“A project on Time Series Predictive model”

Contents

SECTION1: Problem Definition

1. Predict 2019 yearly export value to the country “AFGHANISTAN”
2. Predict 2019 yearly export value to the country “ALBANIA”

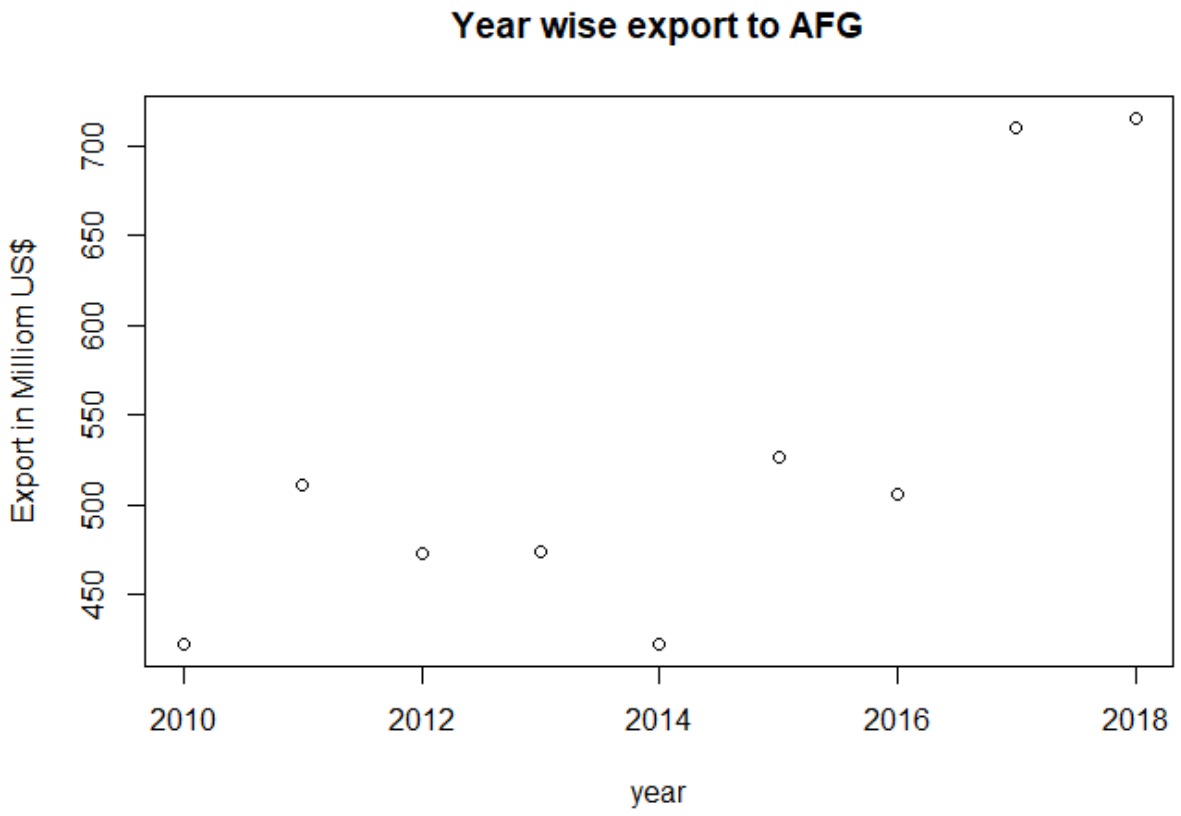
SECTION2: Brief description of the data

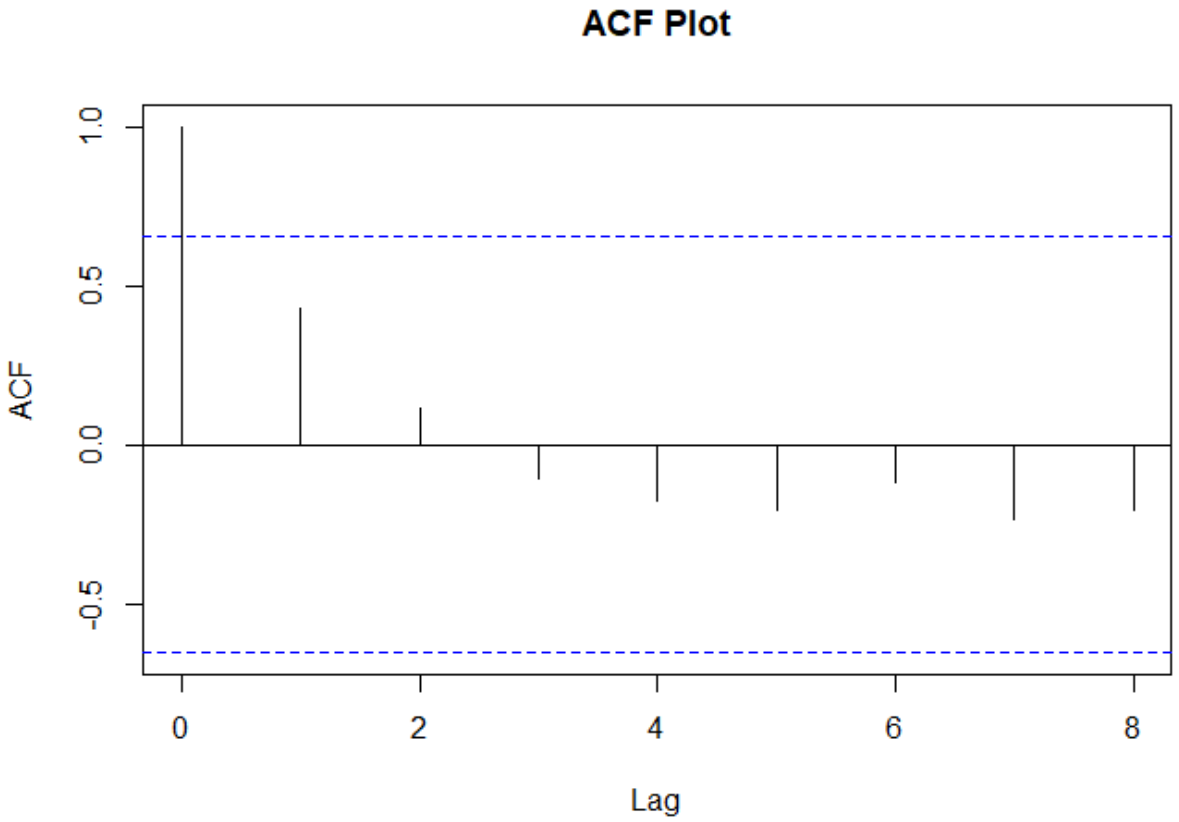
The data set has been taken from www.Kaggle.com . This dataset includes the trade data for India for commodities in the HS2 basket.

In this project, the export values for all commodities for a year are added up and has been tried to fit a time series mode. This procedure is done in order to achieve if the total export value can be forecasted for the year 2019. This exercise is conducted for 2 countries as mentioned in the Problem Definition.

