

# Covid Plots

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## 1 Introduction

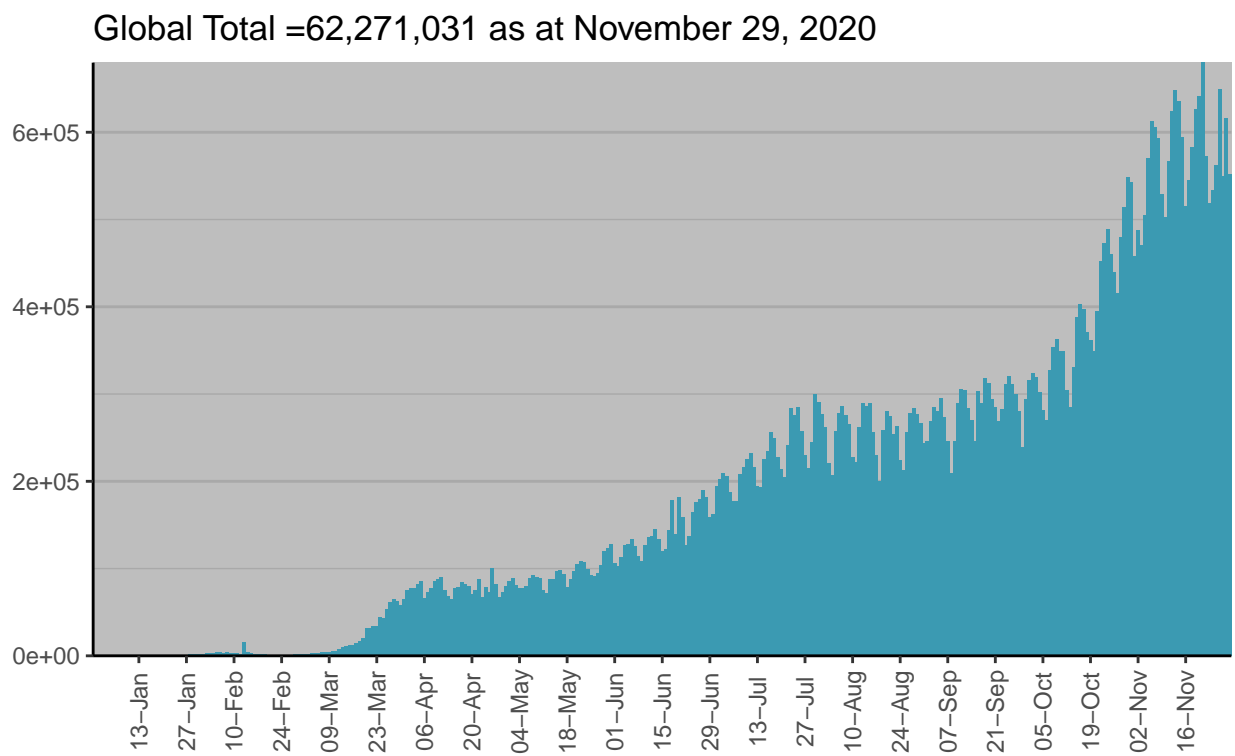


Figure 1: Daily cases Globally to date

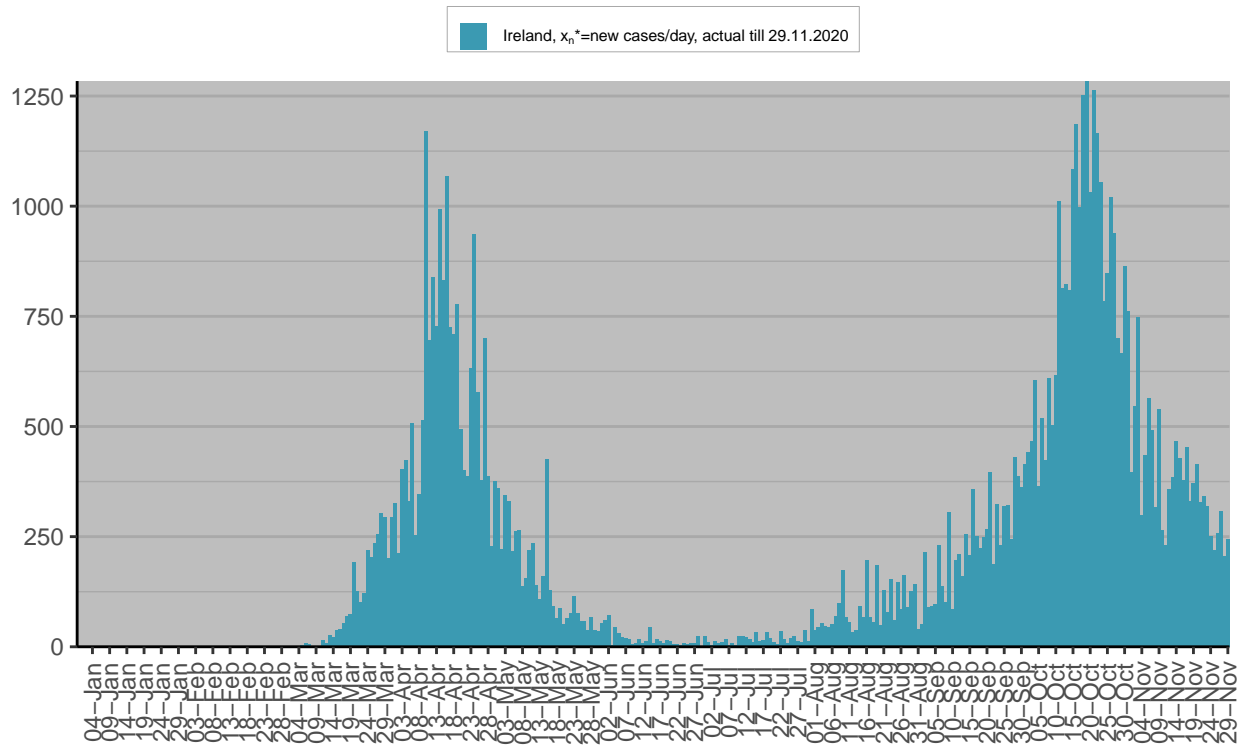


Figure 2:  $x$ -diagram for Ireland: the numbers of actually registered daily cases

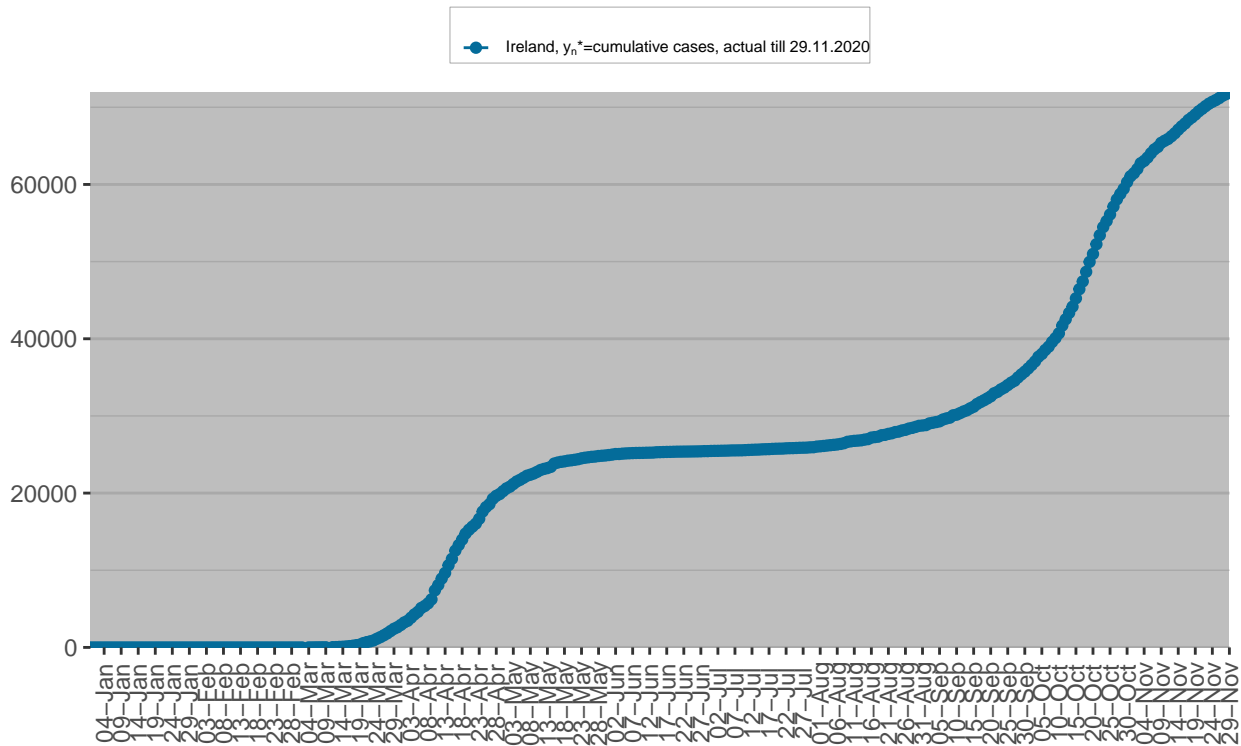


Figure 3:  $x$ -diagram for Ireland: the numbers of actually registered daily cases

