)	51 (48,54)	26 (-31,83)
5/18/2020	58	51 (51,52)	52 (48,55)	49 (33,64)	51 (50,52)	52 (48,55)	28 (-30,85)
5/19/2020	58	52 (51,52)	53 (48,58)	49 (33,65)	51 (51,52)	53 (48,57)	28 (-30,86)
5/20/2020	58	52 (51,53)	53 (47,60)	49 (33,65)	52 (51,53)	53 (47,59)	28 (-30,86)
5/21/2020	58	53 (52,54)	54 (47,62)	49 (32,66)	52 (51,53)	54 (47,62)	27 (-32,86)
5/22/2020	59	53 (52,54)	55 (46,64)	49 (32,66)	52 (51,54)	55 (46,64)	28 (-31,87)
5/23/2020	70	53 (52,55)	56 (45,67)	49 (28,71)	53 (52,54)	56 (45,66)	28 (-34,91)
5/24/2020	86	54 (53,55)	57 (45,69)	49 (18,81)	53 (52,54)	56 (44,69)	31 (-38,100)
5/25/2020	106	54 (53,56)	58 (44,72)	49 (3,95)	53 (52,55)	57 (43,71)	34 (-45,113)
5/26/2020	121	55 (53,56)	59 (43,74)	49 (-12,110)	53 (52,55)	58 (42,74)	38 (-52,128)
5/27/2020	121	55 (53,57)	60 (42,77)	49 (-22,121)	54 (52,55)	59 (41,76)	39 (-59,137)
5/28/2020	122	55 (54,57)	60 (41,80)	49 (-29,128)	54 (52,56)	60 (40,79)	37 (-68,142)
5/29/2020	122	56 (54,58)	61 (40,83)	50 (-35,134)	54 (52,56)	60 (39,82)	33 (-78,145)
5/30/2020	122	56 (54,58)	62 (38,86)	50 (-40,139)	54 (52,56)	61 (37,85)	31 (-86,148)
5/31/2020	122	56 (54,58)	63 (37,89)	50 (-44,144)	54 (52,57)	62 (36,88)	32 (-90,153)
6/1/2020	123	57 (54,59)	64 (36,92)	50 (-48,147)	54 (52,57)	63 (35,91)	32 (-94,158)
6/2/2020	123	57 (55,59)	65 (35,95)	50 (-51,150)	54 (52,57)	64 (33,94)	33 (-96,162)

**Table A.167**

Actual and Predicted Cases with 95% Confidence Intervals for Taiwan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	440	200 (-270,670)	440 (440,440)	505 (378,632)	421 (384,458)	440 (440,440)	440 (440,440)	440 (440,441)
5/17/2020	440	200 (-270,670)	440 (440,440)	510 (378,643)	416 (373,458)	440 (440,440)	440 (440,440)	440 (440,441)
5/18/2020	440	200 (-270,670)	440 (440,440)	515 (378,653)	409 (360,459)	440 (440,440)	440 (440,440)	441 (440,441)
5/19/2020	440	200 (-270,670)	440 (440,440)	520 (377,663)	403 (347,459)	440 (440,440)	440 (440,440)	441 (440,442)
5/20/2020	440	200 (-270,670)	440 (440,440)	526 (377,674)	396 (332,459)	440 (440,440)	440 (440,440)	441 (440,442)
5/21/2020	440	200 (-270,670)	440 (440,440)	531 (377,684)	388 (317,459)	440 (440,440)	440 (440,440)	441 (440,442)
5/22/2020	441	200 (-271,671)	440 (438,442)	536 (377,695)	380 (300,460)	440 (439,441)	440 (440,440)	441 (440,443)
5/23/2020	441	200 (-271,671)	440 (438,442)	541 (377,705)	371 (282,460)	440 (439,441)	440 (440,440)	442 (440,443)
5/24/2020	441	200 (-271,671)	440 (438,442)	546 (377,715)	362 (263,460)	440 (439,441)	440 (440,440)	442 (440,443)
5/25/2020	441	200 (-271,671)	440 (438,442)	551 (377,726)	352 (243,461)	440 (439,441)	440 (440,440)	442 (440,444)
5/26/2020	441	200 (-271,671)	440 (438,442)	557 (377,736)	341 (222,461)	440 (439,441)	440 (440,440)	442 (441,444)
5/27/2020	441	200 (-271,671)	440 (438,442)	562 (377,747)	330 (200,460)	440 (439,441)	440 (440,440)	442 (441,444)
5/28/2020	441	200 (-271,671)	440 (438,442)	567 (376,758)	318 (176,460)	440 (439,441)	440 (440,440)	443 (441,445)
5/29/2020	442	200 (-272,672)	440 (436,444)	572 (376,768)	306 (152,460)	440 (438,442)	440 (440,440)	443 (441,445)
5/30/2020	442	200 (-272,672)	440 (436,444)	577 (376,779)	293 (126,460)	440 (438,442)	440 (440,440)	443 (441,445)
5/31/2020	442	200 (-272,672)	440 (436,444)	582 (376,789)	279 (99,460)	440 (438,442)	440 (440,440)	443 (441,445)
6/1/2020	443	200 (-272,672)	440 (434,446)	588 (376,800)	265 (71,459)	440 (437,443)	440 (440,440)	443 (441,446)
6/2/2020	443	200 (-272,672)	440 (434,446)	593 (375,810)	250 (41,459)	440 (437,443)	440 (440,440)	444 (441,446)

(continued on next page)

**Table A.167 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	440	440 (440,441)	440 (433,447)	431 (412,449)	442 (438,445)	440 (433,447)	220 (-211,651)
5/17/2020	440	440 (440,441)	440 (428,452)	429 (409,449)	443 (437,450)	440 (428,452)	220 (-211,651)
5/18/2020	440	440 (440,441)	440 (422,458)	428 (407,449)	442 (435,450)	440 (422,458)	220 (-211,651)
5/19/2020	440	441 (440,441)	440 (415,465)	427 (405,449)	441 (434,449)	440 (415,465)	220 (-211,651)
5/20/2020	440	441 (440,441)	440 (407,473)	426 (403,449)	441 (433,448)	440 (407,473)	220 (-211,651)
5/21/2020	440	441 (440,442)	440 (398,481)	425 (401,450)	440 (432,448)	440 (398,482)	220 (-211,651)
5/22/2020	441	441 (440,442)	440 (389,491)	424 (399,450)	441 (433,448)	440 (389,491)	220 (-212,651)
5/23/2020	441	441 (440,442)	440 (379,501)	424 (397,451)	442 (434,450)	440 (379,501)	220 (-212,652)
5/24/2020	441	441 (440,442)	440 (368,511)	423 (395,451)	444 (434,454)	440 (368,512)	220 (-212,652)
5/25/2020	441	441 (440,442)	440 (357,522)	423 (394,451)	443 (432,453)	440 (357,523)	220 (-212,652)
5/26/2020	441	441 (440,442)	440 (345,534)	422 (392,452)	442 (431,453)	440 (346,534)	220 (-212,652)
5/27/2020	441	441 (440,443)	440 (333,546)	422 (391,452)	441 (430,452)	440 (333,547)	220 (-212,652)
5/28/2020	441	442 (440,443)	439 (320,559)	421 (390,452)	440 (429,451)	440 (321,559)	220 (-213,652)
5/29/2020	442	442 (440,443)	439 (307,572)	421 (389,453)	441 (430,452)	440 (308,572)	220 (-213,652)
5/30/2020	442	442 (440,443)	439 (293,585)	421 (388,453)	442 (430,454)	440 (294,586)	220 (-213,653)
5/31/2020	442	442 (440,443)	439 (279,599)	421 (387,454)	444 (431,457)	440 (280,600)	220 (-213,653)
6/1/2020	443	442 (440,443)	439 (265,614)	420 (386,454)	443 (429,457)	440 (266,614)	220 (-214,653)
6/2/2020	443	442 (440,443)	439 (250,628)	420 (385,455)	442 (428,456)	440 (251,629)	220 (-214,653)

**Table A.168**

Actual and Predicted Cases with 95% Confidence Intervals for Tajikistan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1322	66 (-2397,2528)	1118 (718,1518)	251 (-1849,2350)	824 (-151,1800)	1118 (718,1518)	1118 (1118,1118)	1178 (1061,1295)	
5/17/2020	1524	66 (-2602,2733)	1118 (322,1914)	254 (-2049,2557)	871 (-267,2009)	1118 (488,1748)	1118 (1118,1118)	1269 (-532,3069)	
5/18/2020	1729	66 (-2813,2944)	1118 (-80,2316)	257 (-2255,2769)	919 (-387,2224)	1118 (256,1980)	1118 (1118,1118)	1359 (-2576,5295)	
5/19/2020	1936	66 (-3029,3160)	1118 (-485,2721)	260 (-2465,2986)	968 (-508,2444)	1118 (23,2213)	1118 (1118,1118)	1450 (-5074,7974)	
5/20/2020	2140	66 (-3246,3377)	1118 (-885,3121)	263 (-2677,3204)	1019 (-627,2665)	1118 (-209,2445)	1118 (1118,1118)	1541 (-7959,11042)	
5/21/2020	2350	66 (-3467,3598)	1118 (-1297,3533)	267 (-2894,3427)	1071 (-747,2889)	1118 (-444,2680)	1118 (1118,1118)	1632 (-11189,14453)	
5/22/2020	2551	66 (-3687,3819)	1118 (-1691,3927)	270 (-3109,3648)	1125 (-863,3112)	1118 (-676,2912)	1118 (1118,1118)	1723 (-14731,18176)	
5/23/2020	2738	66 (-3903,4035)	1118 (-2057,4293)	273 (-3320,3865)	1180 (-970,3330)	1118 (-901,3137)	1118 (1118,1118)	1814 (-18560,22188)	
5/24/2020	2929	66 (-4118,4249)	1118 (-2432,4668)	276 (-3529,4081)	1237 (-1071,3546)	1118 (-1123,3359)	1118 (1118,1118)	1905 (-22657,26467)	
5/25/2020	3100	66 (-4326,4458)	1118 (-2767,5003)	279 (-3732,4290)	1296 (-1163,3755)	1118 (-1338,3574)	1118 (1118,1118)	1996 (-27006,30997)	
5/26/2020	3266	66 (-4529,4661)	1118 (-3092,5328)	282 (-3929,4493)	1356 (-1246,3958)	1118 (-1545,3781)	1118 (1118,1118)	2086 (-31594,35767)	
5/27/2020	3424	66 (-4726,4858)	1118 (-3402,5638)	285 (-4120,4691)	1418 (-1320,4156)	1118 (-1746,3982)	1118 (1118,1118)	2177 (-36408,40763)	
5/28/2020	3563	66 (-4915,5047)	1118 (-3674,5910)	288 (-4303,4880)	1481 (-1382,4345)	1118 (-1938,4174)	1118 (1118,1118)	2268 (-41440,45976)	
5/29/2020	3686	66 (-5095,5227)	1118 (-3915,6151)	292 (-4477,5060)	1547 (-1432,4525)	1118 (-2120,4356)	1118 (1118,1118)	2359 (-46679,51397)	
5/30/2020	3807	66 (-5268,5399)	1118 (-4152,6388)	295 (-4643,5233)	1614 (-1470,4698)	1118 (-2293,4529)	1118 (1118,1118)	2450 (-52118,57018)	
5/31/2020	3930	66 (-5434,5566)	1118 (-4394,6630)	298 (-4804,5400)	1682 (-1500,4865)	1118 (-2461,4697)	1118 (1118,1118)	2541 (-57751,62833)	
6/1/2020	4013	66 (-5591,5722)	1118 (-4556,6792)	301 (-4953,5556)	1753 (-1516,5022)	1118 (-2617,4853)	1118 (1118,1118)	2632 (-63571,68834)	
6/2/2020	4100	66 (-5739,5870)	1118 (-4727,6963)	304 (-5095,5703)	1825 (-1521,5171)	1118 (-2764,5000)	1118 (1118,1118)	2722 (-69572,75017)	

**Table A.168 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	1322	1178 (1061,1295)	1331 (1318,1377)	947 (212,1682)	1305 (939,1671)	1340 (1312,1367)	736 (-413,1885)
5/17/2020	1524	1269 (-532,3069)	1559 (1539,1602)	1009 (126,1892)	1491 (-53372,56354)	1622 (1568,1676)	874 (-339,2087)
5/18/2020	1729	1359 (-2576,5295)	1804 (1774,1841)	1068 (30,2107)	1691 (-124494,127877)	1964 (1869,2059)	1014 (-265,2293)
5/19/2020	1936	1450 (-5074,7974)	2060 (2024,2092)	1124 (-76,2325)	1882 (-209446,213211)	2353 (2197,2508)	1139 (-216,2494)
5/20/2020	2140	1541 (-7959,11042)	2319 (2281,2349)	1178 (-188,2543)	2076 (-307556,311708)	2778 (2539,3016)	1268 (-164,2701)
5/21/2020	2350	1632 (-11189,14453)	2577 (2539,2607)	1230 (-305,2765)	2271 (-417534,422076)	3229 (2886,3573)	1397 (-117,2911)
5/22/2020	2551	1723 (-14731,18176)	2830 (2794,2863)	1282 (-422,2986)	2460 (-537094,542015)	3701 (3230,4171)	1524 (-71,3119)
5/23/2020	2738	1814 (-18560,22188)	3080 (3046,3114)	1334 (-533,3202)	2659 (-667356,672675)	4187 (3570,4803)	1647 (-25,3320)
5/24/2020	2929	1905 (-22657,26467)	3328 (3295,3363)	1387 (-642,3415)	2845 (-805230,810920)	4683 (3901,5465)	1768 (18,3518)
5/25/2020	3100	1996 (-27006,30997)	3576 (3543,3611)	1441 (-742,3623)	3046 (-952759,958851)	5187 (4221,6153)	1888 (66,3710)
5/26/2020	3266	2086 (-31594,35767)	3824 (3790,3859)	1496 (-833,3825)	3236 (-1107743,1114216)	5697 (4531,6862)	2006 (116,3896)
5/27/2020	3424	2177 (-36408,40763)	4073 (4039,4107)	1553 (-915,4021)	3430 (-1270333,1277193)	6211 (4830,7592)	2127 (174,4080)
5/28/2020	3563	2268 (-41440,45976)	4323 (4289,4357)	1613 (-985,4210)	3625 (-1440379,1447629)	6728 (5117,8339)	2246 (238,4254)
5/29/2020	3686	2359 (-46679,51397)	4573 (4539,4607)	1673 (-1043,4389)	3814 (-1616766,1624394)	7247 (5392,9102)	2365 (311,4420)
5/30/2020	3807	2450 (-52118,57018)	4823 (4789,4857)	1734 (-1091,4560)	4013 (-1800571,1808597)	7768 (5655,9881)	2483 (388,4578)
5/31/2020	3930	2541 (-57751,62833)	5073 (5039,5107)	1797 (-1132,4726)	4199 (-1989840,1998237)	8290 (5908,10673)	2602 (471,4732)
6/1/2020	4013	2632 (-63571,68834)	5323 (5289,5357)	1863 (-1157,4882)	4399 (-2186236,2195034)	8813 (6149,11477)	2724 (568,4880)
6/2/2020	4100	2722 (-69572,75017)	5573 (5539,5607)	1932 (-1169,5033)	4590 (-2388301,2397480)	9337 (6379,12294)	2842 (667,5016)

**Table A.169**

Actual and Predicted Cases with 95% Confidence Intervals for Tanzania using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	509	106 (-684,896)	509 (509,509)	354 (51,658)	694 (331,1058)	509 (509,509)	509 (509,509)	512 (506,518)
5/17/2020	509	106 (-684,896)	509 (509,509)	358 (59,658)	720 (331,1110)	509 (509,509)	509 (509,509)	514 (505,524)
5/18/2020	509	106 (-684,896)	509 (509,509)	363 (67,658)	747 (330,1164)	509 (509,509)	509 (509,509)	517 (504,530)
5/19/2020	509	106 (-684,896)	509 (509,509)	367 (76,658)	775 (329,1220)	509 (509,509)	509 (509,509)	519 (502,536)
5/20/2020	509	106 (-684,896)	509 (509,509)	371 (84,658)	803 (328,1277)	509 (509,509)	509 (509,509)	521 (499,543)
5/21/2020	509	106 (-684,896)	509 (509,509)	375 (92,658)	831 (327,1335)	509 (509,509)	509 (509,509)	524 (496,551)
5/22/2020	509	106 (-684,896)	509 (509,509)	379 (100,659)	860 (326,1395)	509 (509,509)	509 (509,509)	526 (493,559)
5/23/2020	509	106 (-684,896)	509 (509,509)	384 (108,659)	890 (325,1456)	509 (509,509)	509 (509,509)	528 (490,567)
5/24/2020	509	106 (-684,896)	509 (509,509)	388 (117,659)	921 (324,1518)	509 (509,509)	509 (509,509)	530 (486,575)
5/25/2020	509	106 (-684,896)	509 (509,509)	392 (125,659)	952 (323,1582)	509 (509,509)	509 (509,509)	533 (482,584)
5/26/2020	509	106 (-684,896)	509 (509,509)	396 (133,660)	984 (322,1647)	509 (509,509)	509 (509,509)	535 (477,593)
5/27/2020	509	106 (-684,896)	509 (509,509)	401 (141,660)	1017 (320,1713)	509 (509,509)	509 (509,509)	537 (473,602)
5/28/2020	509	106 (-684,896)	509 (509,509)	405 (149,660)	1050 (319,1781)	509 (509,509)	509 (509,509)	540 (468,611)
5/29/2020	509	106 (-684,896)	509 (509,509)	409 (157,661)	1084 (318,1850)	509 (509,509)	509 (509,509)	542 (463,621)
5/30/2020	509	106 (-684,896)	509 (509,509)	413 (165,661)	1119 (317,1920)	509 (509,509)	509 (509,509)	544 (457,631)
5/31/2020	509	106 (-684,896)	509 (509,509)	417 (173,662)	1154 (316,1992)	509 (509,509)	509 (509,509)	546 (452,641)
6/1/2020	509	106 (-684,896)	509 (509,509)	422 (181,662)	1190 (315,2065)	509 (509,509)	509 (509,509)	549 (446,652)
6/2/2020	509	106 (-684,896)	509 (509,509)	426 (189,663)	1227 (314,2140)	509 (509,509)	509 (509,509)	551 (440,663)

(continued on next page)

**Table A.169 (continued)**

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	509	510 (508,512)	524 (487,561)	515 (503,527)	507 (504,510)	518 (480,556)	262 (-222,746)
5/17/2020	509	511 (508,514)	536 (483,588)	516 (503,529)	511 (506,516)	524 (470,578)	268 (-210,746)
5/18/2020	509	512 (508,515)	549 (487,612)	517 (503,532)	517 (509,524)	532 (464,599)	275 (-197,747)
5/19/2020	509	512 (508,517)	562 (490,634)	518 (503,534)	515 (506,524)	538 (457,619)	281 (-185,747)
5/20/2020	509	513 (508,518)	576 (496,655)	519 (503,536)	528 (515,541)	545 (452,638)	288 (-172,747)
5/21/2020	509	513 (507,519)	589 (501,676)	520 (503,538)	520 (505,534)	552 (445,658)	294 (-159,748)
5/22/2020	509	514 (507,520)	602 (508,697)	521 (502,539)	525 (508,541)	559 (440,678)	301 (-146,748)
5/23/2020	509	514 (507,521)	616 (515,716)	522 (502,541)	522 (504,540)	566 (433,698)	308 (-133,749)
5/24/2020	509	515 (506,523)	630 (523,736)	522 (502,542)	524 (505,544)	573 (427,718)	315 (-120,749)
5/25/2020	509	515 (506,524)	643 (531,756)	523 (502,544)	530 (508,552)	579 (421,738)	322 (-107,750)
5/26/2020	509	515 (506,525)	658 (540,775)	523 (502,545)	527 (504,551)	586 (414,759)	329 (-93,751)
5/27/2020	509	515 (505,526)	672 (549,795)	524 (501,546)	539 (513,566)	593 (407,779)	336 (-80,752)
5/28/2020	509	516 (505,527)	686 (558,814)	524 (501,547)	531 (502,559)	600 (400,800)	343 (-66,753)
5/29/2020	509	516 (505,527)	700 (568,833)	524 (501,548)	535 (504,566)	607 (393,821)	350 (-53,754)
5/30/2020	509	516 (504,528)	715 (578,852)	525 (501,549)	532 (499,564)	614 (385,842)	358 (-39,755)
5/31/2020	509	516 (504,529)	730 (588,871)	525 (500,550)	534 (500,568)	621 (378,864)	365 (-26,756)
6/1/2020	509	517 (503,530)	745 (599,891)	525 (500,550)	539 (502,575)	628 (370,886)	372 (-12,757)
6/2/2020	509	517 (503,531)	760 (610,910)	525 (500,551)	536 (498,574)	635 (361,908)	380 (1,758)