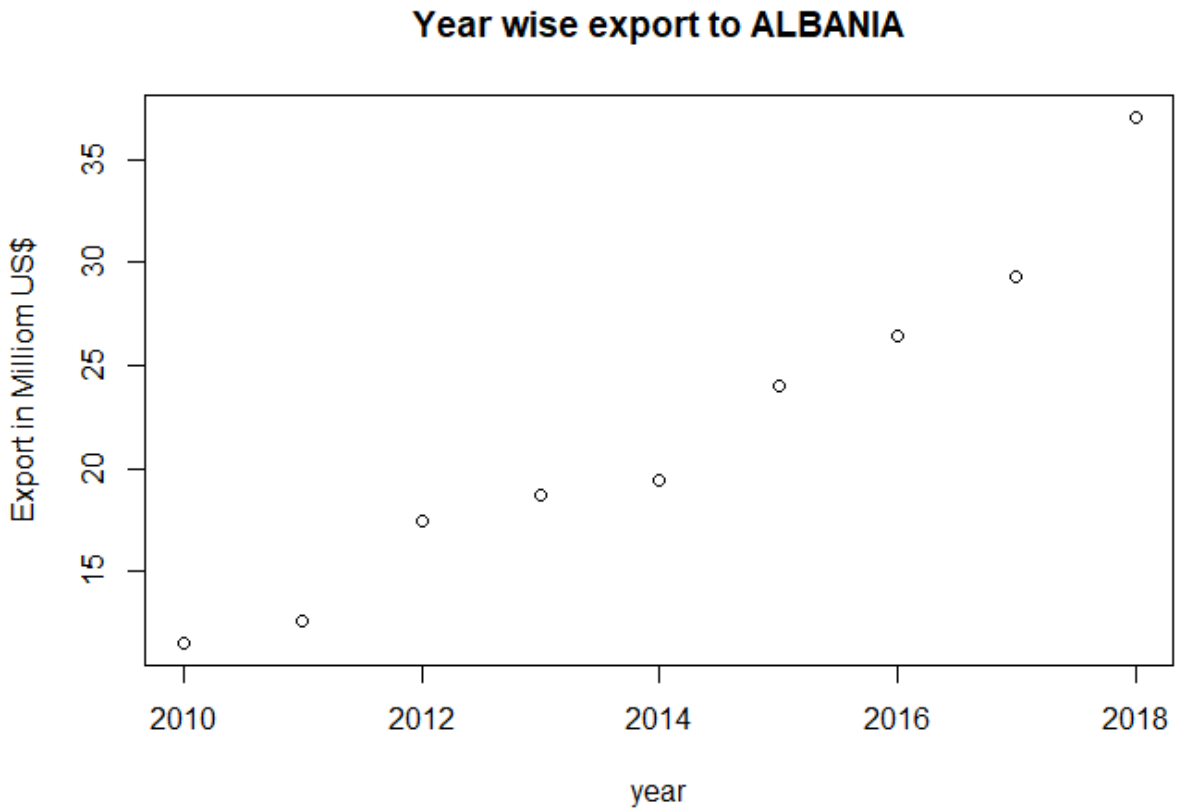
SECTION 3: Data Visualization

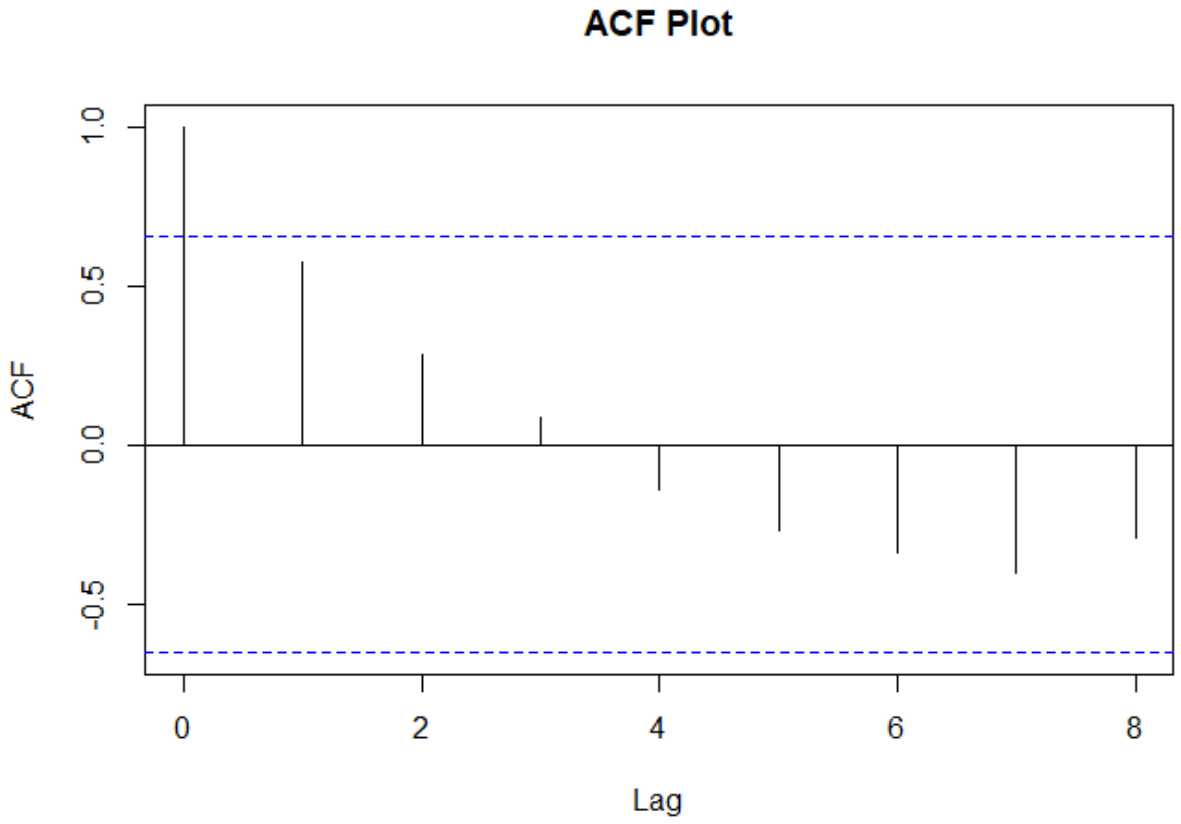
AFGHANISTAN




ACF Plot
ACF
1.0
0.5
0.0
-0.5
0
2
4
6
8
Lag

ALBANIA


Year wise export to ALBANIA
Export in Milliom US$
15
20
25
30
35
2010
2012
2014
2016
2018
year



ACF plot indicates series is stationary. 7 out of 8 values are within ACF limits.