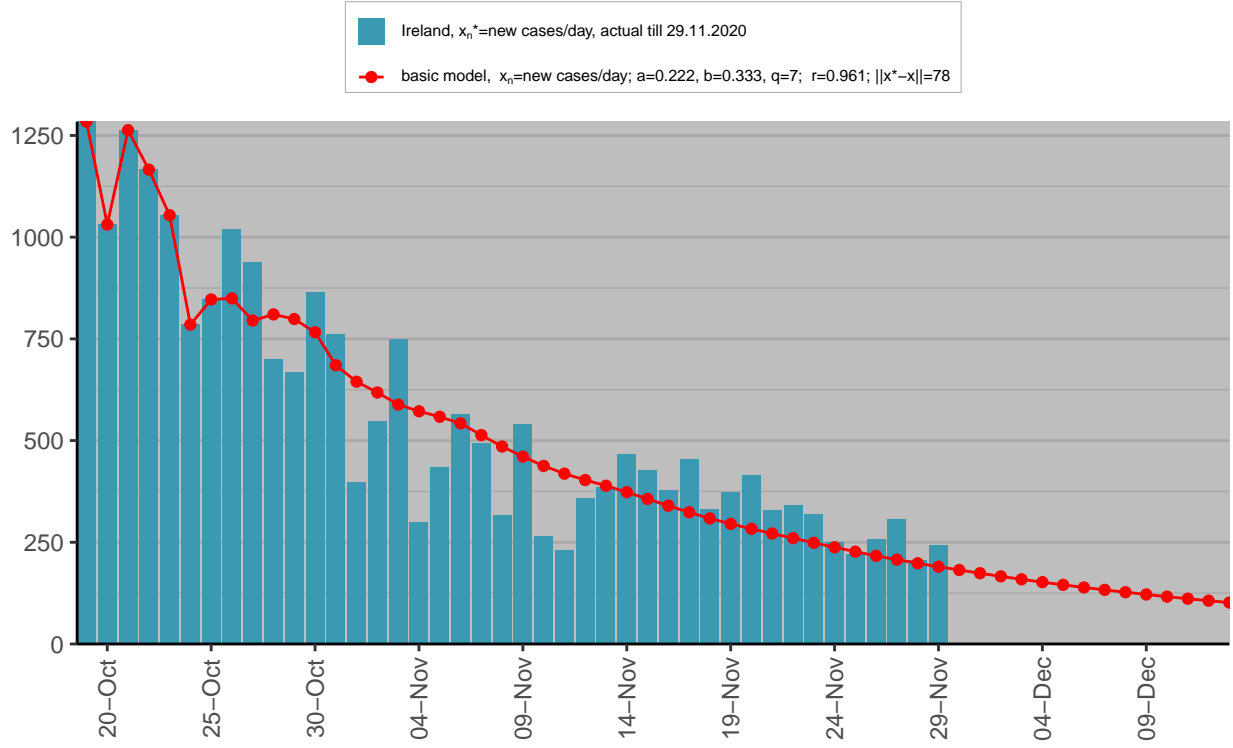


Figure 4: Comparison of the basic model with the actual data, Ireland ( $x$ -diagram)

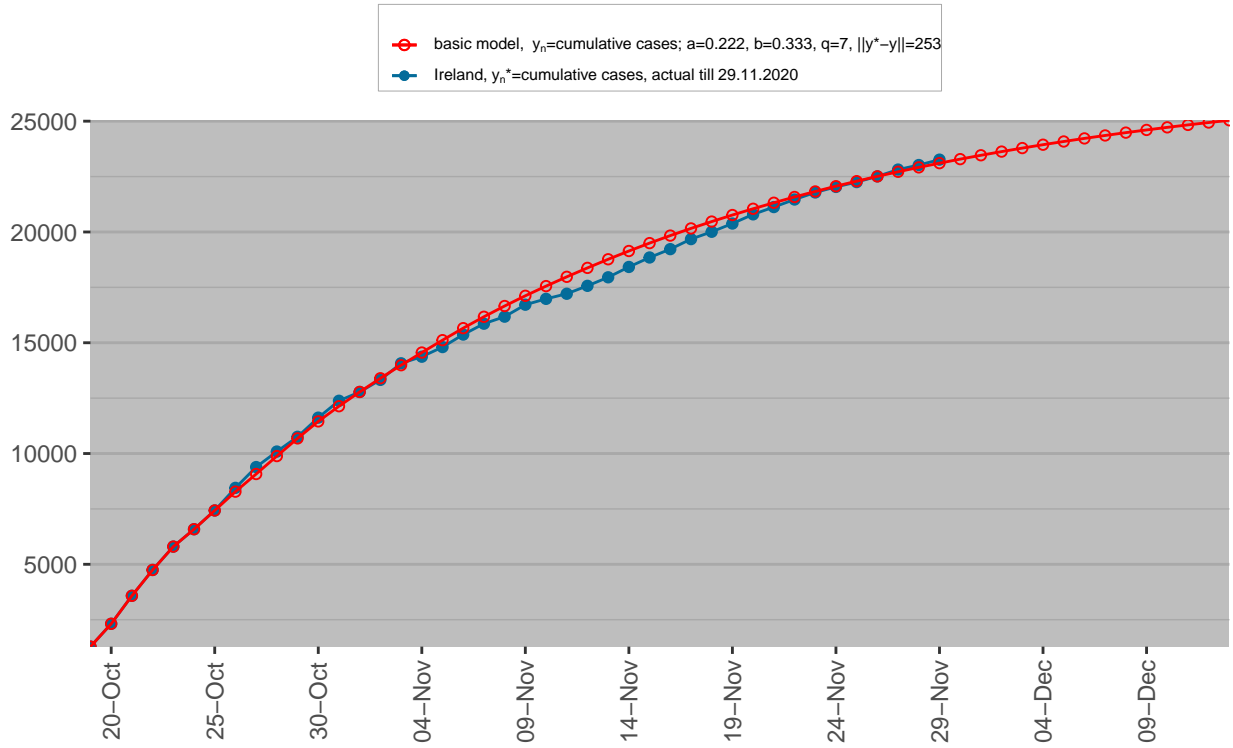


Figure 5: Comparison of the basic model with the actual data, Ireland ( $x$ -diagram)