**Table A.170**

Actual and Predicted Cases with 95% Confidence Intervals for Thailand using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	3025	1188 (-2413,4789)	3025 (3025,3025)	3285 (2775,3795)	3113 (2940,3287)	3017 (3001,3033)	3025 (3025,3025)	3028 (3022,3035)	
5/17/2020	3028	1188 (-2416,4792)	3025 (3019,3031)	3321 (2778,3863)	3098 (2942,3255)	3017 (2998,3036)	3025 (3025,3025)	3032 (3021,3044)	
5/18/2020	3031	1188 (-2419,4794)	3025 (3013,3037)	3356 (2780,3932)	3080 (2941,3219)	3017 (2995,3039)	3025 (3025,3025)	3036 (3018,3055)	
5/19/2020	3033	1188 (-2421,4797)	3025 (3009,3041)	3392 (2781,4002)	3058 (2935,3181)	3017 (2992,3042)	3025 (3025,3025)	3040 (3014,3067)	
5/20/2020	3034	1188 (-2423,4799)	3025 (3007,3043)	3427 (2782,4073)	3034 (2924,3144)	3017 (2990,3044)	3025 (3025,3025)	3044 (3010,3079)	
5/21/2020	3037	1188 (-2425,4801)	3025 (3001,3049)	3463 (2782,4144)	3006 (2903,3109)	3017 (2988,3046)	3025 (3025,3025)	3048 (3004,3093)	
5/22/2020	3037	1188 (-2427,4803)	3025 (3001,3049)	3498 (2781,4215)	2975 (2869,3081)	3017 (2986,3048)	3025 (3025,3025)	3052 (2998,3107)	
5/23/2020	3040	1188 (-2429,4805)	3025 (2996,3054)	3534 (2781,4287)	2941 (2820,3062)	3017 (2984,3050)	3025 (3025,3025)	3056 (2991,3122)	
5/24/2020	3040	1188 (-2430,4806)	3025 (2996,3054)	3569 (2780,4359)	2903 (2758,3048)	3017 (2983,3051)	3025 (3025,3025)	3060 (2984,3137)	
5/25/2020	3042	1188 (-2432,4808)	3025 (2992,3058)	3605 (2779,4432)	2862 (2685,3039)	3017 (2981,3053)	3025 (3025,3025)	3064 (2976,3153)	
5/26/2020	3045	1188 (-2434,4809)	3025 (2986,3064)	3641 (2778,4504)	2817 (2601,3033)	3017 (2979,3055)	3025 (3025,3025)	3068 (2967,3170)	
5/27/2020	3054	1188 (-2437,4812)	3025 (2968,3082)	3676 (2778,4574)	2769 (2507,3031)	3017 (2975,3059)	3025 (3025,3025)	3072 (2958,3187)	
5/28/2020	3065	1188 (-2441,4817)	3025 (2947,3103)	3712 (2780,4643)	2717 (2402,3032)	3017 (2969,3065)	3025 (3025,3025)	3076 (2948,3205)	
5/29/2020	3076	1188 (-2446,4822)	3025 (2925,3125)	3747 (2783,4712)	2662 (2289,3035)	3017 (2961,3073)	3025 (3025,3025)	3080 (2938,3223)	
5/30/2020	3077	1188 (-2451,4826)	3025 (2923,3127)	3783 (2785,4780)	2603 (2170,3036)	3017 (2955,3079)	3025 (3025,3025)	3084 (2927,3242)	
5/31/2020	3081	1188 (-2455,4831)	3025 (2915,3135)	3818 (2787,4850)	2540 (2044,3036)	3017 (2949,3085)	3025 (3025,3025)	3088 (2916,3261)	
6/1/2020	3082	1188 (-2459,4835)	3025 (2913,3137)	3854 (2788,4920)	2473 (1911,3035)	3017 (2944,3090)	3025 (3025,3025)	3092 (2904,3280)	
6/2/2020	3083	1188 (-2463,4839)	3025 (2911,3139)	3889 (2789,4990)	2402 (1772,3032)	3017 (2940,3094)	3025 (3025,3025)	3096 (2892,3301)	

**Table A.170** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	3025	3028 (3022,3033)	3029 (2995,3063)	2985 (2908,3063)	3028 (3022,3034)	3029 (2995,3063)	1516 (-1442,4474)
5/17/2020	3028	3031 (3022,3040)	3033 (2968,3099)	2982 (2899,3066)	3041 (2986,3096)	3033 (2968,3099)	1518 (-1441,4477)
5/18/2020	3031	3035 (3021,3048)	3039 (2939,3138)	2980 (2890,3069)	3046 (2954,3138)	3038 (2939,3138)	1521 (-1438,4480)
5/19/2020	3033	3038 (3019,3057)	3044 (2903,3185)	2977 (2882,3072)	3047 (2926,3168)	3043 (2902,3184)	1523 (-1436,4482)
5/20/2020	3034	3041 (3016,3066)	3048 (2860,3237)	2975 (2875,3074)	3052 (2898,3206)	3048 (2860,3236)	1525 (-1433,4484)
5/21/2020	3037	3044 (3013,3075)	3053 (2815,3292)	2972 (2867,3077)	3054 (2867,3241)	3053 (2814,3291)	1528 (-1431,4486)
5/22/2020	3037	3047 (3009,3085)	3058 (2766,3351)	2970 (2861,3079)	3059 (2835,3282)	3058 (2765,3350)	1530 (-1428,4488)
5/23/2020	3040	3050 (3005,3095)	3063 (2713,3414)	2968 (2854,3081)	3061 (2802,3319)	3062 (2711,3413)	1532 (-1425,4490)
5/24/2020	3040	3053 (3001,3105)	3068 (2656,3480)	2966 (2849,3083)	3073 (2760,3386)	3067 (2655,3479)	1535 (-1421,4492)
5/25/2020	3042	3056 (2996,3116)	3073 (2597,3550)	2964 (2843,3086)	3077 (2710,3444)	3072 (2595,3548)	1537 (-1419,4493)
5/26/2020	3045	3059 (2991,3127)	3079 (2534,3623)	2963 (2837,3088)	3077 (2663,3492)	3077 (2532,3621)	1540 (-1415,4495)
5/27/2020	3054	3062 (2986,3137)	3084 (2469,3699)	2961 (2830,3092)	3081 (2617,3544)	3081 (2466,3696)	1543 (-1413,4499)
5/28/2020	3065	3064 (2980,3148)	3089 (2400,3777)	2960 (2822,3098)	3083 (2572,3593)	3086 (2398,3774)	1547 (-1411,4504)
5/29/2020	3076	3067 (2974,3160)	3094 (2330,3858)	2959 (2812,3106)	3086 (2527,3645)	3091 (2326,3855)	1551 (-1409,4511)
5/30/2020	3077	3069 (2968,3171)	3099 (2256,3942)	2958 (2804,3112)	3088 (2482,3694)	3096 (2252,3939)	1555 (-1407,4516)
5/31/2020	3081	3072 (2962,3182)	3104 (2180,4029)	2957 (2796,3118)	3099 (2433,3765)	3100 (2176,4025)	1556 (-1407,4519)
6/1/2020	3082	3074 (2955,3194)	3110 (2102,4118)	2956 (2788,3123)	3102 (2376,3828)	3105 (2097,4113)	1558 (-1407,4522)
6/2/2020	3083	3077 (2948,3206)	3115 (2021,4209)	2955 (2782,3128)	3102 (2321,3883)	3110 (2016,4204)	1558 (-1407,4524)

**Table A.171**

Actual and Predicted Cases with 95% Confidence Intervals for Timor-Leste using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	24	6 (-28,41)	24 (24,24)	21 (14,27)	33 (15,51)	24 (24,24)	24 (24,24)	24 (24,24)
5/17/2020	24	6 (-28,41)	24 (24,24)	21 (15,27)	34 (15,53)	24 (24,24)	24 (24,24)	24 (24,24)
5/18/2020	24	6 (-28,41)	24 (24,24)	21 (15,27)	35 (15,55)	24 (24,24)	24 (24,24)	24 (24,24)
5/19/2020	24	6 (-28,41)	24 (24,24)	21 (15,27)	36 (15,57)	24 (24,24)	24 (24,24)	24 (24,24)
5/20/2020	24	6 (-28,41)	24 (24,24)	22 (16,27)	37 (15,59)	24 (24,24)	24 (24,24)	24 (24,24)
5/21/2020	24	6 (-28,41)	24 (24,24)	22 (16,27)	38 (15,61)	24 (24,24)	24 (24,24)	24 (24,24)
5/22/2020	24	6 (-28,41)	24 (24,24)	22 (17,27)	39 (15,63)	24 (24,24)	24 (24,24)	24 (24,24)
5/23/2020	24	6 (-28,41)	24 (24,24)	22 (17,27)	40 (15,65)	24 (24,24)	24 (24,24)	24 (24,24)
5/24/2020	24	6 (-28,41)	24 (24,24)	23 (18,27)	41 (15,67)	24 (24,24)	24 (24,24)	24 (24,24)
5/25/2020	24	6 (-28,41)	24 (24,24)	23 (18,27)	42 (15,69)	24 (24,24)	24 (24,24)	24 (24,24)
5/26/2020	24	6 (-28,41)	24 (24,24)	23 (19,28)	43 (15,71)	24 (24,24)	24 (24,24)	24 (24,24)
5/27/2020	24	6 (-28,41)	24 (24,24)	23 (19,28)	44 (15,73)	24 (24,24)	24 (24,24)	24 (24,24)
5/28/2020	24	6 (-28,41)	24 (24,24)	24 (19,28)	45 (15,75)	24 (24,24)	24 (24,24)	24 (24,24)
5/29/2020	24	6 (-28,41)	24 (24,24)	24 (20,28)	46 (15,78)	24 (24,24)	24 (24,24)	24 (24,24)
5/30/2020	24	6 (-28,41)	24 (24,24)	24 (20,28)	47 (15,80)	24 (24,24)	24 (24,24)	24 (24,24)
5/31/2020	24	6 (-28,41)	24 (24,24)	24 (21,28)	48 (15,82)	24 (24,24)	24 (24,24)	24 (24,24)
6/1/2020	24	6 (-28,41)	24 (24,24)	24 (21,28)	50 (15,84)	24 (24,24)	24 (24,24)	24 (24,24)
6/2/2020	24	6 (-28,41)	24 (24,24)	25 (21,28)	51 (15,87)	24 (24,24)	24 (24,24)	24 (24,24)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	24	24 (24,24)	24 (22,26)	24 (24,24)	24 (23,24)	24 (22,26)	12 (-12,36)	
5/17/2020	24	24 (24,24)	24 (21,27)	24 (24,24)	24 (23,24)	24 (21,27)	12 (-11,36)	
5/18/2020	24	24 (24,24)	24 (20,28)	24 (24,24)	24 (23,25)	24 (20,28)	12 (-11,36)	
5/19/2020	24	24 (24,24)	24 (19,29)	24 (24,24)	24 (23,25)	24 (19,29)	12 (-11,36)	
5/20/2020	24	24 (24,24)	24 (18,30)	24 (24,24)	24 (23,25)	24 (18,30)	12 (-11,36)	
5/21/2020	24	24 (24,24)	24 (17,32)	24 (24,24)	24 (23,25)	24 (17,32)	12 (-11,36)	
5/22/2020	24	24 (24,24)	24 (15,33)	24 (24,24)	24 (23,25)	24 (15,33)	12 (-11,36)	
5/23/2020	24	24 (24,24)	24 (14,34)	24 (24,25)	24 (22,25)	24 (14,34)	12 (-11,36)	
5/24/2020	24	24 (24,24)	24 (13,35)	24 (24,25)	24 (22,25)	24 (13,35)	12 (-11,36)	
5/25/2020	24	24 (24,24)	24 (12,37)	24 (24,25)	24 (22,25)	24 (12,37)	12 (-11,36)	
5/26/2020	24	24 (24,24)	24 (10,38)	24 (24,25)	24 (22,25)	24 (10,38)	12 (-11,36)	
5/27/2020	24	24 (24,24)	24 (9,39)	24 (24,25)	23 (22,25)	24 (9,39)	12 (-11,36)	
5/28/2020	24	24 (24,24)	24 (8,41)	24 (24,25)	24 (22,26)	24 (8,41)	12 (-11,36)	
5/29/2020	24	24 (24,24)	24 (6,42)	24 (24,25)	24 (22,26)	24 (6,42)	12 (-11,36)	
5/30/2020	24	24 (24,24)	24 (5,44)	24 (24,25)	24 (22,25)	24 (5,44)	12 (-11,36)	
5/31/2020	24	24 (24,24)	24 (3,45)	24 (24,25)	23 (22,25)	24 (3,45)	12 (-11,36)	
6/1/2020	24	24 (24,24)	24 (2,47)	24 (24,25)	24 (22,25)	24 (2,47)	12 (-11,36)	
6/2/2020	24	24 (24,24)	24 (0,48)	24 (24,25)	24 (22,25)	24 (0,48)	12 (-11,36)	

**Table A.172**

Actual and Predicted Cases with 95% Confidence Intervals for Togo using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	298	44 (-454,542)	263 (194,332)	135 (-184,454)	221 (69,372)	128 (-205,461)	263 (263,263)	276 (251,301)
5/17/2020	301	44 (-457,545)	263 (189,337)	137 (-184,457)	227 (79,376)	128 (-208,464)	263 (263,263)	291 (205,378)
5/18/2020	330	44 (-478,566)	263 (132,394)	138 (-202,478)	234 (71,397)	128 (-229,485)	263 (263,263)	307 (138,475)
5/19/2020	338	44 (-492,580)	263 (116,410)	140 (-213,492)	241 (71,411)	128 (-244,500)	263 (263,263)	322 (55,589)
5/20/2020	340	44 (-501,589)	263 (112,414)	141 (-219,502)	248 (76,420)	128 (-253,509)	263 (263,263)	338 (-41,717)
5/21/2020	354	44 (-512,600)	263 (85,441)	143 (-227,513)	255 (80,431)	128 (-264,520)	263 (263,263)	353 (-151,857)
5/22/2020	363	44 (-523,610)	263 (67,459)	145 (-234,523)	263 (84,442)	128 (-274,530)	263 (263,263)	369 (-271,1009)
5/23/2020	373	44 (-533,621)	263 (47,479)	146 (-241,534)	270 (89,452)	128 (-285,541)	263 (263,263)	384 (-402,1171)
5/24/2020	381	44 (-543,631)	263 (32,494)	148 (-248,543)	278 (94,462)	128 (-295,551)	263 (263,263)	400 (-542,1342)
5/25/2020	386	44 (-552,640)	263 (22,504)	149 (-254,552)	286 (101,471)	128 (-304,560)	263 (263,263)	416 (-691,1522)
5/26/2020	391	44 (-560,648)	263 (12,514)	151 (-259,561)	294 (108,480)	128 (-312,568)	263 (263,263)	431 (-849,1711)
5/27/2020	395	44 (-567,655)	263 (4,522)	152 (-263,568)	302 (116,487)	128 (-320,576)	263 (263,263)	447 (-1016,1909)
5/28/2020	422	44 (-578,666)	263 (-49,575)	154 (-271,579)	310 (122,498)	128 (-331,587)	263 (263,263)	462 (-1190,2114)
5/29/2020	428	44 (-589,676)	263 (-60,586)	155 (-279,589)	319 (128,509)	128 (-341,597)	263 (263,263)	478 (-1371,2326)
5/30/2020	433	44 (-598,686)	263 (-70,596)	157 (-285,599)	327 (136,519)	128 (-351,607)	263 (263,263)	493 (-1560,2546)
5/31/2020	442	44 (-608,695)	263 (-88,614)	158 (-291,608)	336 (143,528)	128 (-361,617)	263 (263,263)	509 (-1756,2773)
6/1/2020	443	44 (-616,704)	263 (-90,616)	160 (-297,617)	345 (152,537)	128 (-369,625)	263 (263,263)	524 (-1959,3007)
6/2/2020	445	44 (-624,711)	263 (-94,620)	162 (-301,624)	354 (162,546)	128 (-227,753)	263 (263,263)	540 (-2168,3247)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	298	276 (251,301)	285 (279,291)	241 (129,353)	284 (243,326)	285 (279,291)	154 (-129,436)	
5/17/2020	301	291 (205,378)	308 (298,318)	257 (158,357)	306 (-241,853)	307 (297,318)	168 (-104,440)	
5/18/2020	330	307 (138,475)	331 (315,346)	276 (173,378)	327 (-858,1513)	330 (314,345)	176 (-106,459)	
5/19/2020	338	322 (55,589)	354 (332,375)	296 (198,393)	349 (-1611,2309)	352 (330,374)	189 (-96,473)	
5/20/2020	340	338 (-41,717)	377 (349,405)	319 (230,408)	371 (-2487,3230)	374 (346,403)	195 (-89,480)	
5/21/2020	354	353 (-151,857)	400 (366,435)	346 (265,428)	393 (-3462,4247)	397 (361,432)	207 (-78,492)	
5/22/2020	363	369 (-271,1009)	424 (382,466)	378 (302,455)	416 (-4541,5372)	419 (375,462)	216 (-70,502)	
5/23/2020	373	384 (-402,1171)	448 (398,498)	417 (340,495)	437 (-5701,6575)	441 (389,493)	228 (-57,514)	
5/24/2020	381	400 (-542,1342)	472 (413,530)	466 (374,558)	459 (-6937,7854)	463 (403,524)	241 (-43,526)	
5/25/2020	386	416 (-691,1522)	496 (429,563)	527 (404,651)	480 (-8247,9207)	486 (416,556)	253 (-29,534)	
5/26/2020	391	431 (-849,1711)	520 (444,597)	608 (434,782)	502 (-9627,10631)	508 (429,588)	264 (-15,543)	
5/27/2020	395	447 (-1016,1909)	545 (459,631)	717 (470,964)	524 (-11079,12127)	530 (441,620)	276 (0,551)	
5/28/2020	422	462 (-1190,2114)	570 (474,666)	872 (531,1213)	546 (-12594,13685)	553 (453,653)	287 (12,562)	
5/29/2020	428	478 (-1371,2326)	595 (489,701)	1105 (622,1589)	568 (-14180,15316)	575 (465,686)	304 (31,576)	
5/30/2020	433	493 (-1560,2546)	620 (503,737)	1484 (776,2191)	590 (-15822,17002)	597 (476,719)	316 (46,586)	
5/31/2020	442	509 (-1756,2773)	645 (518,773)	2159 (1074,3245)	611 (-17520,18742)	620 (487,753)	329 (62,596)	
6/1/2020	443	524 (-1959,3007)	671 (532,810)	3502 (1707,5298)	633 (-19272,20537)	642 (497,787)	339 (75,603)	
6/2/2020	445	540 (-2168,3247)	697 (546,847)	6408 (3147,9669)	655 (-21077,22386)	664 (507,821)	351 (91,611)	