SECTION 4: Time Series Model and forecasting

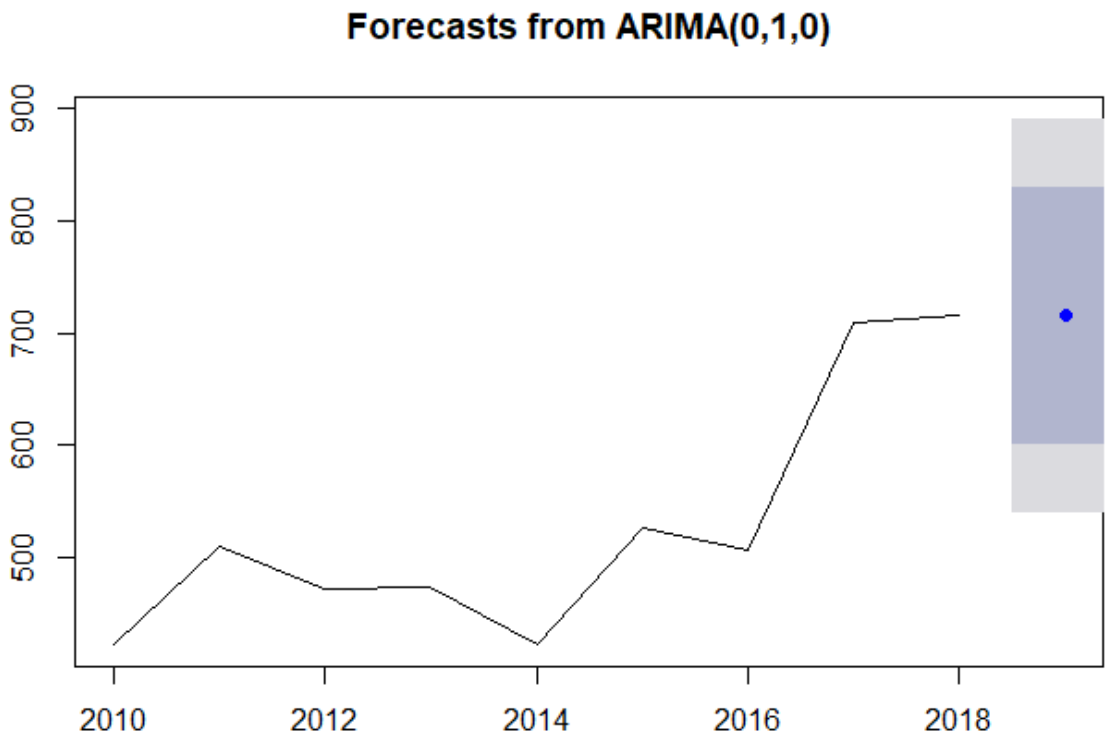
AFGHANISTAN

Model:

```
afg_forecast=forecast(auto.arima(df$TotalExportValue), h=1)
```

Plot:

```
plot(forecast(auto.arima(df$TotalExportValue), h=1))
```



Forecast for 2019 export to AFGHANISTAN in Million US$:

	Point Forecast	Lo 80	Hi 80	Lo 95	Hi 95
2019	715.35	600.1737	830.5263	539.2031	891.4969

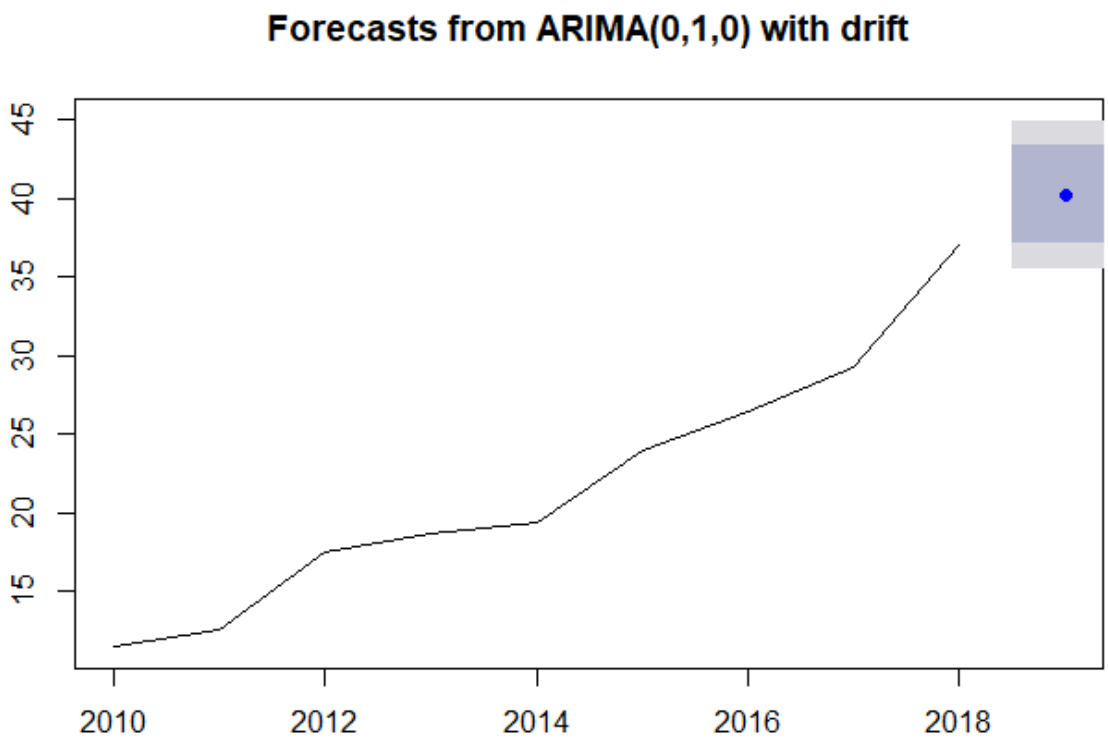
ALBANIA:

Model:

alb_forecast=forecast(auto.arima(df1$TotalExportValue), h=1)

Plot:

plot(forecast(auto.arima(df1$TotalExportValue), h=1))



Forecast for 2019 export to ALBANIA in Million US$:

	Point Forecast	Lo 80	Hi 80	Lo 95	Hi 95
2019	40.2675	37.18267	43.35233	35.54966	44.98534

SECTION5: R File (code)

In the same R file regression for both countries are done one after another.