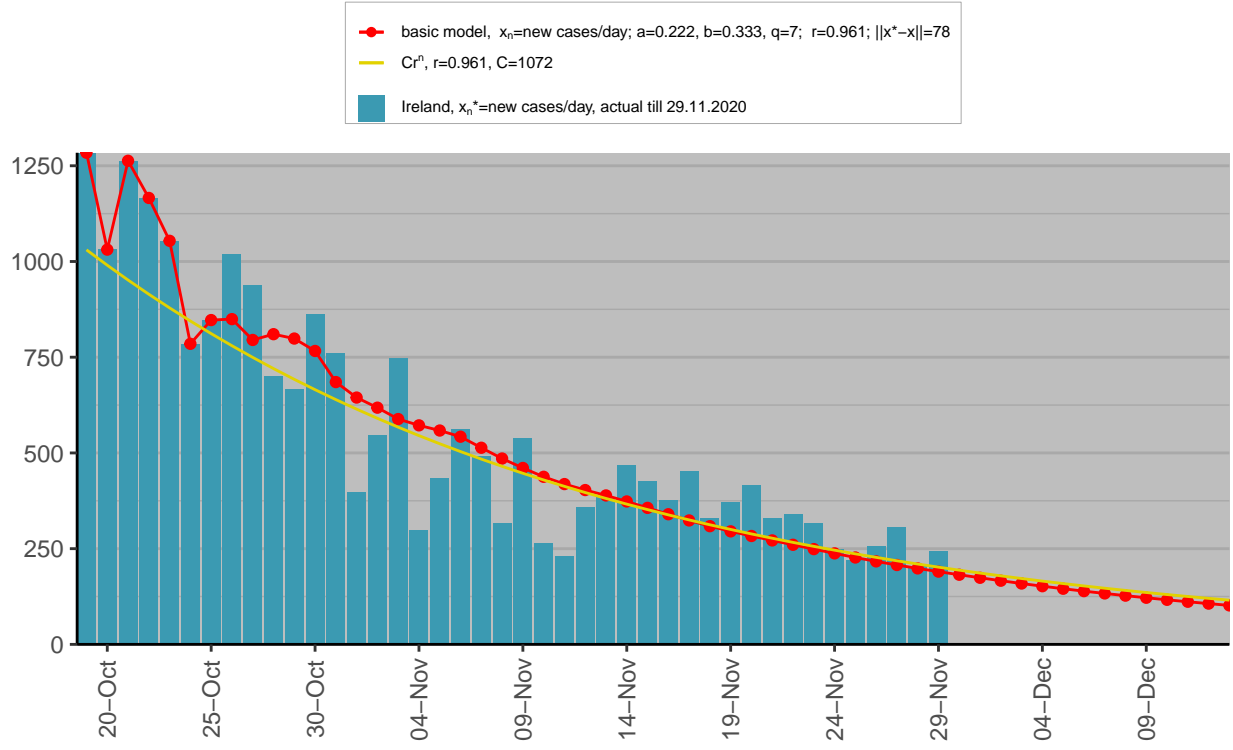


Figure 6: Comparison of  $x_n^*$ ,  $x_n$  and  $Cr^n$ , Ireland

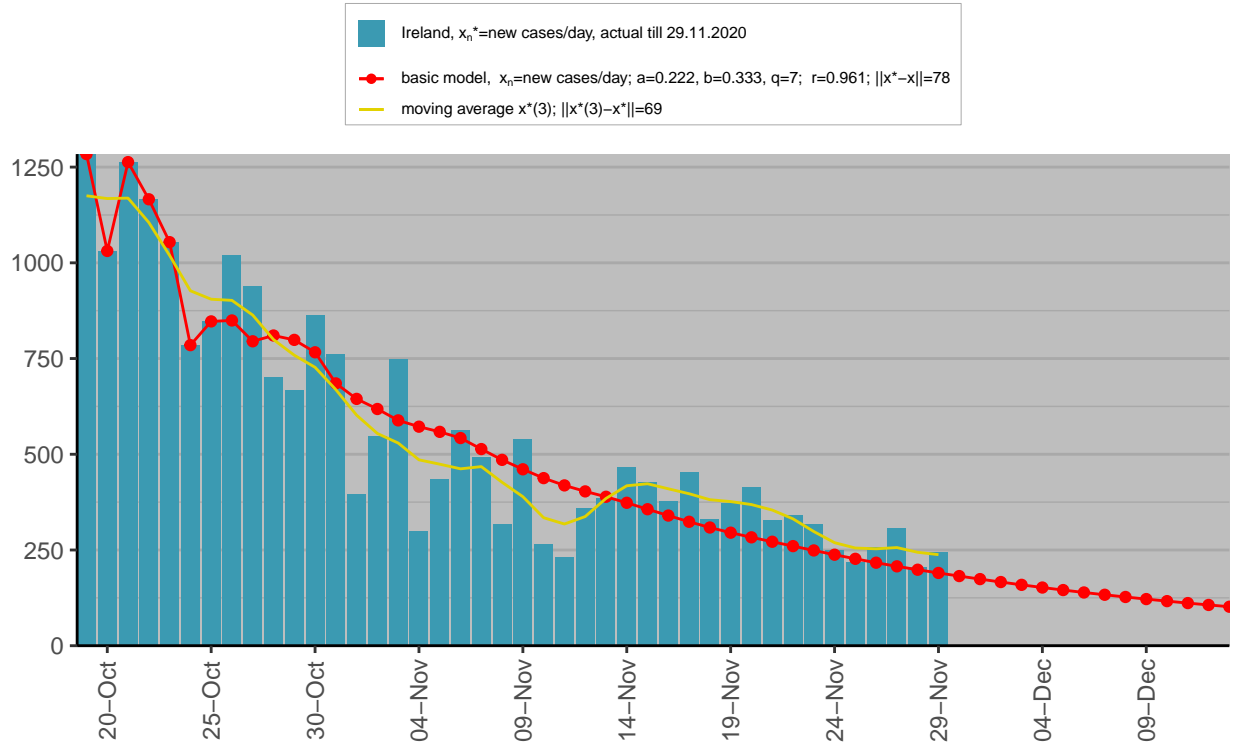


Figure 7: Comparison of basic model with moving averages, Ireland

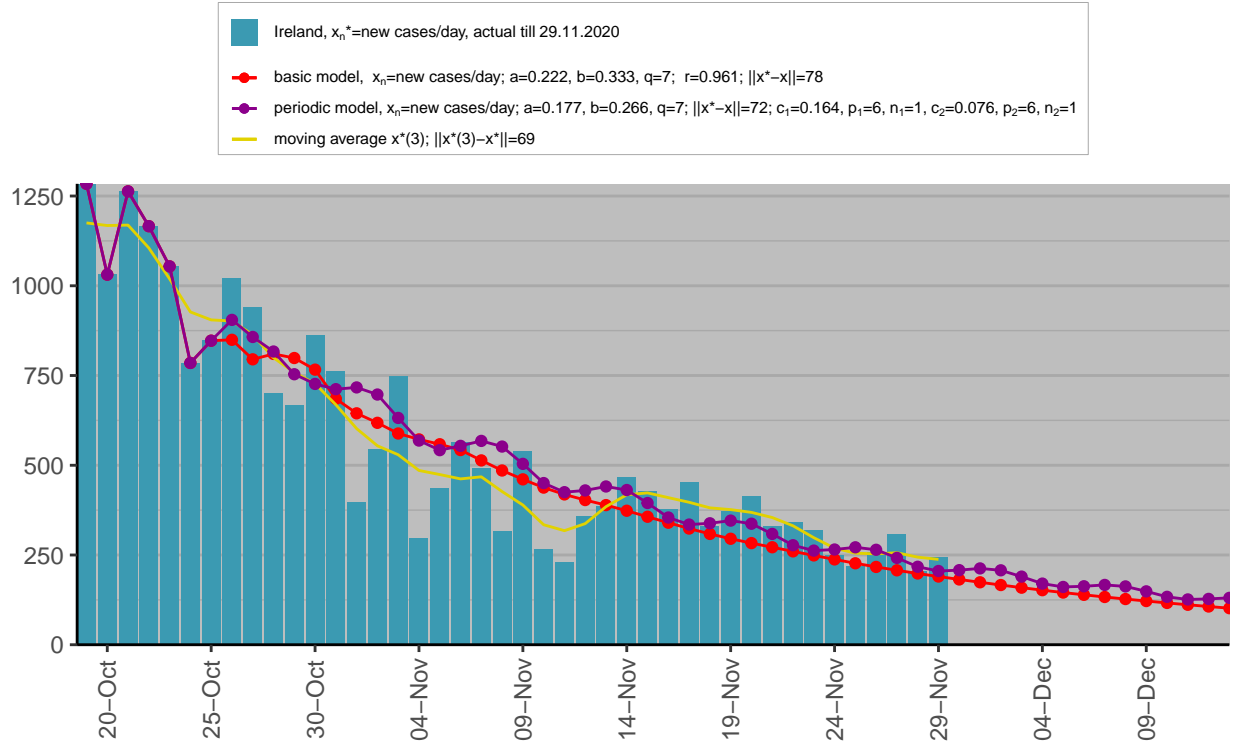


Figure 8: Comparison of basic and periodic models with moving averages, Ireland