**Table A.173**

Actual and Predicted Cases with 95% Confidence Intervals for Trinidad and Tobago using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	116	51 (-78,179)	116 (116,116)	137 (96,177)	107 (89,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/17/2020	116	51 (-78,179)	116 (116,116)	138 (96,180)	104 (84,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/18/2020	116	51 (-78,179)	116 (116,116)	140 (96,183)	102 (79,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/19/2020	116	51 (-78,179)	116 (116,116)	141 (96,186)	99 (73,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/20/2020	116	51 (-78,179)	116 (116,116)	143 (96,189)	96 (67,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/21/2020	116	51 (-78,179)	116 (116,116)	144 (96,192)	93 (61,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/22/2020	116	51 (-78,179)	116 (116,116)	145 (96,195)	90 (55,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/23/2020	116	51 (-78,179)	116 (116,116)	147 (96,198)	86 (48,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/24/2020	116	51 (-78,179)	116 (116,116)	148 (96,201)	83 (40,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/25/2020	116	51 (-78,179)	116 (116,116)	150 (96,204)	79 (32,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/26/2020	116	51 (-78,179)	116 (116,116)	151 (96,207)	75 (24,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/27/2020	116	51 (-78,179)	116 (116,116)	153 (96,210)	71 (16,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/28/2020	116	51 (-78,179)	116 (116,116)	154 (95,213)	66 (7,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/29/2020	116	51 (-78,179)	116 (116,116)	156 (95,216)	61 (-3,125)	116 (116,116)	116 (116,116)	116 (116,116)
5/30/2020	117	51 (-78,179)	116 (114,118)	157 (95,219)	56 (-12,125)	116 (115,117)	116 (116,116)	116 (116,116)
5/31/2020	117	51 (-78,179)	116 (114,118)	159 (95,222)	51 (-23,125)	116 (115,117)	116 (116,116)	116 (116,116)
6/1/2020	117	51 (-78,179)	116 (114,118)	160 (96,225)	46 (-34,125)	116 (115,117)	116 (116,116)	116 (116,116)
6/2/2020	117	51 (-78,179)	116 (114,118)	162 (95,228)	40 (-45,125)	116 (115,117)	116 (116,116)	116 (116,116)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	116	116 (116,116)	116 (109,124)	115 (114,117)	119 (113,124)	116 (109,123)	58 (-55,172)
5/17/2020	116	116 (116,116)	117 (106,127)	115 (113,117)	118 (112,125)	116 (106,126)	58 (-55,172)
5/18/2020	116	116 (116,116)	117 (104,130)	115 (113,117)	118 (110,126)	116 (103,129)	59 (-54,172)
5/19/2020	116	116 (116,116)	118 (102,133)	115 (113,117)	118 (109,127)	116 (100,132)	59 (-54,172)
5/20/2020	116	116 (116,116)	118 (100,137)	115 (113,117)	118 (108,127)	116 (97,135)	59 (-53,172)
5/21/2020	116	116 (116,116)	119 (97,140)	115 (112,117)	118 (108,128)	116 (94,138)	59 (-53,172)
5/22/2020	116	116 (116,116)	119 (95,143)	115 (112,117)	117 (107,128)	116 (91,141)	60 (-52,172)
5/23/2020	116	116 (116,116)	120 (93,146)	114 (112,117)	120 (108,132)	116 (89,143)	60 (-52,172)
5/24/2020	116	116 (116,116)	120 (91,150)	114 (112,117)	119 (107,132)	116 (86,146)	60 (-51,172)
5/25/2020	116	116 (116,116)	121 (89,153)	114 (112,117)	119 (105,133)	116 (83,149)	60 (-51,172)
5/26/2020	116	116 (116,116)	122 (87,156)	114 (111,117)	119 (105,133)	116 (80,152)	61 (-50,172)
5/27/2020	116	116 (116,116)	122 (85,159)	114 (111,117)	119 (104,134)	116 (77,155)	61 (-50,172)
5/28/2020	116	116 (116,116)	123 (83,163)	114 (111,117)	118 (103,134)	116 (74,158)	62 (-49,172)
5/29/2020	116	116 (116,116)	124 (82,166)	114 (111,117)	118 (102,134)	116 (71,161)	62 (-48,172)
5/30/2020	117	116 (116,116)	124 (80,169)	114 (111,117)	121 (103,138)	116 (69,163)	62 (-48,172)
5/31/2020	117	116 (116,116)	125 (78,172)	114 (110,117)	120 (102,138)	116 (66,166)	63 (-47,172)
6/1/2020	117	116 (116,116)	126 (77,175)	114 (110,118)	120 (101,138)	116 (63,169)	63 (-46,173)
6/2/2020	117	116 (116,116)	127 (75,178)	114 (110,118)	120 (100,139)	116 (60,172)	64 (-46,173)

**Table A.174**

Actual and Predicted Cases with 95% Confidence Intervals for Tunisia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	1037	356 (-980,1691)	1035 (1031,1039)	1038 (1036,1039)	1165 (914,1417)	1032 (1022,1042)	1035 (1035,1035)	1036 (1034,1039)	
5/17/2020	1037	356 (-980,1691)	1035 (1031,1039)	1049 (1032,1066)	1174 (914,1433)	1032 (1022,1042)	1035 (1035,1035)	1038 (1034,1042)	
5/18/2020	1043	356 (-984,1695)	1035 (1019,1051)	1061 (1036,1085)	1182 (918,1445)	1032 (1017,1047)	1035 (1035,1035)	1040 (1034,1045)	
5/19/2020	1044	356 (-986,1697)	1035 (1017,1053)	1072 (1037,1107)	1189 (920,1458)	1032 (1015,1049)	1035 (1035,1035)	1041 (1034,1048)	
5/20/2020	1045	356 (-988,1699)	1035 (1015,1055)	1084 (1038,1130)	1196 (921,1470)	1032 (1013,1051)	1035 (1035,1035)	1043 (1034,1051)	
5/21/2020	1046	356 (-990,1701)	1035 (1013,1057)	1095 (1038,1153)	1202 (922,1482)	1032 (1011,1053)	1035 (1035,1035)	1044 (1034,1054)	
5/22/2020	1048	356 (-991,1703)	1035 (1010,1060)	1107 (1038,1176)	1207 (923,1492)	1032 (1009,1055)	1035 (1035,1035)	1046 (1034,1058)	
5/23/2020	1048	356 (-993,1704)	1035 (1010,1060)	1118 (1038,1199)	1212 (923,1502)	1032 (1008,1056)	1035 (1035,1035)	1047 (1034,1061)	
5/24/2020	1051	356 (-994,1705)	1035 (1004,1066)	1130 (1038,1222)	1217 (923,1511)	1032 (1006,1058)	1035 (1035,1035)	1049 (1033,1065)	
5/25/2020	1051	356 (-996,1707)	1035 (1004,1066)	1142 (1038,1245)	1221 (923,1518)	1032 (1005,1059)	1035 (1035,1035)	1051 (1033,1068)	
5/26/2020	1051	356 (-997,1708)	1035 (1004,1066)	1153 (1037,1269)	1224 (922,1525)	1032 (1004,1060)	1035 (1035,1035)	1052 (1032,1072)	
5/27/2020	1051	356 (-997,1709)	1035 (1004,1066)	1165 (1036,1293)	1226 (921,1532)	1032 (1003,1061)	1035 (1035,1035)	1054 (1032,1076)	
5/28/2020	1068	356 (-1001,1712)	1035 (970,1100)	1176 (1040,1313)	1228 (922,1534)	1032 (998,1066)	1035 (1035,1035)	1055 (1031,1080)	
5/29/2020	1071	356 (-1004,1715)	1035 (964,1106)	1188 (1043,1333)	1229 (923,1535)	1032 (993,1071)	1035 (1035,1035)	1057 (1030,1084)	
5/30/2020	1076	356 (-1008,1719)	1035 (955,1115)	1199 (1046,1353)	1229 (923,1535)	1032 (988,1076)	1035 (1035,1035)	1059 (1029,1088)	
5/31/2020	1077	356 (-1011,1722)	1035 (953,1117)	1211 (1048,1373)	1229 (924,1534)	1032 (984,1080)	1035 (1035,1035)	1060 (1029,1092)	
6/1/2020	1084	356 (-1015,1726)	1035 (939,1131)	1222 (1052,1393)	1228 (924,1532)	1032 (980,1084)	1035 (1035,1035)	1062 (1028,1096)	
6/2/2020	1086	356 (-1018,1729)	1035 (935,1135)	1234 (1054,1414)	1226 (924,1529)	1032 (975,1089)	1035 (1035,1035)	1063 (1027,1100)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	1037	1036 (1034,1038)	1036 (1016,1055)	1035 (1032,1038)	1035 (1035,1036)	1036 (1016,1055)	518 (-498,1535)		
5/17/2020	1037	1037 (1034,1040)	1037 (1006,1068)	1036 (1034,1039)	1034 (1033,1035)	1037 (1006,1068)	519 (-496,1535)		
5/18/2020	1043	1039 (1035,1042)	1039 (995,1084)	1037 (1030,1044)	1030 (1029,1031)	1039 (995,1084)	520 (-498,1539)		
5/19/2020	1044	1040 (1035,1044)	1041 (977,1104)	1037 (1028,1046)	1032 (1030,1033)	1040 (977,1104)	522 (-498,1541)		
5/20/2020	1045	1041 (1035,1047)	1042 (959,1125)	1038 (1028,1048)	1033 (1031,1035)	1042 (958,1125)	522 (-499,1543)		
5/21/2020	1046	1042 (1036,1049)	1044 (940,1148)	1038 (1027,1050)	1033 (1031,1035)	1043 (939,1147)	523 (-498,1545)		
5/22/2020	1048	1043 (1036,1051)	1045 (918,1172)	1039 (1027,1051)	1035 (1033,1037)	1045 (918,1172)	523 (-499,1546)		
5/23/2020	1048	1045 (1036,1053)	1047 (895,1198)	1039 (1026,1052)	1036 (1034,1038)	1046 (895,1198)	524 (-499,1547)		
5/24/2020	1051	1046 (1036,1056)	1048 (871,1226)	1040 (1025,1054)	1034 (1032,1036)	1048 (871,1225)	525 (-499,1549)		
5/25/2020	1051	1047 (1036,1058)	1050 (846,1255)	1040 (1025,1055)	1030 (1028,1032)	1049 (845,1254)	526 (-499,1550)		
5/26/2020	1051	1048 (1035,1060)	1052 (819,1285)	1040 (1024,1056)	1032 (1030,1034)	1051 (818,1284)	526 (-499,1551)		
5/27/2020	1051	1049 (1035,1063)	1053 (791,1316)	1041 (1024,1057)	1033 (1031,1035)	1052 (790,1315)	527 (-498,1552)		
5/28/2020	1068	1050 (1035,1065)	1055 (762,1348)	1041 (1019,1062)	1033 (1031,1035)	1054 (761,1347)	528 (-500,1555)		
5/29/2020	1071	1051 (1035,1067)	1057 (732,1382)	1041 (1015,1067)	1035 (1033,1037)	1055 (730,1380)	531 (-499,1561)		
5/30/2020	1076	1052 (1034,1070)	1059 (700,1417)	1041 (1011,1072)	1036 (1034,1038)	1057 (699,1415)	533 (-500,1565)		
5/31/2020	1077	1053 (1034,1072)	1060 (668,1452)	1041 (1007,1076)	1034 (1032,1037)	1058 (666,1450)	534 (-500,1569)		
6/1/2020	1084	1054 (1034,1074)	1062 (635,1489)	1042 (1003,1081)	1031 (1028,1033)	1060 (633,1487)	532 (-505,1570)		
6/2/2020	1086	1055 (1033,1077)	1064 (601,1527)	1042 (999,1085)	1032 (1030,1035)	1061 (598,1524)	534 (-506,1574)		

**Table A.175**

Actual and Predicted Cases with 95% Confidence Intervals for Turkey using the Time Series Models.

Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SA	SMA	LT	QT	ST
5/16/2020	148067	36342 (-182639,255323)	146457 (143301,149613)	114818 (49649,179986)	178356 (118989,237724)	146457 (143301,149613)
5/17/2020	149435	36342 (-183984,256668)	146457 (140620,152294)	116148 (50942,181354)	183090 (120338,245842)	146457 (141765,151149)
5/18/2020	150593	36342 (-185193,257876)	146457 (138350,154564)	117478 (52372,182584)	187892 (121509,254275)	146457 (140409,152505)
5/19/2020	151615	36342 (-186301,258985)	146457 (136347,156567)	118808 (53902,183714)	192763 (122541,262985)	146457 (139178,153736)
5/20/2020	152587	36342 (-187350,260034)	146457 (134442,158472)	120138 (55491,184785)	197704 (123482,271925)	146457 (138015,154899)
5/21/2020	153548	36342 (-188367,261051)	146457 (132559,160355)	121468 (57113,185823)	202714 (124366,281062)	146457 (136887,156027)
5/22/2020	154500	36342 (-189363,262046)	146457 (130693,162221)	122798 (58755,186841)	207794 (125209,290378)	146457 (135780,157134)
5/23/2020	155686	36342 (-190405,263089)	146457 (128368,164546)	124128 (60355,187902)	212944 (126099,299789)	146457 (134597,158317)
5/24/2020	156827	36342 (-191469,264153)	146457 (126132,166782)	125458 (61935,188981)	218165 (127006,309324)	146457 (133383,159531)
5/25/2020	157814	36342 (-192517,265201)	146457 (124197,168717)	126788 (63532,190045)	223457 (127883,319030)	146457 (132196,160718)
5/26/2020	158762	36342 (-193547,266231)	146457 (122339,170575)	128119 (65145,191092)	228820 (128730,328909)	146457 (131037,161877)
5/27/2020	159797	36342 (-194578,267262)	146457 (120311,172603)	129449 (66759,192138)	234254 (129574,338934)	146457 (129876,163038)
5/28/2020	160979	36342 (-195634,268318)	146457 (117994,174920)	130779 (68351,193206)	239761 (130449,349072)	146457 (128678,164236)
5/29/2020	162120	36342 (-196703,269387)	146457 (115758,177156)	132109 (69932,194286)	245339 (131340,359339)	146457 (127461,165453)
5/30/2020	163103	36342 (-197762,270446)	146457 (113831,179083)	133439 (71523,195355)	250990 (132214,369766)	146457 (126264,166650)
5/31/2020	163942	36342 (-198793,271477)	146457 (112186,180728)	134769 (73138,196400)	256714 (130502,380377)	146457 (125111,167803)
6/1/2020	164769	36342 (-199801,272485)	146457 (110565,182349)	136099 (74775,197423)	262511 (133858,391165)	146457 (123993,168921)
6/2/2020	165555	36342 (-200784,273468)	146457 (109025,183889)	137429 (76433,198426)	268382 (134633,402131)	146457 (122910,170004)
Predicted Cases (95% Confidence Interval)						
Date	Actual Cases	SES	HLT	DT	ARIMA	
5/16/2020	148067	146457 (146457,146457)	148137 (144844,151429)	148064 (144914,151214)	148182 (147572,148792)	
5/17/2020	149435	146457 (146457,146457)	149819 (-738965,1038603)	149678 (-666312,965668)	149922 (148522,151321)	
5/18/2020	150593	146457 (146457,146457)	151501 (-1833513,2136515)	151282 (-1666384,1968947)	151676 (149317,154036)	
5/19/2020	151615	146457 (146457,146457)	153183 (-3166688,3473054)	152875 (-2879520,3185270)	153446 (149978,156914)	
5/20/2020	152587	146457 (146457,146457)	154865 (-4703553,5013283)	154458 (-4272362,4581278)	155231 (150524,159939)	
5/21/2020	153548	146457 (146457,146457)	156547 (-6420597,6733692)	156031 (-5822243,6134305)	157032 (150966,163097)	
5/22/2020	154500	146457 (146457,146457)	158230 (-8300840,8617299)	157593 (-7512627,7827814)	158847 (151314,166379)	
5/23/2020	155686	146457 (146457,146457)	159912 (-10331313,10651136)	159146 (-9330764,9649056)	160677 (151576,169778)	
5/24/2020	156827	146457 (146457,146457)	161594 (-12501706,12824894)	160689 (-11266417,11587794)	162523 (151757,173288)	
5/25/2020	157814	146457 (146457,146457)	163276 (-14803569,15130121)	162221 (-13311123,13635566)	164383 (151864,176903)	
5/26/2020	158762	146457 (146457,146457)	164958 (-17229816,17559732)	163744 (-15457721,15785210)	166259 (151899,180619)	
5/27/2020	159797	146457 (146457,146457)	166640 (-19774393,20107673)	165257 (-17700042,18030557)	168150 (151868,184432)	
5/28/2020	160979	146457 (146457,146457)	168322 (-22432050,22768695)	166761 (-20032691,20366212)	170056 (151773,188339)	
5/29/2020	162120	146457 (146457,146457)	170004 (-25198181,25538190)	168254 (-22450897,22787405)	171977 (151618,192337)	
5/30/2020	163103	146457 (146457,146457)	171687 (-28068696,28412069)	169738 (-24950392,25289869)	173914 (151404,196423)	
5/31/2020	163942	146457 (146457,146457)	173369 (-31039939,31386676)	171213 (-27527333,27869759)	175865 (151135,200595)	
6/1/2020	164769	146457 (146457,146457)	175051 (-34108609,34458710)	172678 (-30178226,30523582)	177832 (150813,204850)	
6/2/2020	165555	146457 (146457,146457)	176733 (-37271711,37625177)	174133 (-32899880,33248146)	179813 (150439,209187)	

**Table A.175** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	148067	147196 (145487,148904)	148165 (144818,151512)	148162 (147550,148773)	74926 (-68430,218282)
5/17/2020	149435	148343 (146406,150279)	149872 (-5567775,5867519)	149865 (148517,151213)	75791 (-68059,219641)
5/18/2020	150593	149437 (147384,151489)	151580 (-12629624,12932784)	151567 (149334,153801)	76623 (-67605,220851)
5/19/2020	151615	150474 (148374,152574)	153287 (-21231808,21538383)	153270 (150023,156517)	77416 (-67114,221945)
5/20/2020	152587	151460 (149338,153582)	154994 (-31145950,31455938)	154972 (150598,159346)	78209 (-66571,222990)
5/21/2020	153548	152399 (150255,154543)	156701 (-42221779,42535182)	156674 (151069,162279)	79043 (-65947,224032)
5/22/2020	154500	153294 (151117,155471)	158408 (-54349158,54665974)	158376 (151445,165307)	79918 (-65243,225078)
5/23/2020	155686	154148 (151850,156446)	160114 (-67443918,67764147)	160078 (151732,168425)	80821 (-64537,226179)
5/24/2020	156827	154961 (152475,157447)	161821 (-81440002,81763644)	161780 (151934,171627)	81780 (-63772,227332)
5/25/2020	157814	155731 (153042,158420)	163527 (-96282567,96609621)	163483 (152057,174908)	82740 (-62972,228452)
5/26/2020	158762	156461 (153559,159363)	165234 (-111926640,112257107)	165185 (152104,178265)	83684 (-62160,229528)
5/27/2020	159797	157154 (153998,160309)	166939 (-128331730,128665608)	166887 (152079,181695)	84589 (-61385,230564)
5/28/2020	160979	157812 (154326,161298)	168645 (-145464779,145802069)	168589 (151984,185194)	85525 (-60598,231647)
5/29/2020	162120	158438 (154564,162312)	170351 (-163295759,163636461)	170291 (151821,188761)	86518 (-59753,232789)
5/30/2020	163103	159035 (154764,163307)	172056 (-181797944,182142055)	171993 (151594,192392)	87518 (-58878,233915)
5/31/2020	163942	159601 (154950,164251)	173761 (-200948057,201295580)	173695 (151304,196086)	88485 (-58005,234976)
6/1/2020	164769	160136 (155116,165157)	175466 (-220724591,221075523)	175397 (150954,199841)	89411 (-57151,235973)
6/2/2020	165555	160641 (155260,166023)	177172 (-241108813,241463156)	177099 (150544,203655)	90349 (-56260,236958)