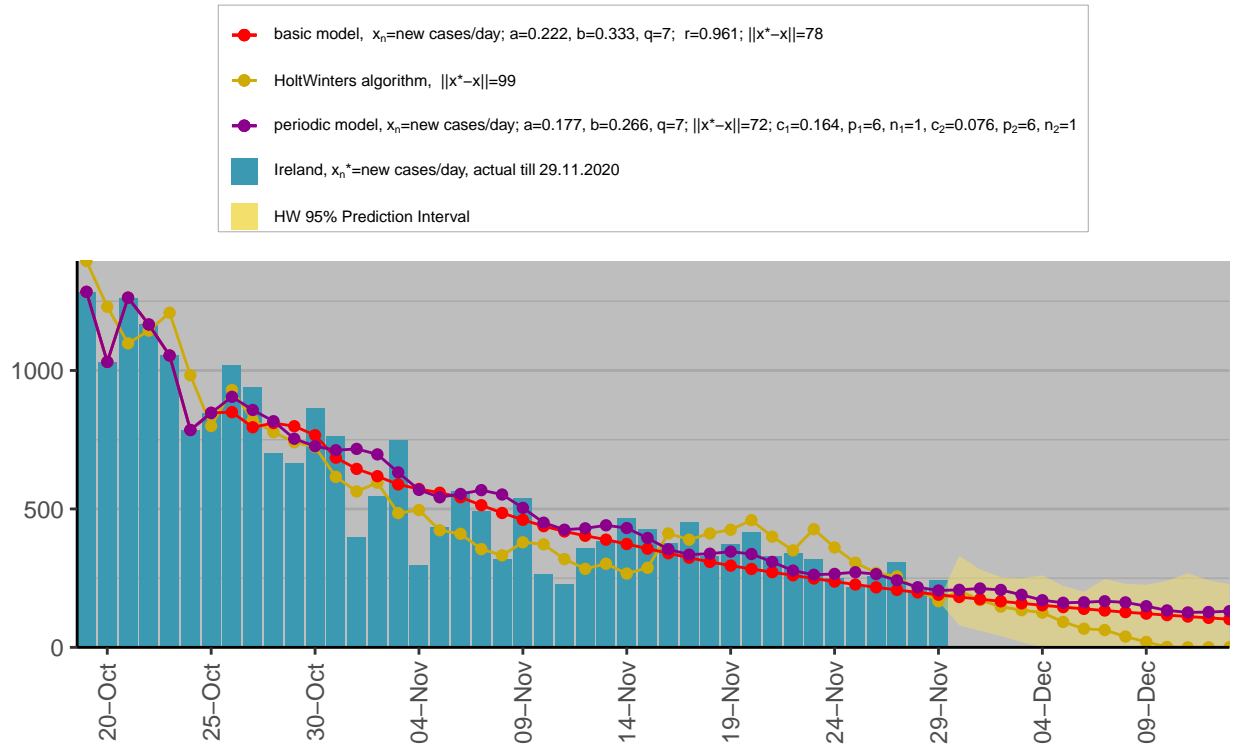


Figure 9: Comparison of basic and periodic models with HoltWinters model, Ireland

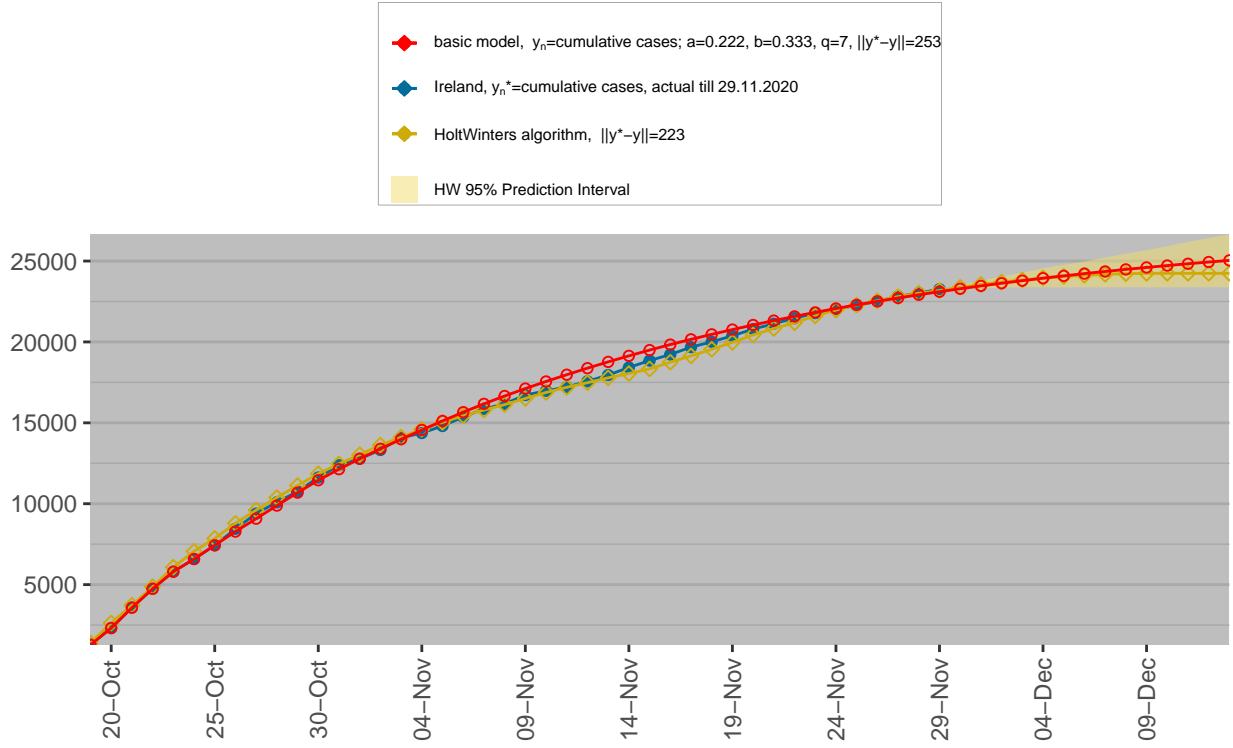


Figure 10: Comparison of Cumulative basic and periodic models with HoltWinters Prediction, Ireland