**Table A.176**

Actual and Predicted Cases with 95% Confidence Intervals for United Arab Emirates using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	22627	3814 (-33061,40688)	21831 (20271,23391)	12559 (-7175,32293)	24244 (21074,27414)	20386 (15994,24778)	21831 (21831,21831)	22499 (21190,23809)
5/17/2020	23358	3814 (-33784,41411)	21831 (18838,24824)	12707 (-7606,33020)	25150 (21804,28495)	20386 (15227,25545)	21831 (21831,21831)	23185 (-121515,167885)
5/18/2020	24190	3814 (-34580,42207)	21831 (17207,26455)	12855 (-8111,33822)	26077 (22610,29543)	20386 (14363,26409)	21831 (21831,21831)	23870 (-298742,346482)
5/19/2020	25063	3814 (-35419,43046)	21831 (15496,28166)	13003 (-8662,34688)	27025 (23460,30591)	20386 (13443,27329)	21831 (21831,21831)	24556 (-514602,563714)
5/20/2020	26004	3814 (-36307,43935)	21831 (13652,30010)	13152 (-9263,35566)	27996 (24360,31632)	20386 (12460,28312)	21831 (21831,21831)	25242 (-763458,813941)
5/21/2020	26898	3814 (-37206,44833)	21831 (11900,31762)	13300 (-9875,36475)	28989 (25272,32706)	20386 (11470,29302)	21831 (21831,21831)	25927 (-1041505,1093359)
5/22/2020	27892	3814 (-38144,45771)	21831 (9951,33711)	13448 (-10528,37424)	30004 (26224,33784)	20386 (10433,30339)	21831 (21831,21831)	26613 (-1345996,1399221)
5/23/2020	28704	3814 (-39057,46684)	21831 (8360,35302)	13596 (-11154,38347)	31042 (27153,34932)	20386 (9436,31336)	21831 (21831,21831)	27298 (-1674831,1729428)
5/24/2020	29485	3814 (-39946,47574)	21831 (6829,36833)	13745 (-11756,39245)	32103 (28057,36150)	20386 (8473,32299)	21831 (21831,21831)	27984 (-2026341,2082309)
5/25/2020	30307	3814 (-40830,48458)	21831 (5218,38444)	13893 (-12351,40137)	33188 (28954,37422)	20386 (7520,33252)	21831 (21831,21831)	28670 (-2399158,2456497)
5/26/2020	31086	3814 (-41702,49329)	21831 (3691,39971)	14041 (-12933,41015)	34296 (29835,38756)	20386 (6585,34187)	21831 (21831,21831)	29355 (-2792132,2850843)
5/27/2020	31969	3814 (-42585,50212)	21831 (1961,41701)	14189 (-13527,41905)	35427 (30730,40125)	20386 (5636,35136)	21831 (21831,21831)	30041 (-3204284,3264366)
5/28/2020	32532	3814 (-43419,51046)	21831 (857,42805)	14337 (-14069,42744)	36583 (31561,41604)	20386 (4752,36020)	21831 (21831,21831)	30726 (-3634764,3696217)
5/29/2020	33170	3814 (-44228,51856)	21831 (-393,44055)	14486 (-14584,43556)	37763 (32359,43167)	20386 (3900,36872)	21831 (21831,21831)	31412 (-4082824,4145648)
5/30/2020	33896	3814 (-45032,52660)	21831 (-1816,45478)	14634 (-15094,44362)	38967 (33150,44784)	20386 (3053,37719)	21831 (21831,21831)	32098 (-4547802,4611998)
5/31/2020	34557	3814 (-45823,53450)	21831 (-3112,46774)	14782 (-15589,45153)	40196 (33922,46470)	20386 (2224,38548)	21831 (21831,21831)	32783 (-5029107,5094673)
6/1/2020	35192	3814 (-46598,54225)	21831 (-4357,48019)	14930 (-16068,45929)	41450 (34675,48224)	20386 (1412,39360)	21831 (21831,21831)	33469 (-5526202,5593140)
6/2/2020	35788	3814 (-47356,54983)	21831 (-5525,49187)	15079 (-16530,46687)	42729 (35406,50052)	20386 (622,40150)	21831 (21831,21831)	34154 (-6038603,6106912)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	22627	22499 (21190,23809)	22581 (22462,22699)	20517 (16383,24652)	22533 (21157,23908)	22581 (22463,22700)	11658 (-9841,33157)	
5/17/2020	23358	23185 (-121515,167885)	23341 (23141,23540)	20815 (16236,25394)	23275 (-500637,547187)	23342 (23141,23543)	12050 (-9783,33884)	
5/18/2020	24190	23870 (-298742,346482)	24111 (23826,24397)	21095 (15972,26218)	24000 (-1135596,1183595)	24114 (23825,24404)	12441 (-9797,34680)	
5/19/2020	25063	24556 (-514602,563714)	24893 (24513,25272)	21343 (15601,27085)	24725 (-1907413,1956863)	24897 (24511,25284)	12846 (-9831,35523)	
5/20/2020	26004	25242 (-763458,813941)	25684 (25201,26167)	21568 (15126,28010)	25456 (-2798870,2849782)	25690 (25197,26183)	13255 (-9903,36413)	
5/21/2020	26898	25927 (-1041505,1093359)	26485 (25890,27080)	21773 (14604,28942)	26182 (-3793225,3845589)	26494 (25884,27104)	13691 (-9943,37326)	
5/22/2020	27892	26613 (-1345996,1399221)	27296 (26580,28013)	21964 (14006,29923)	26915 (-4848528,4938358)	27308 (26572,28044)	14108 (-10039,38254)	
5/23/2020	28704	27298 (-1674831,1729428)	28117 (27271,28964)	22147 (13425,30868)	27619 (-6051899,6107136)	28132 (27259,29005)	14539 (-10089,39167)	
5/24/2020	29485	27984 (-2026341,2082309)	28948 (27962,29934)	22324 (12863,31785)	28361 (-7307656,7364378)	28967 (27946,29987)	14932 (-10159,40022)	
5/25/2020	30307	28670 (-2399158,2456497)	29788 (28654,30922)	22498 (12301,32695)	29086 (-8638500,8696671)	29811 (28633,30989)	15332 (-10217,40881)	
5/26/2020	31086	29355 (-2792132,2850843)	30638 (29347,31929)	22669 (11748,33590)	29811 (-10040725,10100347)	30665 (29319,32010)	15727 (-10269,41723)	
5/27/2020	31969	30041 (-3204284,3264366)	31497 (30040,32954)	22836 (11173,34500)	30542 (-11512657,11573741)	31529 (30005,33053)	16151 (-10299,42600)	
5/28/2020	32532	30726 (-3634764,3696217)	32365 (30733,33997)	23001 (10655,35346)	31268 (-13049421,13111957)	32402 (30690,34115)	16602 (-10245,43449)	
5/29/2020	33170	31412 (-4082824,4145648)	33242 (31427,35057)	23160 (10159,36161)	32001 (-14650892,14714895)	33285 (31373,35197)	16997 (-10226,44219)	
5/30/2020	33896	32098 (-4547802,4611998)	34129 (32122,36136)	23314 (9660,36968)	32705 (-16305044,16370454)	34178 (32056,36300)	17416 (-10174,45005)	
5/31/2020	34557	32783 (-5029107,5094673)	35024 (32816,37231)	23466 (9172,37759)	33447 (-18022548,18089441)	35079 (32737,37422)	17836 (-10106,45778)	
6/1/2020	35192	33469 (-5526202,5593140)	35928 (33511,38344)	23613 (8693,38532)	34172 (-19795773,19864117)	35990 (33416,38564)	18305 (-9967,46576)	
6/2/2020	35788	34154 (-6038603,6106912)	36840 (34206,39474)	23756 (8228,39285)	34897 (-21623212,21693006)	36910 (34094,39726)	18760 (-9818,47339)	

**Table A.177**

Actual and Predicted Cases with 95% Confidence Intervals for Uganda using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	227	33 (-348,414)	203 (156,250)	99 (-151,350)	153 (7,298)	121 (-87,329)	203 (203,203)	210 (197,222)	
5/17/2020	227	33 (-348,414)	203 (156,250)	101 (-149,350)	157 (15,299)	121 (-87,329)	203 (203,203)	224 (182,266)	
5/18/2020	248	33 (-362,428)	203 (115,291)	102 (-161,364)	161 (9,313)	121 (-101,343)	203 (203,203)	238 (157,319)	
5/19/2020	260	33 (-376,441)	203 (91,315)	103 (-172,377)	165 (4,326)	121 (-115,357)	203 (203,203)	252 (125,380)	
5/20/2020	264	33 (-385,450)	203 (83,323)	104 (-179,387)	170 (4,336)	121 (-124,366)	203 (203,203)	267 (86,447)	
5/21/2020	160	33 (-362,427)	203 (119,287)	105 (-157,367)	174 (22,326)	121 (-105,347)	203 (203,203)	281 (41,520)	
5/22/2020	175	33 (-348,413)	203 (148,258)	106 (-142,354)	179 (38,319)	121 (-92,334)	203 (203,203)	295 (-8,598)	
5/23/2020	198	33 (-341,406)	203 (193,213)	107 (-133,347)	183 (51,315)	121 (-85,327)	203 (203,203)	309 (-63,682)	
5/24/2020	198	33 (-336,401)	203 (193,213)	108 (-125,342)	188 (64,313)	121 (-80,322)	203 (203,203)	323 (-123,769)	
5/25/2020	222	33 (-336,401)	203 (166,240)	110 (-123,342)	193 (73,312)	121 (-80,322)	203 (203,203)	338 (-186,862)	
5/26/2020	253	33 (-342,408)	203 (105,301)	111 (-126,348)	198 (79,316)	121 (-86,328)	203 (203,203)	352 (-254,958)	
5/27/2020	281	33 (-353,418)	203 (50,356)	112 (-135,358)	203 (81,325)	121 (-97,339)	203 (203,203)	366 (-325,1058)	
5/28/2020	317	33 (-369,434)	203 (-20,426)	113 (-148,374)	208 (76,339)	121 (-114,356)	203 (203,203)	380 (-401,1161)	
5/29/2020	329	33 (-384,449)	203 (-44,450)	114 (-162,390)	213 (72,353)	121 (-130,372)	203 (203,203)	395 (-479,1268)	
5/30/2020	413	33 (-414,479)	203 (-209,615)	115 (-191,421)	218 (50,386)	121 (-163,405)	203 (203,203)	409 (-561,1379)	
5/31/2020	417	33 (-439,504)	203 (-216,622)	116 (-215,447)	223 (35,411)	121 (-190,432)	203 (203,203)	423 (-647,1493)	
6/1/2020	457	33 (-467,532)	203 (-295,701)	117 (-242,477)	228 (16,441)	121 (-220,462)	203 (203,203)	437 (-736,1610)	
6/2/2020	489	33 (-497,562)	203 (-358,764)	119 (-270,508)	234 (-4,472)	121 (-252,494)	203 (203,203)	452 (-827,1730)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	227	210 (197,222)	239 (231,247)	206 (165,247)	239 (169,309)	239 (231,247)	133 (-51,317)		
5/17/2020	227	224 (182,266)	279 (264,294)	233 (203,263)	277 (-1873,2427)	279 (263,294)	155 (-8,319)		
5/18/2020	248	238 (157,319)	318 (294,343)	268 (235,302)	315 (-4417,5047)	318 (293,343)	171 (12,331)		
5/19/2020	260	252 (125,380)	358 (324,393)	316 (254,377)	353 (-7522,8228)	358 (322,393)	187 (32,343)		
5/20/2020	264	267 (86,447)	399 (352,446)	382 (265,498)	390 (-11081,11861)	397 (349,445)	205 (57,353)		
5/21/2020	160	281 (41,520)	440 (380,499)	479 (202,756)	428 (-15065,15922)	436 (375,498)	226 (81,372)		
5/22/2020	175	295 (-8,598)	481 (407,555)	634 (208,1060)	467 (-19469,20403)	476 (400,551)	230 (89,371)		
5/23/2020	198	309 (-63,682)	522 (434,611)	905 (273,1536)	506 (-24243,25255)	515 (424,606)	251 (115,388)		
5/24/2020	198	323 (-123,769)	564 (460,669)	1441 (434,2448)	544 (-29341,30430)	555 (447,662)	276 (137,414)		
5/25/2020	222	338 (-186,862)	606 (485,727)	2657 (871,4443)	582 (-34735,35898)	594 (470,719)	310 (168,452)		
5/26/2020	253	352 (-254,958)	649 (510,787)	5597 (2009,9185)	620 (-40416,41656)	634 (491,776)	333 (189,476)		
5/27/2020	281	366 (-325,1058)	692 (535,849)	12245 (4654,19836)	657 (-46357,47672)	673 (512,834)	356 (212,499)		
5/28/2020	317	380 (-401,1161)	735 (559,911)	26322 (10415,42228)	695 (-52561,53952)	712 (531,894)	382 (240,525)		
5/29/2020	329	395 (-479,1268)	778 (583,974)	56477 (23310,89644)	734 (-59043,60512)	752 (550,953)	406 (263,549)		
5/30/2020	413	409 (-561,1379)	822 (607,1038)	121401 (52295,190507)	773 (-65785,67331)	791 (569,1014)	425 (286,563)		
5/31/2020	417	423 (-647,1493)	867 (630,1103)	260945 (116814,405077)	811 (-72762,74385)	831 (586,1075)	457 (322,593)		
6/1/2020	457	437 (-736,1610)	911 (653,1170)	560793 (259955,861630)	849 (-79960,81658)	870 (603,1137)	474 (342,606)		
6/2/2020	489	452 (-827,1730)	956 (675,1237)	1204993 (576412,1833574)	887 (-87376,89150)	910 (620,1199)	501 (373,629)		

**Table A.178**

Actual and Predicted Cases with 95% Confidence Intervals for Ukraine using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	17858	3069 (-25916,32055)	17330 (16295,18365)	10208 (-4787,25202)	20101 (15705,24498)	17330 (16295,18365)	17330 (17330,17330)	17769 (16908,18630)	
5/17/2020	18291	3069 (-26344,32482)	17330 (15446,19214)	10329 (-4974,25632)	20867 (16133,25601)	17330 (15810,18850)	17330 (17330,17330)	18215 (-43904,80335)	
5/18/2020	18616	3069 (-26701,32839)	17330 (14809,19851)	10450 (-5091,25991)	21651 (16480,26822)	17330 (15418,19242)	17330 (17330,17330)	18661 (-119616,156939)	
5/19/2020	18876	3069 (-27008,33147)	17330 (14300,20360)	10571 (-5158,26299)	22454 (16767,28141)	17330 (15085,19575)	17330 (17330,17330)	19107 (-211830,250045)	
5/20/2020	19230	3069 (-27334,33473)	17330 (13606,21054)	10692 (-5243,26627)	23275 (17075,29476)	17330 (14721,19939)	17330 (17330,17330)	19553 (-318144,357251)	
5/21/2020	19706	3069 (-27712,33851)	17330 (12673,21987)	10813 (-5381,27007)	24116 (17446,30787)	17330 (14283,20377)	17330 (17330,17330)	19999 (-436935,476933)	
5/22/2020	20148	3069 (-28111,34250)	17330 (11807,22853)	10934 (-5540,27407)	24976 (17840,32113)	17330 (13821,20839)	17330 (17330,17330)	20445 (-567029,607919)	
5/23/2020	20580	3069 (-28521,34660)	17330 (10960,23700)	11055 (-5709,27818)	25856 (18245,33468)	17330 (13349,21311)	17330 (17330,17330)	20891 (-707530,749312)	
5/24/2020	20986	3069 (-28932,35071)	17330 (10164,24496)	11176 (-5879,28231)	26755 (18650,34861)	17330 (12881,21779)	17330 (17330,17330)	21337 (-857724,900398)	
5/25/2020	21245	3069 (-29312,35451)	17330 (9657,25003)	11297 (-6018,28612)	27675 (19014,36336)	17330 (12462,22198)	17330 (17330,17330)	21783 (-1017026,1060593)	
5/26/2020	21584	3069 (-29687,35826)	17330 (8992,25668)	11418 (-6151,28986)	28614 (19370,37859)	17330 (12051,22609)	17330 (17330,17330)	22229 (-1184947,1229406)	
5/27/2020	21905	3069 (-30054,36192)	17330 (8363,26297)	11539 (-6275,29352)	29574 (19717,39432)	17330 (11651,23009)	17330 (17330,17330)	22675 (-1361067,1406417)	
5/28/2020	22382	3069 (-30441,36580)	17330 (7428,27232)	11660 (-6421,29740)	30555 (20094,41016)	17330 (11222,23438)	17330 (17330,17330)	23121 (-1545023,1591265)	
5/29/2020	22811	3069 (-30838,36976)	17330 (6587,28073)	11781 (-6575,30136)	31556 (20484,42628)	17330 (10781,23879)	17330 (17330,17330)	23567 (-1736494,1783629)	
5/30/2020	23204	3069 (-31236,37375)	17330 (5817,28843)	11902 (-6731,30534)	32578 (20877,44280)	17330 (10340,24320)	17330 (17330,17330)	24013 (-1935200,1983226)	
5/31/2020	23672	3069 (-31647,37786)	17330 (4900,29760)	12023 (-6900,30945)	33622 (21287,45957)	17330 (9882,24778)	17330 (17330,17330)	24459 (-2140885,2189804)	
6/1/2020	24562	3069 (-32126,38265)	17330 (3155,31505)	12144 (-7140,31427)	34687 (21789,47585)	17330 (9329,25331)	17330 (17330,17330)	24905 (-2353322,2403133)	
6/2/2020	24895	3069 (-32590,38728)	17330 (2503,32157)	12265 (-7363,31892)	35774 (22269,49278)	17330 (8805,25855)	17330 (17330,17330)	25351 (-2572304,2623006)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima				
5/16/2020	17858	17769 (16908,18630)	17825 (17750,17900)	16327 (13325,19328)	17803 (16876,18729)	17801 (17711,17890)	9133 (-7967,26234)		
5/17/2020	18291	18215 (-43904,80335)	18284 (18134,18435)	16548 (13332,19764)	18275 (-351426,387977)	18267 (18087,18447)	9384 (-7895,26664)		
5/18/2020	18616	18661 (-119616,156939)	18690 (18464,18916)	16768 (13411,20125)	18748 (-807054,844550)	18729 (18447,19011)	9589 (-7830,27007)		
5/19/2020	18876	19107 (-211830,250045)	19063 (18762,19365)	16977 (13525,20429)	19221 (-1362011,1400452)	19191 (18800,19582)	9749 (-7789,27286)		
5/20/2020	19230	19553 (-318144,357251)	19448 (19062,19834)	17177 (13604,20751)	19693 (-2001704,2041091)	19652 (19144,20160)	9895 (-7796,27587)		
5/21/2020	19706	19999 (-436935,476933)	19879 (19390,20369)	17370 (13610,21130)	20166 (-2716303,2756634)	20112 (19481,20744)	10098 (-7789,27985)		
5/22/2020	20148	20445 (-567029,607919)	20361 (19745,20977)	17556 (13580,21531)	20638 (-3498747,3540024)	20572 (19811,21334)	10364 (-7713,28441)		
5/23/2020	20580	20891 (-707530,749312)	20867 (20106,21628)	17736 (13528,21945)	21111 (-4343633,4385855)	21033 (20134,21931)	10648 (-7609,28904)		
5/24/2020	20986	21337 (-857724,900398)	21357 (20442,22272)	17912 (13465,22359)	21583 (-5246667,5289833)	21493 (20451,22535)	10906 (-7523,29335)		
5/25/2020	21245	21783 (-1017026,1060593)	21810 (20740,22879)	18083 (13432,22735)	22055 (-6204322,6248432)	21953 (20762,23144)	11120 (-7455,29696)		
5/26/2020	21584	22229 (-1184947,1229406)	22231 (21009,23453)	18249 (13396,23103)	22528 (-7213680,7258736)	22413 (21067,23759)	11300 (-7425,30025)		
5/27/2020	21905	22675 (-1361067,1406417)	22651 (21275,24026)	18411 (13361,23461)	23000 (-8272205,8318205)	22873 (21366,24381)	11494 (-7377,30365)		
5/28/2020	22382	23121 (-1545023,1591265)	23099 (21561,24636)	18567 (13291,23844)	23472 (-9377681,9424626)	23333 (21660,25007)	11704 (-7333,30740)		
5/29/2020	22811	23567 (-1736494,1783629)	23587 (21875,25298)	18719 (13201,24237)	23944 (-10528193,10576081)	23794 (21948,25640)	11985 (-7216,31186)		
5/30/2020	23204	24013 (-1935200,1983226)	24102 (22204,26000)	18867 (13102,24632)	24416 (-11722032,11770864)	24254 (22230,26277)	12257 (-7102,31617)		
5/31/2020	23672	24459 (-2140885,2189804)	24617 (22522,26711)	19011 (12981,25042)	24888 (-12957675,13007451)	24714 (22508,26920)	12527 (-6997,32051)		
6/1/2020	24562	24905 (-2353322,2403133)	25108 (22814,27402)	19153 (12762,25543)	25360 (-14233740,14284460)	25174 (22781,27568)	12771 (-6982,32524)		
6/2/2020	24895	25351 (-2572304,2623006)	25573 (23079,28067)	19290 (12561,26019)	25832 (-15549006,15600671)	25634 (23048,28220)	13083 (-6875,33040)		

**Table A.179**

Actual and Predicted Cases with 95% Confidence Intervals for United Kingdom using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	241461	55307 (-309556,420169)	238004 (231228,244780)	174021 (41838,306204)	278155 (206234,350077)	238004 (231228,244780)
5/17/2020	244995	55307 (-313036,423649)	238004 (224302,251706)	176033 (42350,309715)	286064 (209735,362392)	238004 (227195,248813)
5/18/2020	247709	55307 (-315981,426594)	238004 (218982,257026)	178045 (43403,312687)	294106 (212616,375596)	238004 (223915,252093)
5/19/2020	250138	55307 (-318654,429268)	238004 (214221,261787)	180057 (44731,315384)	302283 (215152,389415)	238004 (220966,255042)
5/20/2020	249619	55307 (-320043,430656)	238004 (215239,260769)	182069 (47324,316815)	310597 (216096,405097)	238004 (219677,256331)
5/21/2020	252246	55307 (-321839,432452)	238004 (210090,265918)	184081 (49526,318637)	319047 (217563,420532)	238004 (217761,258247)
5/22/2020	255544	55307 (-324065,434679)	238004 (203626,272382)	186093 (51313,320874)	327636 (219562,435710)	238004 (215199,260809)
5/23/2020	258504	55307 (-326478,437092)	238004 (197824,278184)	188106 (52921,323291)	336363 (221773,450954)	238004 (212375,263633)
5/24/2020	260916	55307 (-328893,439506)	238004 (193096,282912)	190118 (54530,325705)	345231 (223960,466501)	238004 (209579,266429)
5/25/2020	262547	55307 (-331148,441762)	238004 (189900,286108)	192130 (56297,327962)	354239 (225921,482558)	238004 (207043,268965)
5/26/2020	266599	55307 (-333746,444359)	238004 (181958,294050)	194142 (57736,330548)	363389 (228332,498447)	238004 (203990,272018)
5/27/2020	268619	55307 (-336248,446861)	238004 (177999,298009)	196154 (59270,330308)	372683 (230601,514765)	238004 (201117,274891)
5/28/2020	270508	55307 (-338657,449270)	238004 (174296,301712)	198166 (60899,335433)	382120 (232736,531504)	238004 (198404,277604)
5/29/2020	272607	55307 (-341024,451637)	238004 (170182,305826)	200178 (62570,337786)	391702 (234814,548589)	238004 (195758,280250)
5/30/2020	274219	55307 (-343290,453903)	238004 (167023,308985)	202190 (64342,340039)	401429 (236757,566102)	238004 (193265,282743)
5/31/2020	276156	55307 (-345518,456131)	238004 (163226,312782)	204202 (66153,342252)	411304 (238655,583953)	238004 (190823,285185)
6/1/2020	277736	55307 (-347669,458283)	238004 (160129,315879)	206215 (68039,344390)	421326 (240457,602195)	238004 (188488,287520)
6/2/2020	279392	55307 (-349767,460381)	238004 (156884,319124)	208227 (69978,346476)	431497 (242199,620796)	238004 (186224,289784)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SES	HLT	DT	ARIMA	
5/16/2020	241461	238004 (238004,238004)	241961 (234205,249717)	241961 (234205,249717)	241624 (240270,242977)	
5/17/2020	244995	238004 (238004,238004)	245809 (-4535453,5027071)	245809 (-4535453,5027071)	245276 (242863,247690)	
5/18/2020	247709	238004 (238004,238004)	249657 (-10436009,10935322)	249657 (-10436009,10935322)	248961 (245416,252506)	
5/19/2020	250138	238004 (238004,238004)	253505 (-17623051,18130060)	253505 (-17623051,18130060)	252679 (247907,257450)	
5/20/2020	249619	238004 (238004,238004)	257352 (-25908007,26422711)	257352 (-25908007,26422711)	256428 (250332,262523)	
5/21/2020	252246	238004 (238004,238004)	261200 (-35164074,35686474)	261200 (-35164074,35686474)	260209 (252697,267721)	
5/22/2020	255544	238004 (238004,238004)	265048 (-45299691,45829787)	265048 (-45299691,45829787)	264023 (255005,273040)	
5/23/2020	258504	238004 (238004,238004)	268896 (-56244948,56782739)	268896 (-56244948,56782739)	267868 (257261,278476)	
5/24/2020	260916	238004 (238004,238004)	272743 (-67944260,68489746)	272743 (-67944260,68489746)	271746 (259468,284025)	
5/25/2020	262547	238004 (238004,238004)	276591 (-80352079,80905262)	276591 (-80352079,80905262)	275656 (261629,289683)	
5/26/2020	266599	238004 (238004,238004)	280439 (-93430211,93991089)	280439 (-93430211,93991089)	279598 (263748,295448)	
5/27/2020	268619	238004 (238004,238004)	284287 (-107146024,107714598)	284287 (-107146024,107714598)	283572 (265828,301317)	
5/28/2020	270508	238004 (238004,238004)	288134 (-121471227,122047496)	288134 (-121471227,122047496)	287579 (267870,307287)	
5/29/2020	272607	238004 (238004,238004)	291982 (-136380984,136964949)	291982 (-136380984,136964949)	291617 (269878,313356)	
5/30/2020	274219	238004 (238004,238004)	295830 (-151853262,152444923)	295830 (-151853262,152444923)	295688 (271854,319522)	
5/31/2020	276156	238004 (238004,238004)	299678 (-167868346,168467702)	299678 (-167868346,168467702)	299791 (273798,325783)	
6/1/2020	277736	238004 (238004,238004)	303526 (-184408455,185015507)	303526 (-184408455,185015507)	303926 (275714,332137)	
6/2/2020	279392	238004 (238004,238004)	307373 (-201457448,202072195)	307373 (-201457448,202072195)	308093 (277602,338583)	

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**Table A.179** (continued)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)			
		LSTM	HWA	SSM	Sutte-Arima
5/16/2020	241461	224149 (190217,258081)	241103 (235029,247178)	241542 (240112,242972)	122535 (-110560,355630)
5/17/2020	244995	224495 (187308,261682)	244304 (-9404962,9893569)	245078 (242516,247641)	124397 (-110342,359136)
5/18/2020	247709	224933 (185105,264760)	247208 (-20529744,21024160)	248615 (244833,252397)	126253 (-109597,362102)
5/19/2020	250138	225255 (183013,267496)	250264 (-34303361,34803889)	252151 (247040,257262)	127968 (-108788,364723)
5/20/2020	249619	225496 (182200,268792)	253649 (-50965776,51473074)	255688 (249140,262236)	129669 (-106757,366095)
5/21/2020	252246	225680 (180802,270558)	257000 (-69874564,70388565)	259224 (251135,267313)	130880 (-105789,367548)
5/22/2020	255544	225820 (178798,272843)	260719 (-91459811,91981249)	262761 (253032,272489)	132772 (-104467,370011)
5/23/2020	258504	225928 (176488,275369)	263798 (-114146055,114673650)	266297 (254835,277759)	134841 (-103046,372729)
5/24/2020	260916	226013 (174121,277904)	266989 (-138204601,138738580)	269834 (256548,283119)	137363 (-101004,375729)
5/25/2020	262547	226074 (171902,280245)	269884 (-163120273,163660042)	273370 (258176,288564)	139281 (-99411,377973)
5/26/2020	266599	226116 (169194,283038)	272932 (-189187716,189733579)	276906 (259722,294091)	140972 (-98415,380359)
5/27/2020	268619	226146 (166584,285707)	276308 (-216862145,217414760)	280443 (261189,299696)	143143 (-96796,383083)
5/28/2020	270508	226166 (164072,288261)	279650 (-245974405,246533705)	283979 (262580,305379)	145081 (-95318,385479)
5/29/2020	272607	226179 (161589,290768)	283360 (-276943917,277510637)	287516 (263897,311134)	147143 (-93653,387939)
5/30/2020	274219	226184 (159217,293152)	286430 (-308760509,309333368)	291052 (265143,316961)	148849 (-92279,389977)
5/31/2020	276156	226184 (156873,295494)	289612 (-341582690,342161915)	294589 (266320,322857)	150832 (-90580,392244)
6/1/2020	277736	226177 (154608,297745)	292499 (-375022977,375607975)	298125 (267429,328821)	152907 (-88697,394512)
6/2/2020	279392	226155 (152382,299927)	295537 (-409297421,409888496)	301662 (268473,334850)	154904 (-86834,396642)

**Table A.180**

Actual and Predicted Cases with 95% Confidence Intervals for United States using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		SA	SMA	LT	QT	ST
5/16/2020	1467820	345811 (-1853326,2544948)	1442824 (1393832,1491816)	1079817 (319332,1840303)	1667192 (1276423,2057962)	1390406 (1238675,1542137)
5/17/2020	1486757	345811 (-1871962,2563584)	1442824 (1356715,1528933)	1092258 (325380,1859136)	1711584 (1295121,2128048)	1390406 (1219108,1561704)
5/18/2020	1508308	345811 (-1892385,2584007)	1442824 (1314475,1571173)	1104699 (329672,1879726)	1756644 (1315510,2197778)	1390406 (1197112,1583700)
5/19/2020	1528568	345811 (-1912652,2604275)	1442824 (1274766,1610882)	1117140 (334152,1900128)	1802375 (1335523,2269228)	1390406 (1175105,1605707)
5/20/2020	1551853	345811 (-1934118,2625740)	1442824 (1229127,1656521)	1129581 (337458,1921703)	1848782 (1356744,2340820)	1390406 (1151429,1629383)
5/21/2020	1577147	345811 (-1956903,2648526)	1442824 (1179551,1706097)	1142021 (339459,1944584)	1895867 (1379349,2412385)	1390406 (1125983,1654829)
5/22/2020	1600937	345811 (-1980031,2671653)	1442824 (1132923,1752725)	1154462 (341142,1967782)	1943635 (1402220,2485050)	1390406 (1100138,1680674)
5/23/2020	1622612	345811 (-2002844,2694466)	1442824 (1090440,1795208)	1166903 (343176,1990630)	1992089 (1424601,2559577)	1390406 (1074786,1706026)
5/24/2020	1643246	345811 (-2025221,2716844)	1442824 (1049997,1835651)	1179344 (345681,2013007)	2041233 (1446364,2636103)	1390406 (1050061,1730751)
5/25/2020	1662302	345811 (-2046974,2738597)	1442824 (1012647,1873001)	1191784 (348848,2034721)	2091071 (1467286,2714855)	1390406 (1026193,1754619)
5/26/2020	1680913	345811 (-2068198,2759821)	1442824 (976170,1909478)	1204225 (352577,2055874)	2141605 (1487499,2795711)	1390406 (1003023,1777789)
5/27/2020	1699176	345811 (-2088973,2780596)	1442824 (940374,1945274)	1216666 (356785,2076547)	2192840 (1507116,2878565)	1390406 (980429,1800383)
5/28/2020	1721753	345811 (-2110125,2801747)	1442824 (896123,1989525)	1229107 (360638,2097576)	2244780 (1527225,2962336)	1390406 (957283,1823529)
5/29/2020	1746019	345811 (-2131844,2823467)	1442824 (848562,2037086)	1241548 (363939,2119156)	2297428 (1548068,3046788)	1390406 (933353,1847459)
5/30/2020	1770165	345811 (-2154010,2845633)	1442824 (801236,2084412)	1253988 (366809,2141167)	2350788 (1569479,3132097)	1390406 (908840,1871972)
5/31/2020	1790172	345811 (-2175980,2867602)	1442824 (762022,2123626)	1266429 (369905,2162953)	2404863 (1590608,3219118)	1390406 (884657,1896155)
6/1/2020	1811020	345811 (-2197903,2889525)	1442824 (721160,2164488)	1278870 (373073,2184667)	2459657 (1611668,3307646)	1390406 (860580,1920232)
6/2/2020	1831821	345811 (-2219787,2911410)	1442824 (680390,2205258)	1291311 (376303,2206318)	2515174 (1632678,3397670)	1390406 (836597,1944215)

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**Table A.180 (continued)**

Predicted Cases (95% Confidence Interval)					
Date	Actual Cases	SES	HLT	DT	ARIMA
5/16/2020	1467820	1442824 (1442824,1442824)	1466202 (1420381,1512023)	1466202 (1420381,1512023)	1468237 (1463880,1472594)
5/17/2020	1486757	1442824 (1442824,1442824)	1490051 (-173390650,176370752)	1490051 (-173390650,176370752)	1493582 (1483352,1503812)
5/18/2020	1508308	1442824 (1442824,1442824)	1513900 (-389498438,392526238)	1513900 (-389498438,392526238)	1519148 (1501363,1536932)
5/19/2020	1528568	1442824 (1442824,1442824)	1537749 (-652727522,655803020)	1537749 (-652727522,655803020)	1544933 (1518288,1571578)
5/20/2020	1551853	1442824 (1442824,1442824)	1561598 (-956165568,959288763)	1561598 (-956165568,959288763)	1570939 (1534311,1607568)
5/21/2020	1577147	1442824 (1442824,1442824)	1585447 (-1295166789,1298337682)	1585447 (-1295166789,1298337682)	1597166 (1549548,1644783)
5/22/2020	1600937	1442824 (1442824,1442824)	1609296 (-1666377224,1669595816)	1609296 (-1666377224,1669595816)	1623612 (1564087,1683138)
5/23/2020	1622612	1442824 (1442824,1442824)	1633145 (-2067236162,2070502452)	1633145 (-2067236162,2070502452)	1650279 (1577994,1722565)
5/24/2020	1643246	1442824 (1442824,1442824)	1656994 (-2495707772,2499021760)	1656994 (-2495707772,2499021760)	1677166 (1591322,1763011)
5/25/2020	1662302	1442824 (1442824,1442824)	1680843 (-2950123961,2953485646)	1680843 (-2950123961,2953485646)	1704274 (1604117,1804431)
5/26/2020	1680913	1442824 (1442824,1442824)	1704692 (-3429085823,3432495207)	1704692 (-3429085823,3432495207)	1731602 (1616415,1846788)
5/27/2020	1699176	1442824 (1442824,1442824)	1728541 (-3931398400,3934855481)	1728541 (-3931398400,3934855481)	1759150 (1628251,1890048)
5/28/2020	1721753	1442824 (1442824,1442824)	1752390 (-4456025575,4459530355)	1752390 (-4456025575,4459530355)	1786918 (1639652,1934184)
5/29/2020	1746019	1442824 (1442824,1442824)	1776239 (-5002057792,5005610269)	1776239 (-5002057792,5005610269)	1814907 (1650643,1979170)
5/30/2020	1770165	1442824 (1442824,1442824)	1800088 (-5568688245,5572288420)	1800088 (-5568688245,5572288420)	1843115 (1661248,2024983)
5/31/2020	1790172	1442824 (1442824,1442824)	1823937 (-6155194906,6158842779)	1823937 (-6155194906,6158842779)	1871545 (1671486,2071603)
6/1/2020	1811020	1442824 (1442824,1442824)	1847785 (-6760926659,6764622230)	1847785 (-6760926659,6764622230)	1900194 (1681376,2119012)
6/2/2020	1831821	1442824 (1442824,1442824)	1871634 (-7385292410,7389035679)	1871634 (-7385292410,7389035679)	1929064 (1690934,2167193)
Predicted Cases (95% Confidence Interval)					
Date	Actual Cases	LSTM	HWA	SSM	Sutte-Arima
3196	1467820	1302278 (977815,1626741)	1467871 (1418779,1516964)	1468117 (1463560,1472675)	746467 (-667383,2160318)
	1486757	1298603 (951274,1645933)	1492919 (-1227965070,1230950908)	1493076 (1482320,1503833)	759810 (-659534,2179154)
	1508308	1295250 (923023,1667478)	1517965 (-2747520669,2750556599)	1518036 (1499227,1536844)	771164 (-656717,2199044)
	1528568	1291274 (893791,1688758)	1543009 (-4598302099,4601388117)	1542995 (1514719,1571271)	783463 (-652619,2219544)
	1551853	1286932 (862294,1711570)	1568043 (-6731411860,6734547946)	1567954 (1528996,1606912)	795663 (-649746,2241072)
	1577147	1282377 (828618,1736136)	1593082 (-9114492701,9117678865)	1592913 (1542189,1643636)	809510 (-645926,2264946)
	1600937	1277705 (794155,1761256)	1618115 (-11723781860,11727018090)	1617872 (1554392,1681352)	823365 (-642068,2288799)
	1622612	1272980 (759857,1786102)	1643144 (-14541236670,14544522958)	1642831 (1565677,1719986)	837294 (-637565,2312153)
	1643246	1268318 (726061,1810574)	1668174 (-17552626490,17555962839)	1667790 (1576102,1759479)	850464 (-633379,2334308)
	1662302	1263816 (693168,1834464)	1693203 (-20746214754,20749601161)	1692749 (1585715,1799784)	863229 (-629053,2355511)
	1680913	1259486 (661105,1857867)	1718229 (-24112136459,24115572917)	1717709 (1594557,1840860)	876093 (-624131,2376317)
	1699176	1255325 (629794,1880856)	1743246 (-27641797319,27645283811)	1742668 (1602665,1882671)	889349 (-618320,2397018)
	1721753	1251245 (598093,1904398)	1768267 (-31328088690,31331625225)	1767627 (1610068,1925186)	902833 (-612552,2418218)
	1746019	1247265 (565800,1928730)	1793283 (-35164510459,35168097025)	1792586 (1616793,1968379)	917420 (-605984,2440824)
	1770165	1243388 (533104,1953672)	1818295 (-39145359072,39148995661)	1817545 (1622866,2012224)	932478 (-599108,2464065)
	1790172	1239604 (500853,1978354)	1843307 (-43265618624,43269305239)	1842504 (1628307,2056701)	947685 (-591655,2487024)
	1811020	1235915 (468849,2002981)	1868319 (-47520711869,47524448506)	1867463 (1633137,2101789)	961575 (-585434,2508583)
	1831821	1232258 (437009,2027508)	1893327 (-51906465306,51910251961)	1892422 (1637374,2147470)	975432 (-579175,2530039)