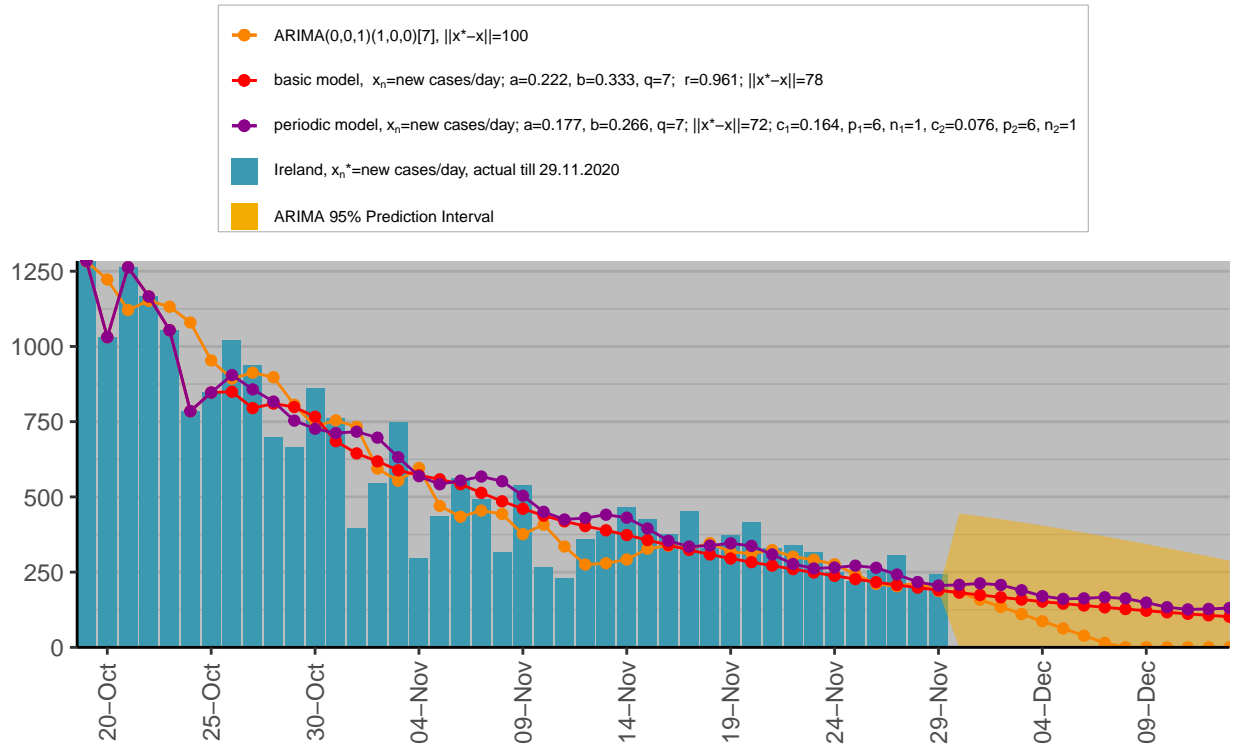


Figure 11: Comparison of basic and periodic models with ARIMA model, Ireland

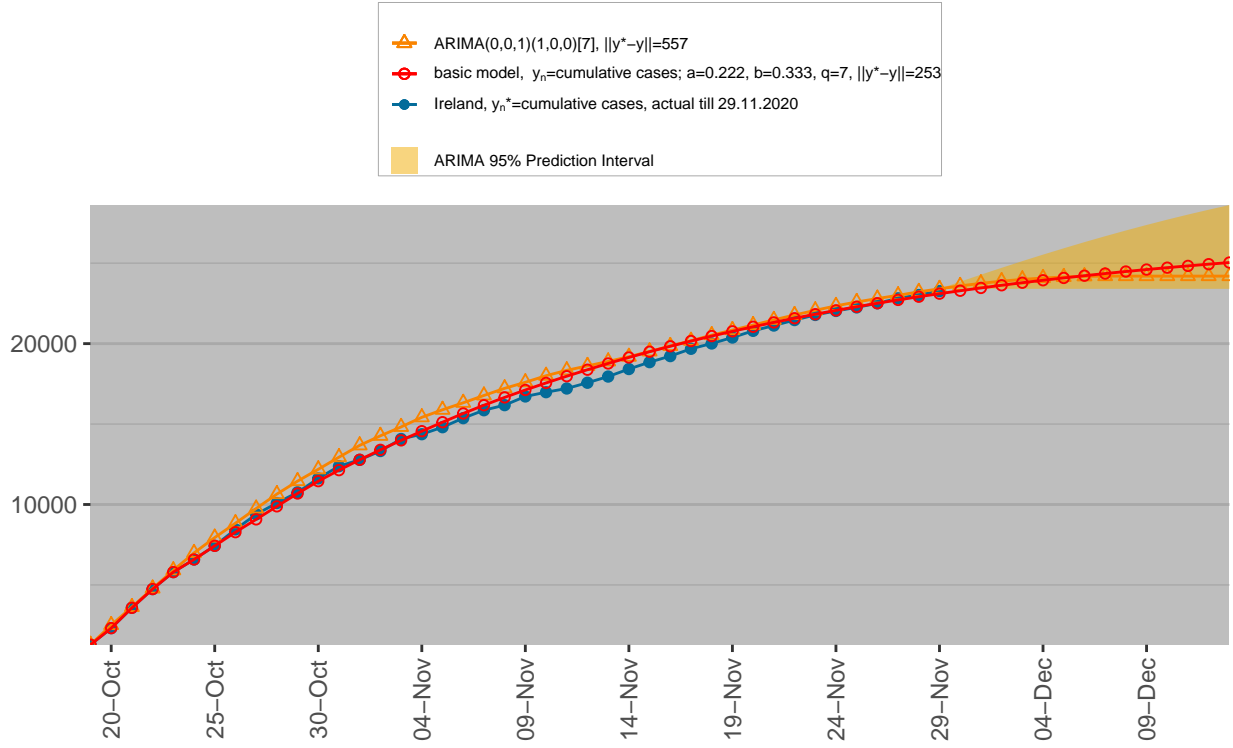


Figure 12: Comparison of Cumulative basic and periodic models with ARIMA model, Ireland

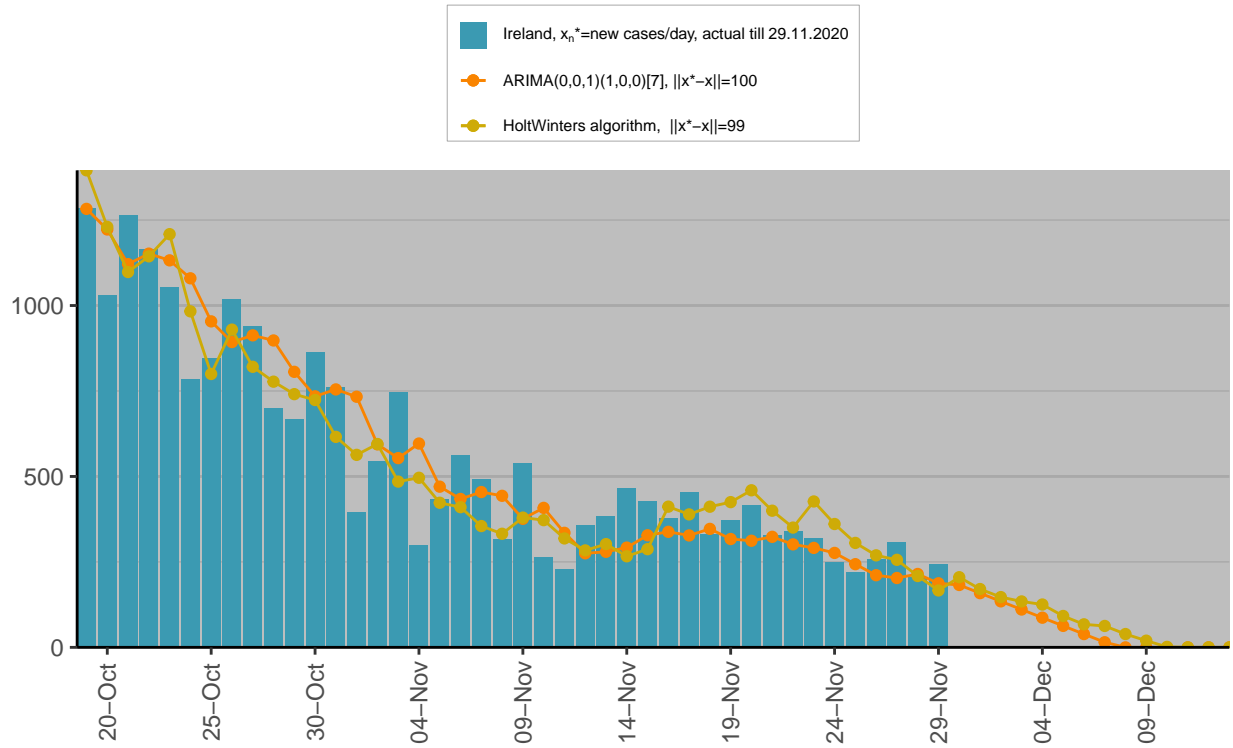


Figure 13: Comparison of HoltWinters and ARIMA models, Ireland

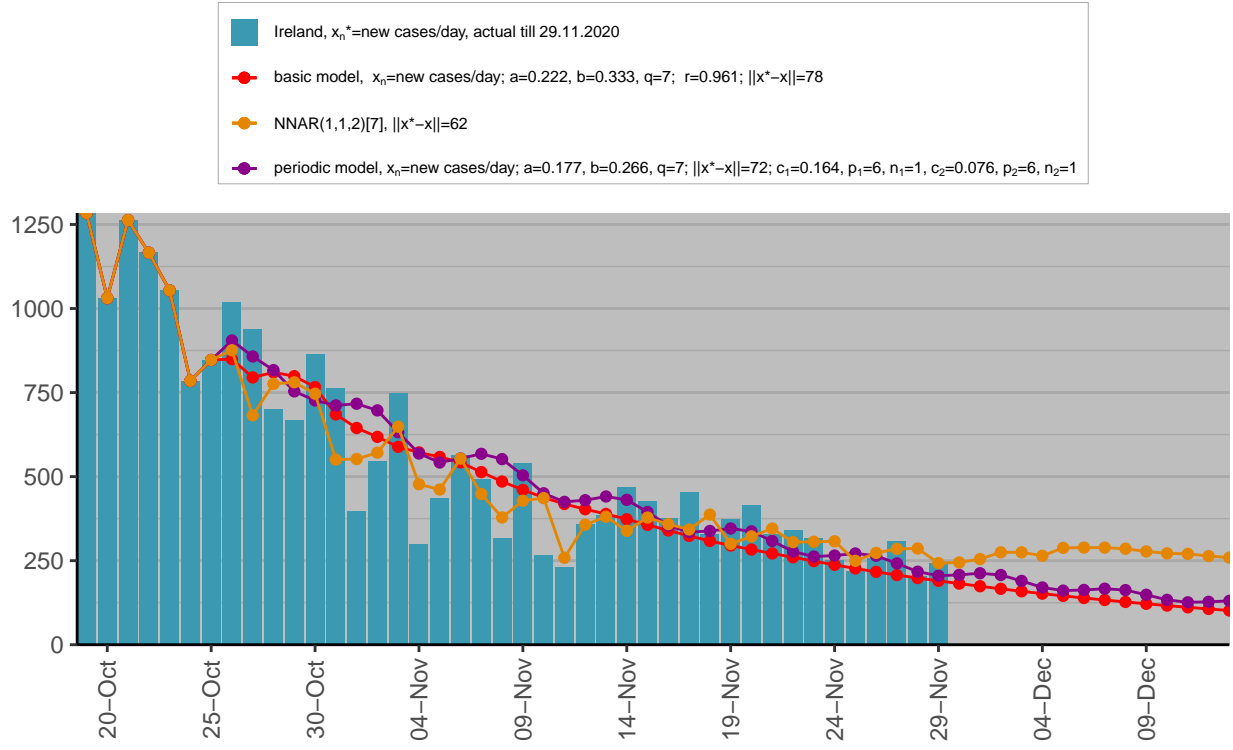


Figure 14: Comparison of basic and periodic models with Neural Network model, Ireland

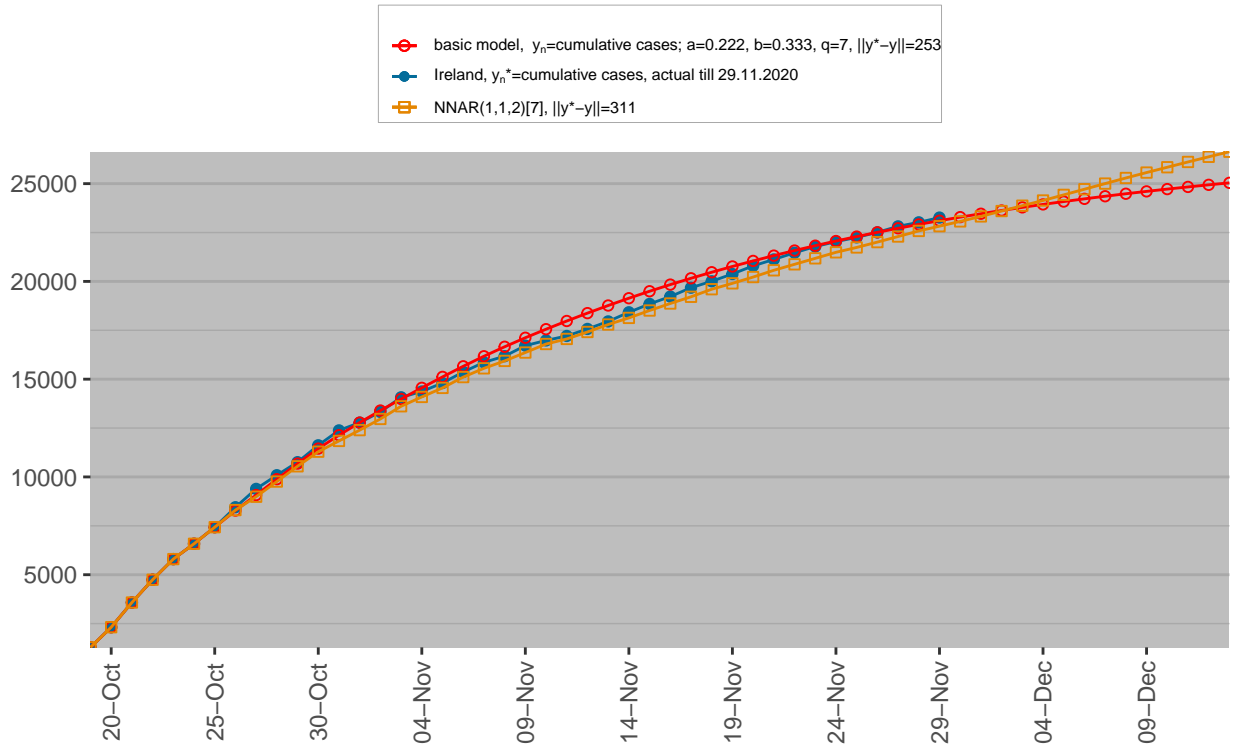


Figure 15: Comparison of Cumulative basic and periodic models with Neural Network model, Ireland



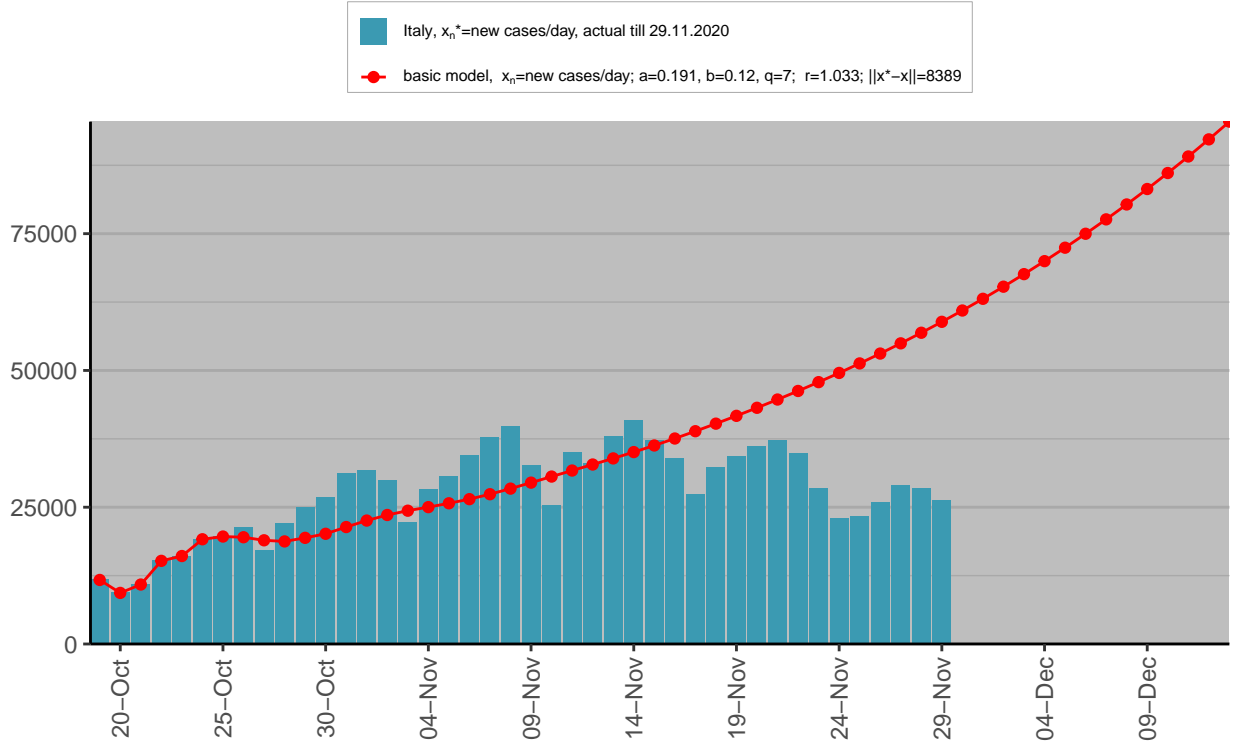


Figure 16: Comparison of the basic model with the actual data, Italy ( $x$ -diagram)