**Table A.181**

Actual and Predicted Cases with 95% Confidence Intervals for Uruguay using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	733	248 (-703,1199)	732 (730,734)	702 (643,762)	756 (711,800)	732 (730,734)	732 (732,732)	737 (727,748)
5/17/2020	734	248 (-704,1200)	732 (728,736)	710 (657,764)	760 (712,807)	732 (729,735)	732 (732,732)	743 (722,765)
5/18/2020	737	248 (-706,1202)	732 (722,742)	718 (669,767)	763 (715,812)	732 (726,738)	732 (732,732)	749 (714,785)
5/19/2020	738	248 (-708,1204)	732 (720,744)	726 (682,770)	766 (716,817)	732 (724,740)	732 (732,732)	755 (703,807)
5/20/2020	746	248 (-712,1208)	732 (705,759)	733 (692,774)	769 (720,819)	732 (718,746)	732 (732,732)	761 (690,832)
5/21/2020	749	248 (-716,1211)	732 (699,765)	741 (703,779)	772 (723,821)	732 (713,751)	732 (732,732)	767 (675,859)
5/22/2020	753	248 (-719,1215)	732 (691,773)	749 (714,784)	774 (726,822)	732 (709,755)	732 (732,732)	773 (658,887)
5/23/2020	764	248 (-725,1221)	732 (669,795)	756 (723,790)	775 (730,821)	732 (701,763)	732 (732,732)	778 (639,917)
5/24/2020	769	248 (-731,1226)	732 (659,805)	764 (733,796)	777 (734,820)	732 (694,770)	732 (732,732)	784 (620,949)
5/25/2020	787	248 (-739,1234)	732 (624,840)	772 (740,803)	777 (736,819)	732 (682,782)	732 (732,732)	790 (598,982)
5/26/2020	789	248 (-746,1241)	732 (620,844)	780 (749,810)	778 (738,818)	732 (674,790)	732 (732,732)	796 (576,1016)
5/27/2020	803	248 (-754,1250)	732 (593,871)	787 (757,818)	777 (737,818)	732 (663,801)	732 (732,732)	802 (552,1052)
5/28/2020	811	248 (-762,1258)	732 (577,887)	795 (764,826)	777 (733,820)	732 (653,811)	732 (732,732)	808 (527,1089)
5/29/2020	816	248 (-770,1266)	732 (567,897)	803 (772,833)	776 (729,823)	732 (644,820)	732 (732,732)	814 (500,1127)
5/30/2020	821	248 (-777,1273)	732 (558,906)	810 (781,840)	774 (723,825)	732 (636,828)	732 (732,732)	819 (473,1166)
5/31/2020	823	248 (-784,1280)	732 (554,910)	818 (789,847)	772 (716,827)	732 (629,835)	732 (732,732)	825 (444,1206)
6/1/2020	825	248 (-790,1286)	732 (550,914)	826 (798,854)	769 (709,829)	732 (623,841)	732 (732,732)	831 (415,1248)
6/2/2020	826	248 (-795,1291)	732 (548,916)	833 (806,861)	766 (701,831)	732 (617,847)	732 (732,732)	837 (384,1290)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)					
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	733	737 (727,746)	739 (725,752)	723 (703,743)	737 (727,747)	738 (725,752)	372 (-336,1080)
5/17/2020	734	742 (724,760)	745 (721,769)	725 (707,744)	742 (721,772)	744 (721,768)	375 (-331,1081)
5/18/2020	737	747 (718,776)	751 (718,785)	727 (709,746)	747 (692,802)	751 (717,784)	377 (-328,1083)
5/19/2020	738	752 (711,793)	758 (715,801)	729 (711,748)	751 (668,834)	757 (713,800)	380 (-325,1084)
5/20/2020	746	757 (701,813)	764 (711,818)	731 (711,752)	755 (641,869)	763 (709,816)	383 (-323,1089)
5/21/2020	749	762 (691,833)	771 (707,835)	733 (710,756)	759 (612,906)	769 (704,833)	387 (-319,1094)
5/22/2020	753	766 (679,854)	777 (702,852)	735 (710,760)	763 (581,945)	775 (699,850)	391 (-316,1098)
5/23/2020	764	771 (666,876)	784 (697,871)	736 (706,767)	767 (549,985)	781 (694,868)	395 (-315,1104)
5/24/2020	769	776 (652,899)	791 (692,889)	738 (702,773)	770 (515,1025)	787 (688,886)	398 (-313,1110)
5/25/2020	787	780 (637,923)	797 (686,909)	739 (694,784)	773 (480,1066)	793 (681,904)	402 (-314,1118)
5/26/2020	789	784 (622,947)	804 (680,929)	740 (689,792)	776 (444,1108)	799 (674,923)	408 (-311,1126)
5/27/2020	803	789 (606,972)	811 (674,949)	742 (681,802)	779 (407,1151)	805 (667,943)	410 (-313,1133)
5/28/2020	811	793 (589,997)	818 (667,970)	743 (674,812)	782 (370,1193)	811 (659,963)	415 (-313,1142)
5/29/2020	816	797 (571,1023)	825 (659,991)	744 (668,820)	784 (332,1236)	817 (651,983)	417 (-315,1148)
5/30/2020	821	801 (553,1049)	832 (652,1012)	745 (662,828)	787 (294,1279)	823 (642,1004)	421 (-314,1156)
5/31/2020	823	805 (535,1075)	839 (644,1035)	746 (657,835)	789 (256,1322)	829 (633,1025)	423 (-316,1161)
6/1/2020	825	809 (515,1102)	846 (636,1057)	747 (653,841)	791 (217,1365)	835 (623,1047)	425 (-316,1166)
6/2/2020	826	813 (496,1130)	854 (627,1080)	748 (650,846)	793 (179,1408)	841 (613,1069)	428 (-315,1172)

**Table A.182**

Actual and Predicted Cases with 95% Confidence Intervals for Uzbekistan using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	2738	621 (-3528,4770)	2686 (2584,2788)	1977 (486,3468)	3176 (2318,4034)	2686 (2584,2788)	2686 (2686,2686)	2737 (2637,2837)	
5/17/2020	2753	621 (-3543,4785)	2686 (2555,2817)	2000 (516,3484)	3266 (2331,4200)	2686 (2568,2804)	2686 (2686,2686)	2786 (1918,3654)	
5/18/2020	2791	621 (-3572,4815)	2686 (2480,2892)	2023 (532,3514)	3357 (2361,4353)	2686 (2533,2839)	2686 (2686,2686)	2835 (975,4694)	
5/19/2020	2855	621 (-3619,4862)	2686 (2355,3017)	2046 (531,3561)	3450 (2409,4491)	2686 (2474,2898)	2686 (2686,2686)	2883 (-173,5940)	
5/20/2020	2939	621 (-3682,4924)	2686 (2190,3182)	2069 (514,3624)	3544 (2472,4616)	2686 (2394,2978)	2686 (2686,2686)	2932 (-1499,7364)	
5/21/2020	2964	621 (-3731,4973)	2686 (2141,3231)	2092 (510,3674)	3640 (2522,4758)	2686 (2339,3033)	2686 (2686,2686)	2981 (-2983,8945)	
5/22/2020	3028	621 (-3785,5027)	2686 (2016,3356)	2115 (502,3728)	3737 (2577,4898)	2686 (2277,3095)	2686 (2686,2686)	3030 (-4608,10668)	
5/23/2020	3115	621 (-3848,5090)	2686 (1845,3527)	2138 (484,3792)	3836 (2641,5032)	2686 (2201,3171)	2686 (2686,2686)	3079 (-6366,12523)	
5/24/2020	3164	621 (-3908,5151)	2686 (1749,3623)	2161 (470,3852)	3937 (2702,5172)	2686 (2133,3239)	2686 (2686,2686)	3127 (-8246,14501)	
5/25/2020	3189	621 (-3961,5203)	2686 (1700,3672)	2184 (463,3905)	4039 (2754,5323)	2686 (2075,3297)	2686 (2686,2686)	3176 (-10242,16594)	
5/26/2020	3290	621 (-4024,5266)	2686 (1502,3870)	2207 (445,3968)	4142 (2818,5466)	2686 (2003,3369)	2686 (2686,2686)	3225 (-12346,18796)	
5/27/2020	3369	621 (-4090,5332)	2686 (1347,4025)	2230 (424,4035)	4247 (2886,5609)	2686 (1927,3446)	2686 (2686,2686)	3274 (-14555,21103)	
5/28/2020	3444	621 (-4158,5401)	2686 (1200,4172)	2253 (401,4104)	4354 (2955,5753)	2686 (1848,3524)	2686 (2686,2686)	3323 (-16863,23508)	
5/29/2020	3468	621 (-4220,5462)	2686 (1153,4219)	2276 (385,4166)	4462 (3017,5907)	2686 (1781,3591)	2686 (2686,2686)	3371 (-19266,26009)	
5/30/2020	3546	621 (-4284,5527)	2686 (1000,4372)	2299 (367,4231)	4572 (3083,6061)	2686 (1709,3663)	2686 (2686,2686)	3420 (-21761,28602)	
5/31/2020	3623	621 (-4351,5593)	2686 (849,4523)	2322 (345,4298)	4683 (3151,6216)	2686 (1634,3738)	2686 (2686,2686)	3469 (-24345,31283)	
6/1/2020	3702	621 (-4420,5662)	2686 (695,4677)	2345 (322,4368)	4796 (3221,6372)	2686 (1557,3815)	2686 (2686,2686)	3518 (-27015,34050)	
6/2/2020	3760	621 (-4488,5730)	2686 (581,4791)	2368 (299,4436)	4911 (3290,6532)	2686 (1482,3890)	2686 (2686,2686)	3567 (-29767,36900)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	2738	2734 (2639,2829)	2736 (2696,2776)	2462 (1920,3003)	2726 (2647,2806)	2735 (2695,2775)	1396 (-1234,4026)		
5/17/2020	2753	2781 (1997,3565)	2786 (2712,2861)	2458 (1898,3018)	2765 (929,4601)	2783 (2708,2858)	1414 (-1212,4041)		
5/18/2020	2791	2826 (1157,4496)	2837 (2728,2946)	2454 (1858,3050)	2801 (-1149,6751)	2832 (2723,2942)	1437 (-1199,4073)		
5/19/2020	2855	2872 (140,5604)	2889 (2744,3033)	2447 (1795,3100)	2835 (-3594,9265)	2881 (2735,3026)	1462 (-1198,4122)		
5/20/2020	2939	2917 (-1028,6861)	2940 (2758,3123)	2440 (1710,3169)	2868 (-6321,12057)	2929 (2745,3113)	1490 (-1207,4187)		
5/21/2020	2964	2961 (-2326,8248)	2993 (2770,3215)	2431 (1641,3222)	2899 (-9271,15069)	2978 (2753,3202)	1528 (-1189,4245)		
5/22/2020	3028	3005 (-3741,9751)	3045 (2781,3309)	2423 (1564,3281)	2928 (-12400,18256)	3026 (2759,3293)	1552 (-1191,4295)		
5/23/2020	3115	3049 (-5261,11359)	3098 (2790,3407)	2414 (1476,3353)	2956 (-15674,21585)	3075 (2763,3387)	1578 (-1200,4356)		
5/24/2020	3164	3092 (-6878,13062)	3152 (2798,3506)	2406 (1392,3420)	2982 (-19066,25029)	3124 (2765,3482)	1606 (-1204,4416)		
5/25/2020	3189	3135 (-8584,14854)	3206 (2804,3608)	2398 (1319,3478)	3007 (-22553,28566)	3172 (2765,3580)	1637 (-1198,4471)		
5/26/2020	3290	3177 (-10373,16727)	3260 (2808,3712)	2391 (1233,3549)	3030 (-26117,32177)	3221 (2763,3679)	1657 (-1212,4527)		
5/27/2020	3369	3219 (-12240,18678)	3315 (2811,3819)	2385 (1144,3626)	3052 (-29742,35847)	3269 (2759,3780)	1687 (-1220,4594)		
5/28/2020	3444	3261 (-14179,20700)	3370 (2813,3928)	2378 (1053,3704)	3074 (-33415,39562)	3318 (2753,3883)	1720 (-1227,4666)		
5/29/2020	3468	3302 (-16186,22789)	3426 (2814,4039)	2373 (973,3773)	3094 (-37126,43313)	3367 (2745,3988)	1756 (-1221,4734)		
5/30/2020	3546	3343 (-18258,24943)	3482 (2813,4152)	2368 (889,3846)	3113 (-40865,47090)	3415 (2736,4095)	1771 (-1242,4785)		
5/31/2020	3623	3383 (-20391,27156)	3539 (2811,4267)	2363 (804,3922)	3130 (-44622,50883)	3464 (2725,4203)	1799 (-1252,4851)		
6/1/2020	3702	3423 (-22582,29427)	3596 (2808,4384)	2358 (716,4000)	3147 (-48392,54687)	3512 (2712,4313)	1828 (-1263,4920)		
6/2/2020	3760	3462 (-24827,31752)	3654 (2804,4503)	2354 (631,4076)	3164 (-52167,58494)	3561 (2698,4424)	1866 (-1263,4995)		

**Table A.183**

Actual and Predicted Cases with 95% Confidence Intervals for Venezuela using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	504	122 (-626,871)	459 (371,547)	360 (78,642)	483 (443,524)	423 (264,582)	459 (459,459)	469 (449,489)	
5/17/2020	541	122 (-664,908)	459 (298,620)	364 (48,680)	493 (420,565)	423 (225,621)	459 (459,459)	479 (428,529)	
5/18/2020	618	122 (-730,974)	459 (147,771)	368 (-14,751)	503 (359,646)	423 (149,697)	459 (459,459)	489 (397,581)	
5/19/2020	749	122 (-838,1082)	459 (-109,1027)	372 (-124,868)	512 (249,775)	423 (25,821)	459 (459,459)	498 (357,640)	
5/20/2020	824	122 (-934,1179)	459 (-256,1174)	376 (-216,969)	522 (168,876)	423 (-77,923)	459 (459,459)	508 (310,706)	
5/21/2020	882	122 (-1018,1262)	459 (-370,1288)	380 (-293,1054)	532 (104,960)	423 (-163,1009)	459 (459,459)	518 (258,778)	
5/22/2020	944	122 (-1096,1341)	459 (-492,1410)	384 (-364,1133)	542 (46,1037)	423 (-243,1089)	459 (459,459)	528 (200,856)	
5/23/2020	1010	122 (-1173,1417)	459 (-621,1539)	388 (-434,1211)	552 (-10,1114)	423 (-321,1167)	459 (459,459)	537 (137,938)	
5/24/2020	1121	122 (-1263,1507)	459 (-839,1757)	392 (-517,1302)	562 (-81,1205)	423 (-414,1260)	459 (459,459)	547 (69,1025)	
5/25/2020	1177	122 (-1345,1589)	459 (-948,1866)	396 (-593,1386)	572 (-144,1288)	423 (-498,1344)	459 (459,459)	557 (-3,1117)	
5/26/2020	1211	122 (-1418,1662)	459 (-1015,1933)	401 (-657,1458)	582 (-195,1360)	423 (-571,1417)	459 (459,459)	567 (-80,1213)	
5/27/2020	1245	122 (-1483,1728)	459 (-1082,2000)	405 (-714,1524)	592 (-239,1423)	423 (-636,1482)	459 (459,459)	577 (-160,1313)	
5/28/2020	1325	122 (-1553,1797)	459 (-1238,2156)	409 (-776,1593)	603 (-287,1492)	423 (-707,1553)	459 (459,459)	586 (-244,1417)	
5/29/2020	1370	122 (-1620,1864)	459 (-1327,2245)	413 (-834,1660)	613 (-332,1558)	423 (-773,1619)	459 (459,459)	596 (-332,1524)	
5/30/2020	1459	122 (-1691,1936)	459 (-1501,2419)	417 (-899,1732)	623 (-383,1629)	423 (-846,1692)	459 (459,459)	606 (-423,1635)	
5/31/2020	1510	122 (-1761,2005)	459 (-1601,2519)	421 (-960,1801)	634 (-431,1698)	423 (-916,1762)	459 (459,459)	616 (-518,1749)	
6/1/2020	1662	122 (-1846,2090)	459 (-1899,2817)	425 (-1038,1888)	644 (-496,1785)	423 (-1004,1850)	459 (459,459)	625 (-616,1867)	
6/2/2020	1819	122 (-1945,2189)	459 (-2207,3125)	429 (-1131,1989)	655 (-577,1887)	423 (-1106,1952)	459 (459,459)	635 (-718,1988)	
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
3199	504	469 (450,487)	471 (459,483)	438 (308,568)	472 (446,498)	470 (459,482)	242 (-273,756)		
5/17/2020	541	478 (431,525)	484 (468,500)	441 (276,607)	484 (356,612)	483 (467,499)	256 (-281,793)		
5/18/2020	618	487 (402,573)	497 (475,519)	445 (207,683)	494 (239,749)	496 (474,518)	263 (-331,858)		
5/19/2020	749	497 (365,628)	510 (480,540)	449 (89,808)	505 (98,912)	509 (479,538)	283 (-405,971)		
5/20/2020	824	506 (323,688)	523 (485,561)	452 (-6,910)	515 (-62,1092)	521 (483,560)	306 (-459,1071)		
5/21/2020	882	515 (276,754)	537 (489,584)	455 (-85,995)	526 (-245,1297)	534 (487,582)	319 (-512,1150)		
5/22/2020	944	524 (224,824)	550 (493,608)	458 (-159,1074)	534 (-432,1499)	547 (489,605)	322 (-575,1219)		
5/23/2020	1010	533 (167,898)	564 (496,632)	461 (-230,1151)	546 (-642,1733)	560 (491,628)	316 (-651,1283)		
5/24/2020	1121	542 (107,976)	578 (498,658)	464 (-317,1244)	554 (-862,1971)	572 (492,653)	321 (-730,1372)		
5/25/2020	1177	550 (43,1058)	592 (500,684)	466 (-395,1328)	562 (-1086,2210)	585 (493,678)	337 (-787,1462)		
5/26/2020	1211	559 (-24,1143)	606 (501,710)	469 (-462,1400)	570 (-1315,2454)	598 (493,703)	343 (-845,1532)		
5/27/2020	1245	568 (-95,1231)	620 (502,738)	472 (-521,1465)	577 (-1548,2702)	611 (492,729)	345 (-902,1592)		
5/28/2020	1325	576 (-169,1322)	634 (503,766)	475 (-585,1535)	586 (-1790,2961)	623 (491,756)	338 (-974,1651)		
5/29/2020	1370	585 (-245,1415)	649 (503,794)	477 (-646,1601)	591 (-2031,3212)	636 (489,783)	350 (-1024,1723)		
5/30/2020	1459	593 (-325,1512)	663 (502,824)	480 (-713,1673)	600 (-2281,3482)	649 (487,811)	359 (-1080,1797)		
5/31/2020	1510	602 (-406,1610)	678 (502,853)	483 (-777,1743)	607 (-2538,3752)	662 (485,839)	375 (-1124,1875)		
6/1/2020	1662	610 (-491,1711)	692 (501,884)	485 (-859,1830)	613 (-2794,4019)	674 (482,867)	378 (-1200,1956)		
6/2/2020	1819	618 (-577,1814)	707 (500,915)	488 (-956,1932)	618 (-3050,4287)	687 (478,896)	404 (-1263,2071)		

**Table A.184**

Actual and Predicted Cases with 95% Confidence Intervals for Vietnam using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	318	130 (-238,498)	314 (306,322)	329 (308,350)	274 (187,360)	270 (176,364)	314 (314,314)	319 (310,327)
5/17/2020	320	130 (-240,500)	314 (302,326)	332 (310,355)	270 (178,362)	270 (174,366)	314 (314,314)	323 (307,340)
5/18/2020	324	130 (-243,504)	314 (294,334)	336 (313,358)	266 (167,366)	270 (171,369)	314 (314,314)	328 (302,355)
5/19/2020	324	130 (-245,505)	314 (294,334)	339 (315,363)	262 (157,368)	270 (169,371)	314 (314,314)	333 (294,372)
5/20/2020	324	130 (-246,506)	314 (294,334)	342 (315,369)	257 (147,368)	270 (168,372)	314 (314,314)	338 (286,390)
5/21/2020	324	130 (-246,507)	314 (294,334)	346 (315,376)	253 (136,369)	270 (167,373)	314 (314,314)	343 (276,410)
5/22/2020	324	130 (-247,507)	314 (294,334)	349 (315,383)	247 (125,369)	270 (167,373)	314 (314,314)	348 (265,431)
5/23/2020	325	130 (-247,508)	314 (292,336)	352 (316,389)	242 (114,369)	270 (166,374)	314 (314,314)	353 (253,453)
5/24/2020	325	130 (-248,508)	314 (292,336)	356 (316,396)	235 (102,369)	270 (166,374)	314 (314,314)	358 (240,476)
5/25/2020	326	130 (-248,509)	314 (290,338)	359 (316,402)	229 (89,370)	270 (165,375)	314 (314,314)	363 (225,500)
5/26/2020	327	130 (-249,510)	314 (289,339)	362 (316,409)	222 (75,370)	270 (165,375)	314 (314,314)	368 (210,525)
5/27/2020	327	130 (-250,510)	314 (289,339)	366 (317,415)	215 (60,370)	270 (164,376)	314 (314,314)	373 (194,551)
5/28/2020	327	130 (-250,511)	314 (289,339)	369 (317,422)	208 (45,370)	270 (164,376)	314 (314,314)	377 (177,578)
5/29/2020	328	130 (-251,511)	314 (287,341)	373 (317,428)	200 (29,370)	288 (183,393)	314 (314,314)	382 (160,605)
5/30/2020	328	130 (-251,512)	314 (287,341)	376 (317,435)	191 (13,370)	288 (185,391)	314 (314,314)	387 (141,633)
5/31/2020	328	130 (-251,512)	314 (287,341)	379 (317,442)	182 (-5,369)	288 (186,390)	314 (314,314)	392 (122,663)
6/1/2020	328	130 (-252,512)	314 (287,341)	383 (317,449)	173 (-23,369)	288 (187,389)	314 (314,314)	397 (102,692)
6/2/2020	328	130 (-252,513)	314 (287,341)	386 (317,456)	164 (-41,368)	288 (189,387)	314 (314,314)	402 (81,723)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)				
		DT	ARIMA	LSTM	HWA	SSM
5/16/2020	318	318 (310,327)	321 (314,329)	289 (231,346)	320 (308,332)	321 (313,328)
5/17/2020	320	323 (308,338)	328 (317,339)	288 (228,348)	327 (291,363)	328 (316,339)
5/18/2020	324	327 (303,351)	335 (320,350)	287 (223,352)	333 (268,397)	334 (319,350)
5/19/2020	324	332 (297,366)	342 (322,362)	287 (220,353)	338 (241,434)	341 (321,361)
5/20/2020	324	336 (290,382)	349 (324,374)	286 (218,354)	342 (211,474)	348 (323,373)
5/21/2020	324	340 (282,398)	356 (326,386)	286 (216,355)	351 (174,527)	355 (324,385)
5/22/2020	324	344 (273,416)	364 (328,399)	285 (215,355)	355 (134,576)	361 (325,397)
5/23/2020	325	348 (263,434)	371 (329,412)	284 (213,356)	360 (93,627)	368 (326,410)
5/24/2020	325	352 (252,452)	378 (330,426)	284 (211,357)	366 (49,683)	375 (327,422)
5/25/2020	326	356 (241,472)	385 (331,439)	283 (210,357)	371 (2,739)	381 (327,436)
5/26/2020	327	360 (229,491)	393 (332,454)	283 (208,358)	375 (-45,795)	388 (327,449)
5/27/2020	327	364 (217,511)	400 (333,468)	283 (206,359)	379 (-94,852)	395 (327,463)
5/28/2020	327	368 (204,532)	408 (333,483)	282 (205,359)	386 (-145,917)	401 (326,477)
5/29/2020	328	371 (190,552)	416 (333,498)	282 (204,360)	390 (-199,979)	408 (326,491)
5/30/2020	328	375 (176,574)	423 (334,513)	281 (202,361)	394 (-253,1041)	415 (325,505)
5/31/2020	328	378 (162,595)	431 (333,528)	281 (201,361)	399 (-309,1107)	422 (324,520)
6/1/2020	328	382 (147,617)	439 (333,544)	281 (200,362)	403 (-366,1172)	428 (322,534)
6/2/2020	328	385 (131,639)	446 (333,560)	281 (199,362)	406 (-424,1237)	435 (321,549)