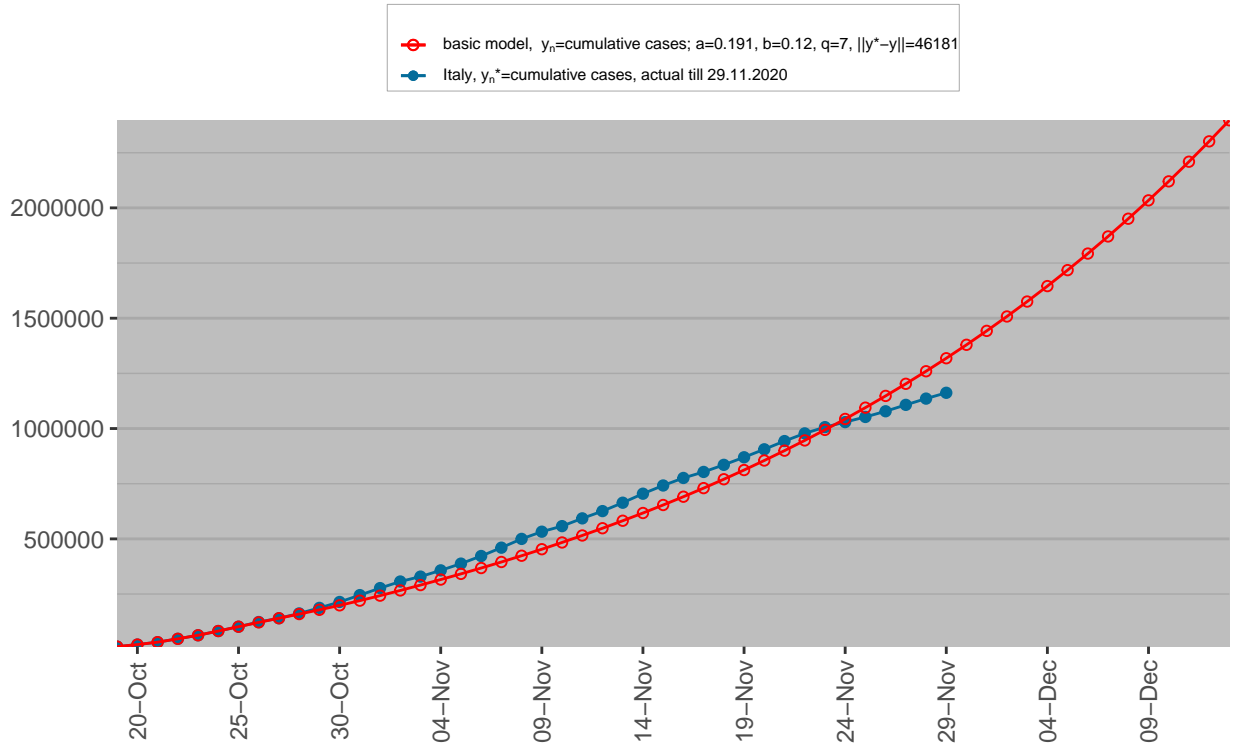


Figure 17: Comparison of the basic model with the actual data, Italy ( $x$ -diagram)