**Table A.185**

Actual and Predicted Cases with 95% Confidence Intervals for West Bank and Gaza using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	376	135 (-338,608)	375 (373,377)	383 (370,395)	409 (344,475)	375 (373,377)	375 (375,375)	376 (374,377)
5/17/2020	381	135 (-343,613)	375 (363,387)	387 (375,399)	411 (349,474)	375 (367,383)	375 (375,375)	376 (374,378)
5/18/2020	388	135 (-349,619)	375 (350,400)	391 (381,401)	413 (355,471)	375 (359,391)	375 (375,375)	377 (374,379)
5/19/2020	391	135 (-354,623)	375 (344,406)	395 (385,405)	414 (359,470)	375 (354,396)	375 (375,375)	377 (375,380)
5/20/2020	398	135 (-360,629)	375 (330,420)	399 (390,408)	416 (364,467)	375 (347,403)	375 (375,375)	378 (375,382)
5/21/2020	423	135 (-372,641)	375 (281,469)	404 (386,421)	416 (369,464)	375 (329,421)	375 (375,375)	379 (375,383)
5/22/2020	423	135 (-381,650)	375 (281,469)	408 (388,428)	417 (373,462)	375 (320,430)	375 (375,375)	379 (375,384)
5/23/2020	423	135 (-387,657)	375 (281,469)	412 (392,432)	418 (376,459)	375 (313,437)	375 (375,375)	380 (375,385)
5/24/2020	423	135 (-392,662)	375 (281,469)	416 (397,436)	418 (378,457)	375 (309,441)	375 (375,375)	380 (375,386)
5/25/2020	423	135 (-396,666)	375 (281,469)	420 (402,439)	418 (380,455)	375 (306,444)	375 (375,375)	381 (375,387)
5/26/2020	429	135 (-400,670)	375 (269,481)	425 (407,442)	417 (381,454)	375 (302,448)	375 (375,375)	381 (375,388)
5/27/2020	434	135 (-405,674)	375 (259,491)	429 (411,446)	417 (381,453)	375 (297,453)	375 (375,375)	382 (375,389)
5/28/2020	446	135 (-411,680)	375 (236,514)	433 (415,451)	416 (378,454)	375 (291,459)	375 (375,375)	383 (375,390)
5/29/2020	446	135 (-416,685)	375 (236,514)	437 (419,455)	415 (374,455)	375 (286,464)	375 (375,375)	383 (375,391)
5/30/2020	447	135 (-420,689)	375 (234,516)	441 (424,459)	413 (371,456)	375 (281,469)	375 (375,375)	384 (375,393)
5/31/2020	448	135 (-424,693)	375 (232,518)	446 (428,463)	412 (367,457)	375 (278,472)	375 (375,375)	384 (375,394)
6/1/2020	449	135 (-427,697)	375 (230,520)	450 (433,466)	410 (362,457)	375 (274,476)	375 (375,375)	385 (375,395)
6/2/2020	451	135 (-431,700)	375 (226,524)	454 (438,470)	407 (357,458)	375 (271,479)	375 (375,375)	385 (375,396)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	376	375 (375,376)	375 (366,384)	375 (374,377)	375 (375,375)	375 (366,384)	188 (-182,557)	
5/17/2020	381	376 (375,377)	375 (359,392)	376 (368,383)	375 (375,375)	375 (358,392)	188 (-186,562)	
5/18/2020	388	376 (375,378)	376 (351,400)	376 (361,391)	375 (375,375)	376 (351,400)	189 (-191,568)	
5/19/2020	391	376 (375,378)	376 (343,408)	376 (357,396)	375 (375,375)	376 (343,408)	190 (-193,573)	
5/20/2020	398	377 (375,379)	376 (335,417)	376 (351,402)	375 (375,375)	376 (335,417)	191 (-197,578)	
5/21/2020	423	377 (375,379)	376 (326,426)	377 (333,420)	375 (375,375)	376 (326,426)	191 (-209,591)	
5/22/2020	423	377 (375,380)	376 (317,436)	377 (324,430)	375 (375,375)	376 (317,435)	194 (-213,601)	
5/23/2020	423	377 (375,380)	377 (308,445)	377 (318,436)	375 (375,375)	377 (308,445)	194 (-219,606)	
5/24/2020	423	378 (375,381)	377 (298,456)	377 (314,440)	375 (375,375)	377 (298,456)	193 (-224,610)	
5/25/2020	423	378 (375,381)	377 (288,467)	377 (311,444)	375 (375,375)	377 (287,467)	189 (-233,610)	
5/26/2020	429	378 (375,381)	377 (277,478)	377 (307,448)	375 (375,375)	377 (277,478)	189 (-238,615)	
5/27/2020	434	378 (375,382)	378 (266,489)	377 (303,452)	375 (375,375)	377 (265,489)	190 (-241,621)	
5/28/2020	446	379 (375,382)	378 (254,501)	377 (297,458)	375 (375,375)	378 (254,501)	191 (-246,627)	
5/29/2020	446	379 (375,383)	378 (242,514)	377 (292,463)	375 (375,375)	378 (242,514)	193 (-248,634)	
5/30/2020	447	379 (375,383)	378 (230,527)	378 (288,468)	375 (375,375)	378 (230,526)	192 (-253,637)	
5/31/2020	448	379 (375,383)	378 (217,540)	378 (284,471)	375 (375,375)	378 (217,539)	191 (-258,641)	
6/1/2020	449	379 (375,384)	379 (204,553)	378 (281,475)	375 (375,375)	378 (204,553)	190 (-263,643)	
6/2/2020	451	380 (375,384)	379 (191,567)	378 (278,478)	375 (375,375)	379 (191,567)	190 (-266,646)	

**Table A.186**

Actual and Predicted Cases with 95% Confidence Intervals for Western Sahara using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		SA	SMA	LT	QT	ST	SES	HLT	
5/16/2020	6	2 (-6,10)	6 (6,6)	6 (6,6)	7 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/17/2020	6	2 (-6,10)	6 (6,6)	6 (6,7)	7 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/18/2020	6	2 (-6,10)	6 (6,6)	6 (6,7)	7 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/19/2020	6	2 (-6,10)	6 (6,6)	6 (6,7)	7 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/20/2020	6	2 (-6,10)	6 (6,6)	6 (6,7)	7 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/21/2020	6	2 (-6,10)	6 (6,6)	6 (6,7)	8 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/22/2020	6	2 (-6,10)	6 (6,6)	7 (6,7)	8 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/23/2020	6	2 (-6,10)	6 (6,6)	7 (6,7)	8 (5,10)	6 (6,6)	6 (6,6)	6 (6,6)	6 (6,6)
5/24/2020	9	2 (-7,11)	6 (0,12)	7 (5,8)	8 (5,10)	6 (4,8)	6 (6,6)	6 (6,6)	6 (6,6)
5/25/2020	9	2 (-7,11)	6 (0,12)	7 (5,9)	8 (5,10)	6 (3,9)	6 (6,6)	6 (6,6)	6 (6,6)
5/26/2020	9	2 (-8,12)	6 (0,12)	7 (4,9)	8 (5,10)	6 (3,9)	6 (6,6)	6 (6,6)	6 (6,6)
5/27/2020	9	2 (-8,12)	6 (0,12)	7 (4,9)	8 (5,10)	6 (3,9)	6 (6,6)	6 (6,6)	6 (6,6)
5/28/2020	9	2 (-8,12)	6 (0,12)	7 (4,10)	8 (5,10)	6 (2,10)	6 (6,6)	6 (6,6)	6 (6,6)
5/29/2020	9	2 (-9,13)	6 (0,12)	7 (4,10)	8 (5,10)	6 (2,10)	6 (6,6)	6 (6,6)	6 (6,6)
5/30/2020	9	2 (-9,13)	6 (0,12)	7 (4,10)	8 (5,10)	6 (2,10)	6 (6,6)	6 (6,6)	6 (6,6)
5/31/2020	9	2 (-9,13)	6 (0,12)	7 (4,10)	8 (5,10)	6 (2,10)	6 (6,6)	6 (6,6)	6 (6,6)
6/1/2020	9	2 (-9,13)	6 (0,12)	7 (4,10)	8 (5,10)	6 (2,10)	6 (6,6)	6 (6,6)	6 (6,6)
6/2/2020	9	2 (-9,13)	6 (0,12)	7 (4,10)	8 (5,10)	6 (2,10)	6 (6,6)	6 (6,6)	6 (6,6)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)							
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima		
5/16/2020	6	6 (6,6)	6 (5,7)	6 (6,6)	6 (6,6)	6 (5,7)	3 (-3,9)		
5/17/2020	6	6 (6,6)	6 (5,7)	6 (6,6)	6 (6,6)	6 (5,7)	3 (-3,9)		
5/18/2020	6	6 (6,6)	6 (4,7)	6 (6,6)	6 (6,6)	6 (4,7)	3 (-3,9)		
5/19/2020	6	6 (6,6)	6 (4,7)	6 (6,6)	6 (6,6)	6 (4,7)	3 (-3,9)		
5/20/2020	6	6 (6,6)	6 (4,8)	6 (6,6)	6 (6,6)	6 (4,8)	3 (-3,9)		
5/21/2020	6	6 (6,6)	6 (4,8)	6 (6,6)	6 (6,6)	6 (4,8)	3 (-3,9)		
5/22/2020	6	6 (6,6)	6 (4,8)	6 (6,6)	6 (6,6)	6 (4,8)	3 (-3,9)		
5/23/2020	6	6 (6,6)	6 (3,8)	6 (6,6)	6 (6,6)	6 (3,8)	3 (-3,9)		
5/24/2020	9	6 (6,6)	6 (3,8)	6 (4,8)	6 (6,6)	6 (3,8)	3 (-4,10)		
5/25/2020	9	6 (6,6)	6 (3,8)	6 (4,9)	6 (6,6)	6 (3,8)	3 (-4,11)		
5/26/2020	9	6 (6,6)	6 (3,8)	6 (3,9)	6 (6,6)	6 (3,8)	3 (-4,11)		
5/27/2020	9	6 (6,6)	6 (3,8)	6 (3,9)	6 (6,6)	6 (3,8)	3 (-5,12)		
5/28/2020	9	6 (6,6)	6 (3,8)	6 (3,10)	6 (6,6)	6 (3,8)	3 (-6,11)		
5/29/2020	9	6 (6,6)	6 (3,8)	6 (2,10)	6 (6,6)	6 (3,8)	3 (-6,12)		
5/30/2020	9	6 (6,6)	6 (3,8)	6 (2,10)	6 (6,6)	6 (2,9)	3 (-6,12)		
5/31/2020	9	6 (6,6)	5 (2,9)	6 (2,10)	6 (6,6)	5 (2,9)	3 (-7,12)		
6/1/2020	9	6 (6,6)	5 (2,9)	6 (2,10)	6 (6,6)	5 (2,9)	3 (-7,12)		
6/2/2020	9	6 (6,6)	5 (2,9)	6 (2,10)	6 (6,6)	5 (2,9)	3 (-7,12)		

**Table A.187**

Actual and Predicted Cases with 95% Confidence Intervals for Yemen using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	122	6 (-223,234)	106 (75,137)	21 (-176,219)	69 (-35,173)	34 (-138,206)	106 (106,106)	113 (99,127)
5/17/2020	128	6 (-229,240)	106 (63,149)	21 (-182,225)	73 (-33,179)	34 (-144,212)	106 (106,106)	123 (87,159)
5/18/2020	130	6 (-232,243)	106 (59,153)	22 (-185,228)	77 (-28,182)	34 (-148,216)	106 (106,106)	133 (68,198)
5/19/2020	167	6 (-254,265)	106 (-42,226)	22 (-206,250)	81 (-43,205)	34 (-170,238)	106 (106,106)	143 (42,244)
5/20/2020	184	6 (-274,285)	106 (-47,259)	22 (-226,271)	85 (-56,226)	34 (-191,259)	106 (106,106)	153 (12,294)
5/21/2020	197	6 (-292,303)	106 (-72,284)	23 (-244,289)	90 (-65,244)	34 (-209,277)	106 (106,106)	163 (-23,349)
5/22/2020	209	6 (-309,320)	106 (-96,308)	23 (-260,305)	94 (-73,261)	34 (-226,294)	106 (106,106)	173 (-61,407)
5/23/2020	212	6 (-321,332)	106 (-102,314)	23 (-272,318)	99 (-76,273)	34 (-239,307)	106 (106,106)	183 (-103,469)
5/24/2020	222	6 (-333,345)	106 (-121,333)	23 (-284,330)	103 (-78,285)	34 (-251,319)	106 (106,106)	193 (-148,534)
5/25/2020	233	6 (-346,357)	106 (-143,355)	24 (-295,342)	108 (-81,297)	34 (-263,331)	106 (106,106)	203 (-197,603)
5/26/2020	249	6 (-359,370)	106 (-174,386)	24 (-308,356)	113 (-84,311)	34 (-276,344)	106 (106,106)	213 (-248,675)
5/27/2020	256	6 (-371,382)	106 (-188,400)	24 (-320,368)	119 (-86,323)	34 (-289,357)	106 (106,106)	223 (-303,749)
5/28/2020	278	6 (-385,397)	106 (-231,443)	24 (-334,382)	124 (-90,337)	34 (-303,371)	106 (106,106)	233 (-360,826)
5/29/2020	283	6 (-398,409)	106 (-241,453)	25 (-346,395)	129 (-92,350)	34 (-316,384)	106 (106,106)	243 (-420,906)
5/30/2020	310	6 (-414,425)	106 (-294,506)	25 (-361,411)	135 (-96,366)	34 (-332,400)	106 (106,106)	253 (-482,988)
5/31/2020	323	6 (-429,440)	106 (-319,531)	25 (-376,426)	141 (-100,381)	34 (-348,416)	106 (106,106)	263 (-547,1073)
6/1/2020	354	6 (-448,459)	106 (-380,592)	25 (-394,445)	146 (-107,400)	34 (-366,434)	106 (106,106)	273 (-614,1160)
6/2/2020	399	6 (-471,482)	106 (-468,680)	26 (-417,468)	153 (-119,424)	34 (-390,458)	106 (106,106)	283 (-683,1250)

## Predicted Cases (95% Confidence Interval)

Date	Actual Cases	DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima
5/16/2020	122	113 (99,127)	110 (107,114)	100 (56,143)	115 (98,131)	117 (113,122)	63 (-54,179)
5/17/2020	128	123 (87,159)	125 (121,129)	115 (80,151)	129 (37,221)	131 (124,137)	72 (-41,185)
5/18/2020	130	133 (68,198)	140 (135,145)	133 (104,163)	143 (-52,338)	144 (135,153)	78 (-32,187)
5/19/2020	167	143 (42,244)	155 (148,162)	155 (127,183)	158 (-162,477)	158 (146,170)	82 (-45,208)
5/20/2020	184	153 (12,294)	170 (161,178)	181 (156,206)	172 (-290,634)	171 (156,186)	93 (-45,231)
5/21/2020	197	163 (-23,349)	185 (174,196)	215 (188,242)	186 (-434,807)	184 (166,203)	103 (-45,250)
5/22/2020	209	173 (-61,407)	199 (186,213)	258 (214,303)	201 (-594,995)	198 (176,220)	112 (-42,266)
5/23/2020	212	183 (-103,469)	214 (197,231)	318 (234,403)	215 (-766,1196)	211 (185,237)	114 (-45,274)
5/24/2020	222	193 (-148,534)	229 (209,249)	405 (261,548)	229 (-952,1411)	224 (194,254)	119 (-45,284)
5/25/2020	233	203 (-197,603)	243 (220,267)	537 (305,770)	244 (-1150,1637)	237 (203,271)	126 (-44,295)
5/26/2020	249	213 (-248,675)	258 (231,285)	759 (385,1133)	258 (-1358,1874)	250 (212,288)	133 (-43,309)
5/27/2020	256	223 (-303,749)	272 (242,303)	1169 (540,1797)	272 (-1578,2122)	263 (221,306)	143 (-37,323)
5/28/2020	278	233 (-360,826)	287 (252,322)	2017 (895,3139)	287 (-1808,2381)	276 (229,323)	149 (-37,336)
5/29/2020	283	243 (-420,906)	301 (263,340)	3903 (1720,6086)	301 (-2047,2649)	289 (237,341)	158 (-33,350)
5/30/2020	310	253 (-482,988)	316 (273,359)	8063 (3609,12518)	315 (-2296,2927)	302 (245,359)	164 (-35,363)
5/31/2020	323	263 (-547,1073)	330 (283,378)	16985 (7751,26219)	330 (-2554,3214)	315 (253,376)	174 (-31,380)
6/1/2020	354	273 (-614,1160)	345 (293,397)	35701 (16659,54742)	344 (-2821,3509)	328 (261,394)	180 (-36,396)
6/2/2020	399	283 (-683,1250)	359 (302,415)	74744 (35730,113758)	358 (-3097,3814)	340 (268,412)	192 (-39,423)

**Table A.188**

Actual and Predicted Cases with 95% Confidence Intervals for Zambia using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	679	52 (-1176,1281)	654 (605,703)	178 (-804,1160)	437 (-38,912)	654 (605,703)	654 (654,654)	723 (587,860)
5/17/2020	753	52 (-1250,1355)	654 (460,848)	180 (-875,1235)	458 (-72,987)	654 (512,796)	654 (654,654)	786 (-690,2262)
5/18/2020	761	52 (-1280,1384)	654 (444,864)	182 (-900,1264)	479 (-58,1016)	654 (487,821)	654 (654,654)	848 (-2344,4041)
5/19/2020	772	52 (-1300,1404)	654 (423,885)	184 (-916,1284)	501 (-35,1037)	654 (469,839)	654 (654,654)	911 (-4358,6180)
5/20/2020	832	52 (-1337,1441)	654 (305,1003)	186 (-949,1321)	524 (-26,1074)	654 (426,882)	654 (654,654)	973 (-6682,8628)
5/21/2020	866	52 (-1373,1478)	654 (238,1070)	188 (-981,1358)	547 (-16,1110)	654 (386,922)	654 (654,654)	1036 (-9279,11351)
5/22/2020	920	52 (-1416,1520)	654 (133,1175)	191 (-1019,1401)	571 (-11,1153)	654 (337,971)	654 (654,654)	1098 (-12126,14322)
5/23/2020	920	52 (-1447,1551)	654 (133,1175)	193 (-1046,1432)	596 (7,1185)	654 (305,1003)	654 (654,654)	1161 (-15201,17523)
5/24/2020	920	52 (-1470,1575)	654 (133,1175)	195 (-1066,1455)	621 (32,1210)	654 (282,1026)	654 (654,654)	1223 (-18491,20937)
5/25/2020	920	52 (-1489,1594)	654 (133,1175)	197 (-1080,1474)	647 (63,1230)	654 (264,1044)	654 (654,654)	1286 (-21981,24553)
5/26/2020	920	52 (-1504,1609)	654 (133,1175)	199 (-1091,1489)	674 (98,1249)	654 (250,1058)	654 (654,654)	1348 (-25662,28358)
5/27/2020	1057	52 (-1543,1647)	654 (-136,1444)	201 (-1125,1528)	701 (115,1287)	654 (205,1103)	654 (654,654)	1411 (-29524,32345)
5/28/2020	1057	52 (-1574,1679)	654 (-136,1444)	203 (-1153,1560)	729 (138,1320)	654 (171,1137)	654 (654,654)	1473 (-33559,36505)
5/29/2020	1057	52 (-1601,1706)	654 (-136,1444)	205 (-1176,1587)	758 (167,1348)	654 (143,1165)	654 (654,654)	1535 (-37760,40831)
5/30/2020	1057	52 (-1624,1729)	654 (-136,1444)	208 (-1194,1609)	787 (200,1374)	654 (119,1189)	654 (654,654)	1598 (-42121,45317)
5/31/2020	1057	52 (-1644,1749)	654 (-136,1444)	210 (-1210,1629)	817 (237,1397)	654 (100,1208)	654 (654,654)	1660 (-46636,49957)
6/1/2020	1089	52 (-1665,1770)	654 (-199,1507)	212 (-1227,1651)	848 (274,1422)	654 (78,1230)	654 (654,654)	1723 (-51301,54746)
6/2/2020	1089	52 (-1684,1789)	654 (-199,1507)	214 (-1241,1669)	879 (313,1446)	654 (59,1249)	654 (654,654)	1785 (-56110,59680)

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Surte-Arima	
5/16/2020	679	723 (587,860)	822 (789,854)	704 (655,752)	772 (540,1004)	821 (788,853)	453 (10,896)	
5/17/2020	753	786 (-690,2262)	943 (905,981)	843 (714,973)	867 (-6600,8334)	941 (902,979)	517 (64,970)	
5/18/2020	761	848 (-2344,4041)	1066 (1012,1120)	1011 (709,1313)	961 (-15609,17531)	1061 (1006,1115)	550 (110,990)	
5/19/2020	772	911 (-4358,6180)	1190 (1112,1267)	1220 (709,1730)	1055 (-26585,28695)	1181 (1102,1260)	613 (202,1025)	
5/20/2020	832	973 (-6682,8628)	1314 (1207,1421)	1491 (754,2227)	1150 (-39238,41538)	1301 (1191,1410)	673 (280,1067)	
5/21/2020	866	1036 (-9279,11351)	1440 (1299,1581)	1860 (819,2902)	1244 (-53380,55868)	1421 (1276,1565)	734 (359,1108)	
5/22/2020	920	1098 (-12126,14322)	1567 (1388,1746)	2395 (938,3852)	1338 (-68867,71544)	1541 (1358,1724)	801 (444,1159)	
5/23/2020	920	1161 (-15201,17523)	1695 (1474,1915)	3224 (1125,5324)	1433 (-85595,88460)	1661 (1435,1886)	873 (537,1209)	
5/24/2020	920	1223 (-18491,20937)	1823 (1559,2088)	4637 (1504,7770)	1527 (-103477,106530)	1781 (1510,2051)	927 (610,1244)	
5/25/2020	920	1286 (-21981,24553)	1953 (1642,2265)	7344 (2375,12313)	1621 (-122443,125685)	1901 (1582,2219)	986 (682,1290)	
5/26/2020	920	1348 (-25662,28358)	2084 (1724,2445)	13255 (4561,21949)	1715 (-142436,145867)	2021 (1652,2390)	1042 (744,1341)	
5/27/2020	1057	1411 (-29524,32345)	2217 (1804,2629)	27438 (10347,44528)	1810 (-163405,167025)	2141 (1718,2563)	1108 (821,1395)	
5/28/2020	1057	1473 (-33559,36505)	2350 (1883,2816)	61462 (24749,98175)	1904 (-185308,189116)	2261 (1783,2738)	1199 (913,1486)	
5/29/2020	1057	1535 (-37760,40831)	2484 (1961,3007)	138647 (58359,218936)	1998 (-208105,212101)	2381 (1845,2916)	1266 (969,1563)	
5/30/2020	1057	1598 (-42121,45317)	2619 (2037,3201)	310044 (135494,484594)	2093 (-231762,235947)	2501 (1905,3096)	1334 (1015,1653)	
5/31/2020	1057	1660 (-46636,49957)	2755 (2113,3398)	689730 (312323,1067137)	2187 (-256250,260624)	2621 (1963,3278)	1378 (1031,1725)	
6/1/2020	1089	1723 (-51301,54746)	2893 (2188,3598)	1528509 (715328,2341690)	2281 (-281541,286103)	2741 (2019,3462)	1446 (1069,1823)	
6/2/2020	1089	1785 (-56110,59680)	3031 (2261,3801)	3382898 (1632082,5133714)	2375 (-307611,312362)	2861 (2073,3648)	1521 (1104,1938)	

**Table A.189**

Actual and Predicted Cases with 95% Confidence Intervals for Zimbabwe using the Time Series Models.

Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		SA	SMA	LT	QT	ST	SES	HLT
5/16/2020	42	11 (-51,72)	42 (42,42)	32 (13,51)	46 (38,53)	36 (24,48)	42 (42,42)	42 (42,42)
5/17/2020	44	11 (-53,74)	42 (38,46)	33 (12,53)	47 (40,53)	36 (22,50)	42 (42,42)	43 (43,44)
5/18/2020	46	11 (-55,76)	42 (34,50)	33 (10,55)	48 (42,53)	36 (20,52)	42 (42,42)	44 (44,45)
5/19/2020	46	11 (-56,77)	42 (34,50)	33 (10,56)	49 (43,54)	36 (19,53)	42 (42,42)	45 (45,46)
5/20/2020	48	11 (-58,79)	42 (30,54)	34 (10,58)	50 (45,55)	36 (18,54)	42 (42,42)	46 (46,47)
5/21/2020	51	11 (-60,81)	42 (24,60)	34 (8,60)	51 (46,55)	36 (15,57)	42 (42,42)	47 (47,48)
5/22/2020	51	11 (-61,82)	42 (24,60)	34 (8,61)	52 (47,56)	36 (14,58)	42 (42,42)	49 (48,50)
5/23/2020	56	11 (-63,84)	42 (15,69)	35 (6,64)	53 (48,58)	36 (11,61)	42 (42,42)	50 (48,51)
5/24/2020	56	11 (-65,86)	42 (15,69)	35 (5,66)	54 (49,59)	36 (9,63)	42 (42,42)	51 (49,52)
5/25/2020	56	11 (-67,88)	42 (15,69)	36 (4,67)	55 (51,59)	36 (8,64)	42 (42,42)	52 (50,53)
5/26/2020	56	11 (-68,89)	42 (15,69)	36 (3,68)	56 (52,60)	36 (6,66)	42 (42,42)	53 (51,54)
5/27/2020	132	11 (-91,112)	42 (-134,218)	36 (-26,99)	57 (15,100)	36 (-25,97)	42 (42,42)	54 (52,56)
5/28/2020	149	11 (-113,134)	42 (-168,252)	37 (-49,122)	58 (-6,122)	36 (-49,121)	42 (42,42)	55 (53,57)
5/29/2020	149	11 (-129,150)	42 (-168,252)	37 (-64,138)	59 (-18,137)	36 (-65,137)	42 (42,42)	56 (54,58)
5/30/2020	174	11 (-147,168)	42 (-217,301)	37 (-82,157)	60 (-34,155)	36 (-84,156)	42 (42,42)	57 (55,59)
5/31/2020	178	11 (-163,184)	42 (-225,309)	38 (-97,173)	62 (-46,169)	36 (-99,171)	42 (42,42)	58 (56,61)
6/1/2020	203	11 (-181,202)	42 (-274,358)	38 (-114,191)	63 (-61,187)	36 (-118,190)	42 (42,42)	59 (57,62)
6/2/2020	206	11 (-197,218)	42 (-279,363)	39 (-129,206)	64 (-74,201)	36 (-133,205)	42 (42,42)	60 (57,63)
Date	Actual Cases	Predicted Cases (95% Confidence Interval)						
		DT	ARIMA	LSTM	HWA	SSM	Sutte-Arima	
5/16/2020	42	42 (42,42)	43 (40,45)	39 (34,45)	42 (42,42)	42 (40,45)	22 (-16,61)	
5/17/2020	44	43 (43,43)	43 (39,46)	40 (32,47)	42 (42,42)	42 (39,46)	22 (-18,63)	
5/18/2020	46	44 (44,44)	44 (40,48)	40 (31,49)	43 (43,43)	43 (39,47)	23 (-19,65)	
5/19/2020	46	45 (45,45)	45 (41,49)	40 (31,50)	44 (43,44)	44 (39,49)	23 (-19,66)	
5/20/2020	48	45 (45,45)	46 (41,51)	41 (30,51)	44 (44,45)	45 (39,50)	24 (-20,67)	
5/21/2020	51	46 (46,46)	47 (42,52)	41 (28,54)	45 (45,45)	45 (39,51)	24 (-21,69)	
5/22/2020	51	47 (47,47)	48 (42,53)	41 (27,55)	46 (46,46)	46 (39,53)	25 (-21,71)	
5/23/2020	56	47 (47,47)	49 (43,55)	41 (25,58)	47 (46,47)	47 (39,54)	25 (-23,73)	
5/24/2020	56	48 (48,48)	50 (43,56)	42 (23,60)	47 (47,47)	47 (39,55)	26 (-23,76)	
5/25/2020	56	48 (48,49)	51 (44,57)	42 (22,61)	48 (47,48)	48 (40,57)	26 (-24,77)	
5/26/2020	56	49 (49,49)	52 (45,58)	42 (22,62)	48 (48,49)	49 (40,58)	27 (-24,78)	
5/27/2020	132	49 (49,50)	53 (45,60)	42 (-12,97)	49 (49,49)	50 (40,59)	26 (-51,104)	
5/28/2020	149	50 (50,50)	54 (46,61)	42 (-36,120)	50 (49,50)	50 (40,61)	45 (-49,138)	
5/29/2020	149	50 (50,51)	55 (47,62)	43 (-51,136)	51 (50,51)	51 (40,62)	48 (-56,153)	
5/30/2020	174	51 (51,51)	56 (48,64)	43 (-69,155)	51 (51,52)	52 (40,64)	49 (-71,168)	
5/31/2020	178	51 (51,51)	57 (48,65)	43 (-84,170)	52 (51,52)	52 (40,65)	36 (-99,171)	
6/1/2020	203	52 (51,52)	58 (49,66)	43 (-102,188)	52 (52,53)	53 (40,66)	34 (-119,187)	
6/2/2020	206	52 (52,52)	59 (50,67)	43 (-116,203)	53 (52,53)	54 (40,68)	39 (-129,207)	

## References

- [1] Who – what is a pandemic?, [https://www.who.int/csr/disease/swineflu/frequently\\_asked\\_questions/pandemic/en/](https://www.who.int/csr/disease/swineflu/frequently_asked_questions/pandemic/en/), (Accessed on 06/10/2020). .
- [2] Who coronavirus disease (covid-19) dashboard, <https://covid19.who.int/>, (Accessed on 06/10/2020). .
- [3] Who – sars (severe acute respiratory syndrome), <https://www.who.int/ith/diseases/sars/en/>, (Accessed on 06/11/2020). .
- [4] Who emro – mers situation update, january 2020 – mers-cov – epidemic and pandemic diseases, <http://www.emro.who.int/pandemic-epidemic-diseases/mers-cov/mers-situation-update-january-2020.html>, (Accessed on 06/11/2020). .
- [5] Haber MJ, Shay DK, Davis XM, Patel R, Jin X, Weintraub E, Orenstein E, Thompson WW. Effectiveness of interventions to reduce contact rates during a simulated influenza pandemic. *Emerging Infectious Diseases* 2007;13(4):581.
- [6] Covid-19 confinement: States must step up protection of children against sexual exploitation and abuse says lanzarote committee - newsroom, [https://www.coe.int/en/web/portal/full-news/-/asset\\_publisher/5X8kX9ePN6CH/content/covid-19-confinement-states-must-step-up-protection-of-children-against-sexual-exploitation-and-abuse-says-lanzarote-committee](https://www.coe.int/en/web/portal/full-news/-/asset_publisher/5X8kX9ePN6CH/content/covid-19-confinement-states-must-step-up-protection-of-children-against-sexual-exploitation-and-abuse-says-lanzarote-committee), (Accessed on 06/10/2020). .
- [7] Tandon H, Ranjan P, Chakraborty T, Suhag V. Coronavirus (covid-19): Arima based time-series analysis to forecast near future, arXiv preprint arXiv:2004.07859. .
- [8] Elmousalam HH, Hassanien AE. Day level forecasting for coronavirus disease (covid-19) spread: analysis, modeling and recommendations, arXiv preprint arXiv:2003.07778. .
- [9] Petropoulos F, Makridakis S. Forecasting the novel coronavirus covid-19. *PLoS one* 2020;15(3): e0231236.
- [10] Chimmula VKR, Zhang L. Time series forecasting of covid-19 transmission in canada using lstm networks. *Chaos, Solitons & Fractals* 2020: 109864.
- [11] Yonar H, Yonar A, Tekindal MA, Tekindal M. Modeling and forecasting for the number of cases of the covid-19 pandemic with the curve estimation models, the box-jenkins and exponential smoothing methods. .
- [12] Jiang X, Zhao BZ, Jinming C. Statistical analysis on covid-19, *Biomedical Journal of Scientific and Technical Research* 26 (2).
- [13] Panda M. Application of arima and holt-winters forecasting model to predict the spreading of covid-19 for india and its states, medRxiv. .
- [14] Patil R, Patel U, Sarkar T. Covid-19 cases prediction using regression and novel ssm model for non-converged countries. *J Appl Sci, Eng, Technol, Educ* 2020;3 (1):74–81.
- [15] Ahmar AS, del Val EB. Suttearima: Short-term forecasting method, a case: Covid-19 and stock market in spain. *Sci Total Environ* 2020;138883.
- [16] Johnston F, Boyland J, Meadows M, Shale E. Some properties of a simple moving average when applied to forecasting a time series. *J Oper Res Soc* 1999;50(12):1267–71.
- [17] Linear trend model for forecasting, <http://people.duke.edu/rnau/411trend.htm#:text=This%20is%20a%20linear%20trend, equally%20spaced%20sequence%20of%20numbers.> .
- [18] Alhassan EA, Isaac AM, Emmanuel A. Time series analysis of malaria cases in kasena nankana municipality. *Int J Stat Appl* 2017;7(22):43–56.
- [19] Gurbaxani V. Diffusion in computing networks: the case of bitnet. *Commun ACM* 1990;33(12):65–75.
- [20] Ostertagová E, Ostertag O. The simple exponential smoothing model. In: The 4th International Conference on Modelling of Mechanical and Mechatronic Systems, Technical University of Košice, Slovak Republic, Proceedings of conference, 2011, pp. 380–384. .
- [21] Holt CC. Forecasting seasonals and trends by exponentially weighted moving averages. *International journal of forecasting* 2004;20(1):5–10.
- [22] Gardner Jr ES, McKenzie E. Forecasting trends in time series. *Manage Sci* 1985;31(10):1237–46.
- [23] Box GE, Pierce DA. Distribution of residual autocorrelations in autoregressive-integrated moving average time series models. *J Am Statist Assoc* 1970;65 (332):1509–26.
- [24] Gers FA, Schmidhuber J, Cummins F. Learning to forget: Continual prediction with lstm. .
- [25] Chatfield C. The holt-winters forecasting procedure. *J R Stat Soc : Series C (Appl Stat)* 1978;27(3):264–79.
- [26] Engle RF, Mustafa C, Rice J. Modelling peak electricity demand. *J Forecasting* 1992;11(3):241–51.
- [27] 2009 h1n1 pandemic (h1n1pdm09 virus) – pandemic influenza (flu) – cdc, <https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html>, (Accessed on 06/11/2020). .
- [28] Influenza historic timeline – pandemic influenza (flu) – cdc, <https://www.cdc.gov/flu/pandemic-resources/pandemic-timeline-1930-and-beyond.htm>, (Accessed on 06/11/2020). .
- [29] Finkenstädt BF, Grenfell BT. Time series modelling of childhood diseases: a dynamical systems approach. *J R Statist Soc: Series C (Appl Stat)* 2000;49 (2):187–205.
- [30] Lai D. Monitoring the sars epidemic in china: a time series analysis. *J Data Sci* 2005;3(3):279–93.
- [31] Hall I, Gani R, Hughes H, Leach S. Real-time epidemic forecasting for pandemic influenza. *Epidemiol Infection* 2007;135(3):372–85.
- [32] Ohkusa Y, Sugawara T, Taniguchi K, Okabe N. Real-time estimation and prediction for pandemic a/h1n1 (2009) in japan. *J Infection Chemotherapy* 2011;17(4):468–72.
- [33] Sumi A, Kamo K-I, Ohtomo N, Mise K, Kobayashi N. Time series analysis of incidence data of influenza in japan. *J Epidemiol* 2011;21(1):21–9.
- [34] Foster E, Cavanaugh J, Haynes W, Yang M, Gerke A, Tang F, Polgreen P. Acute myocardial infarctions, strokes and influenza: seasonal and pandemic effects. *Epidemiol Infection* 2013;141(4):735–44.
- [35] Zhang X, Zhang T, Young AA, Li X. Applications and comparisons of four time series models in epidemiological surveillance data, *PLoS One* 9 (2). .
- [36] Wu I-L, Wang J-T, Chang S-C, Chuang Y-C, Lin W-R, Lu M-C, Lu P-L, Hu F-C, Chuang J-H, Chen Y-C, et al. Impacts of a mass vaccination campaign against pandemic h1n1 2009 influenza in taiwan: a time-series regression analysis. *Int J Infectious Diseases* 2009;23(2014):82–9.
- [37] Song X, Xiao J, Deng J, Kang Q, Zhang Y, Xu J. Time series analysis of influenza incidence in chinese provinces from 2004 to 2011, *Medicine* 95 (26).
- [38] Meyer S, Held L, Höhle M. Spatio-temporal analysis of epidemic phenomena using the r package surveillance, arXiv preprint arXiv:1411.0416. .
- [39] Tapak L, Hamidi O, Fathian M, Karami M. Comparative evaluation of time series models for predicting influenza outbreaks: application of influenza-like illness data from sentinel sites of healthcare centers in iran. *BMC Res Notes* 2019;12(1):353.
- [40] Coronavirus update (live): 7,302,754 cases and 412,747 deaths from covid-19 virus pandemic - worldometer, <https://www.worldometers.info/coronavirus/>, (Accessed on 06/10/2020). .
- [41] Methods and formulas for trend analysis - minitab express, <https://support.minitab.com/en-us/minitab-express/1/help-and-how-to/modeling-statistics/time-series/how-to/trend-analysis/methods-and-formulas/methods-and-formulas/#s-curve>, (Accessed on 06/09/2020).
- [42] Novel coronavirus (covid-19) cases data - humanitarian data exchange, <https://data.humdata.org/dataset/novel-coronavirus-2019-ncov-cases>, (Accessed on 06/09/2020).
- [43] About python – python.org, <https://www.python.org/about/>, (Accessed on 06/11/2020).