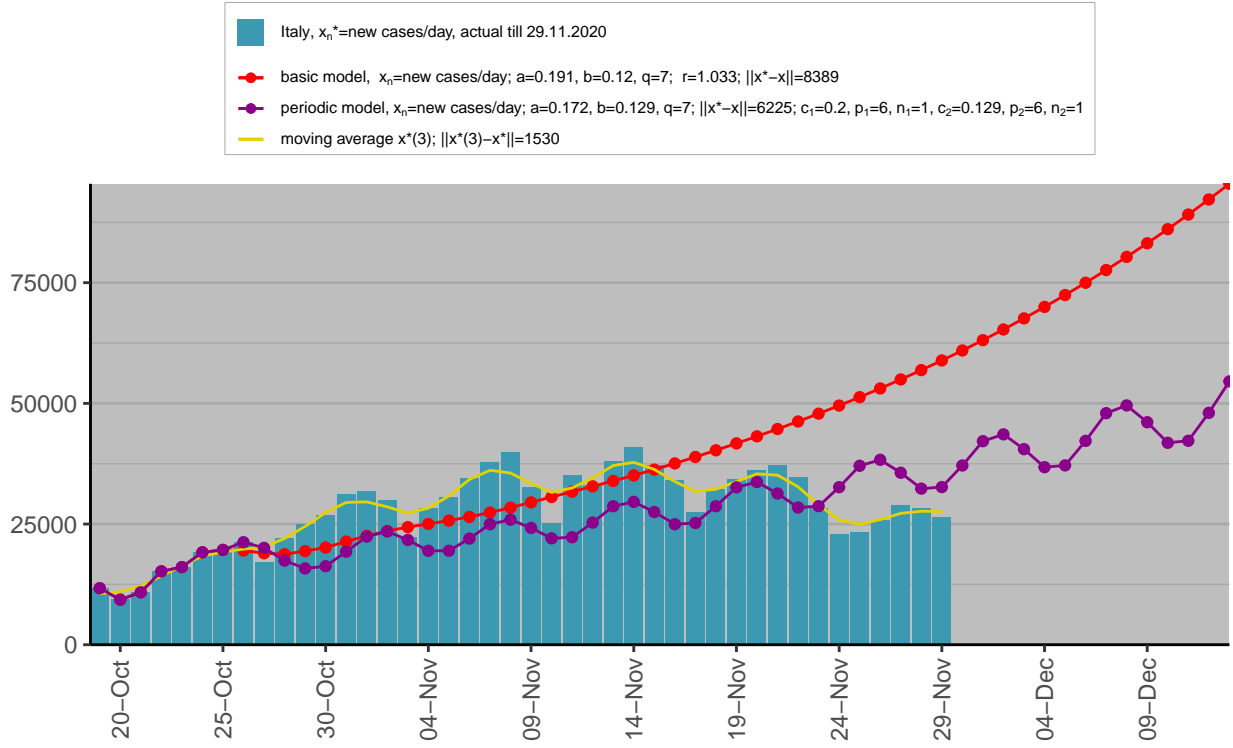


Figure 18: Comparison of basic and periodic models with moving averages, Italy

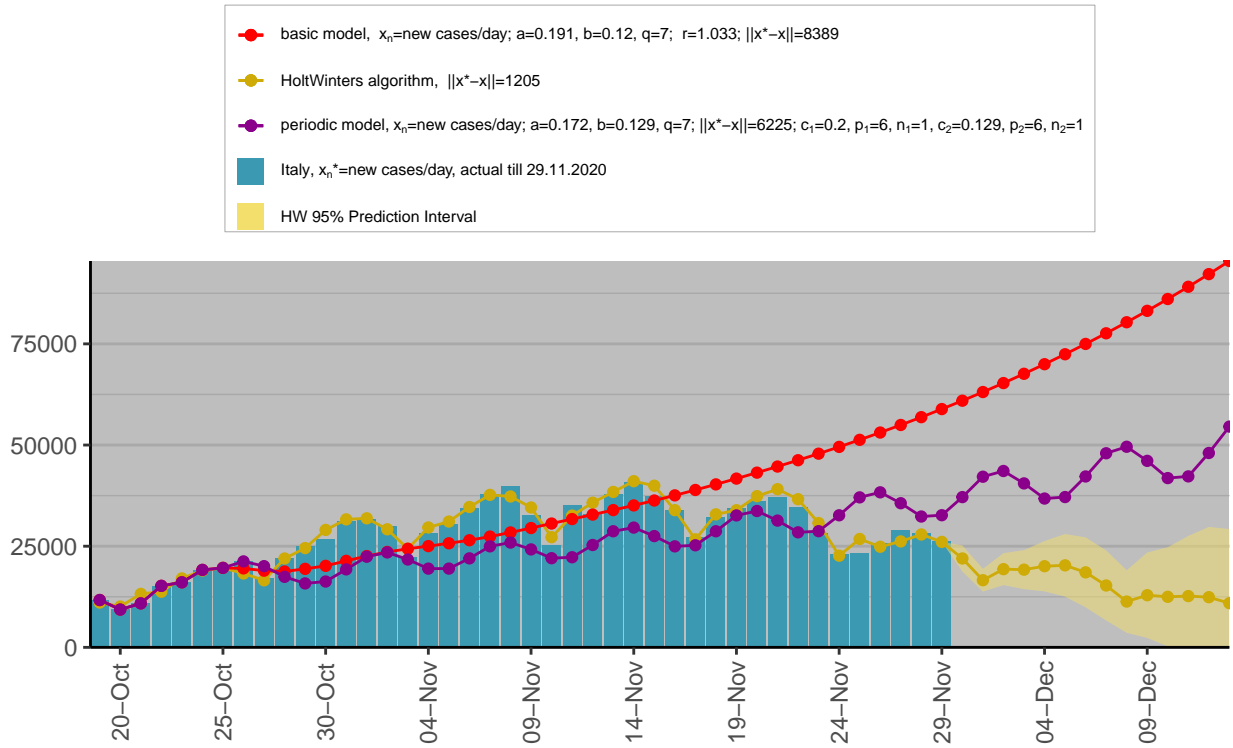


Figure 19: Comparison of basic and periodic models with HoltWinters model, Italy

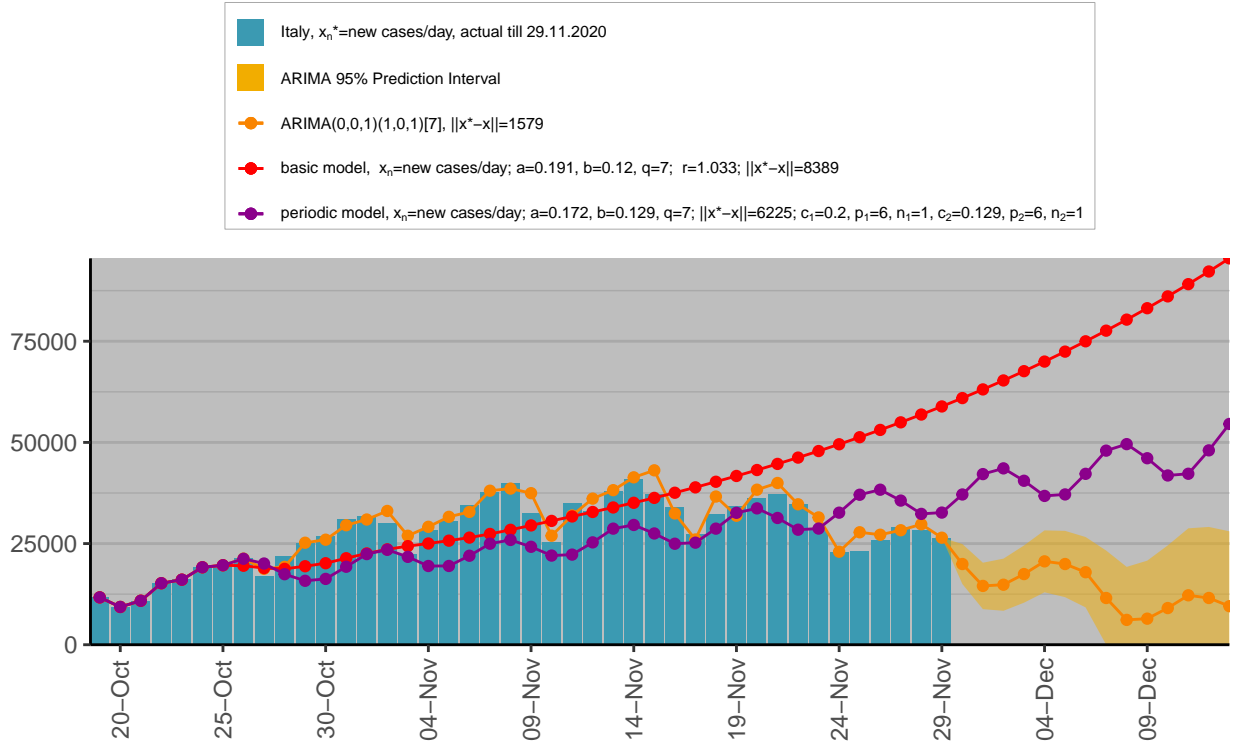


Figure 20: Comparison of basic and periodic models with ARIMA model, Italy

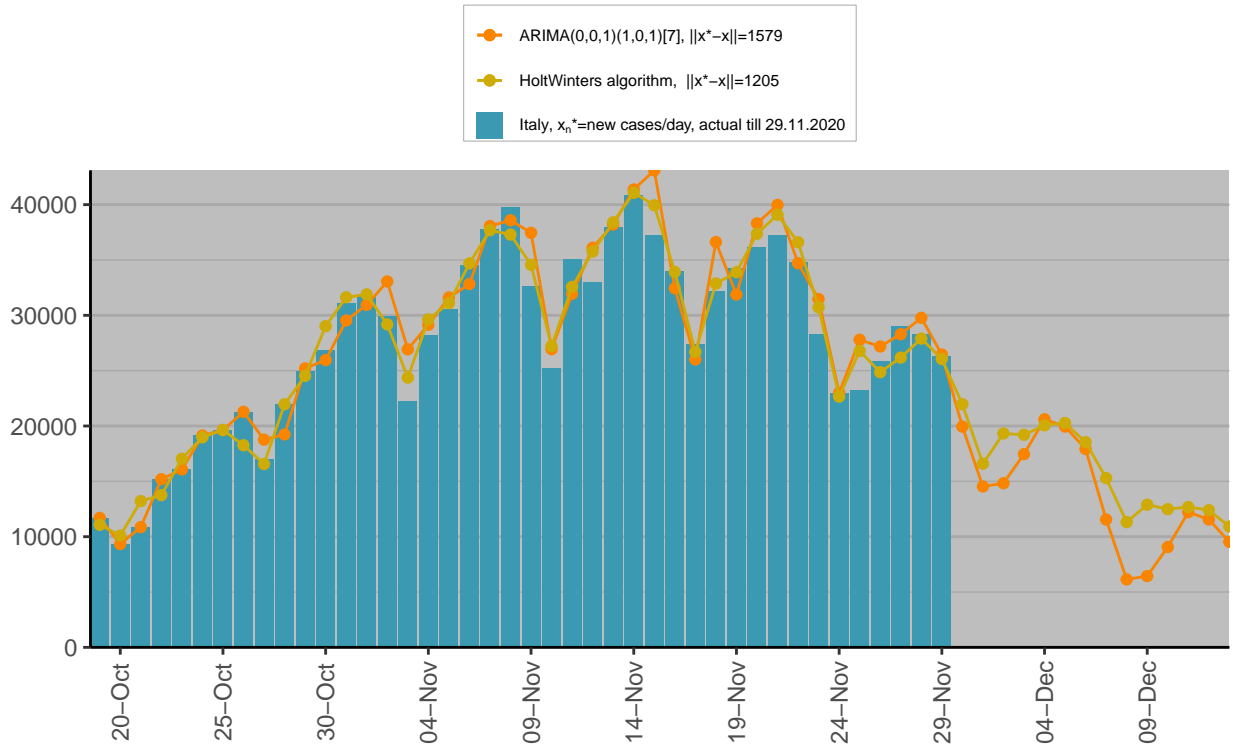


Figure 21: Comparison of HoltWinters and ARIMA models, Italy

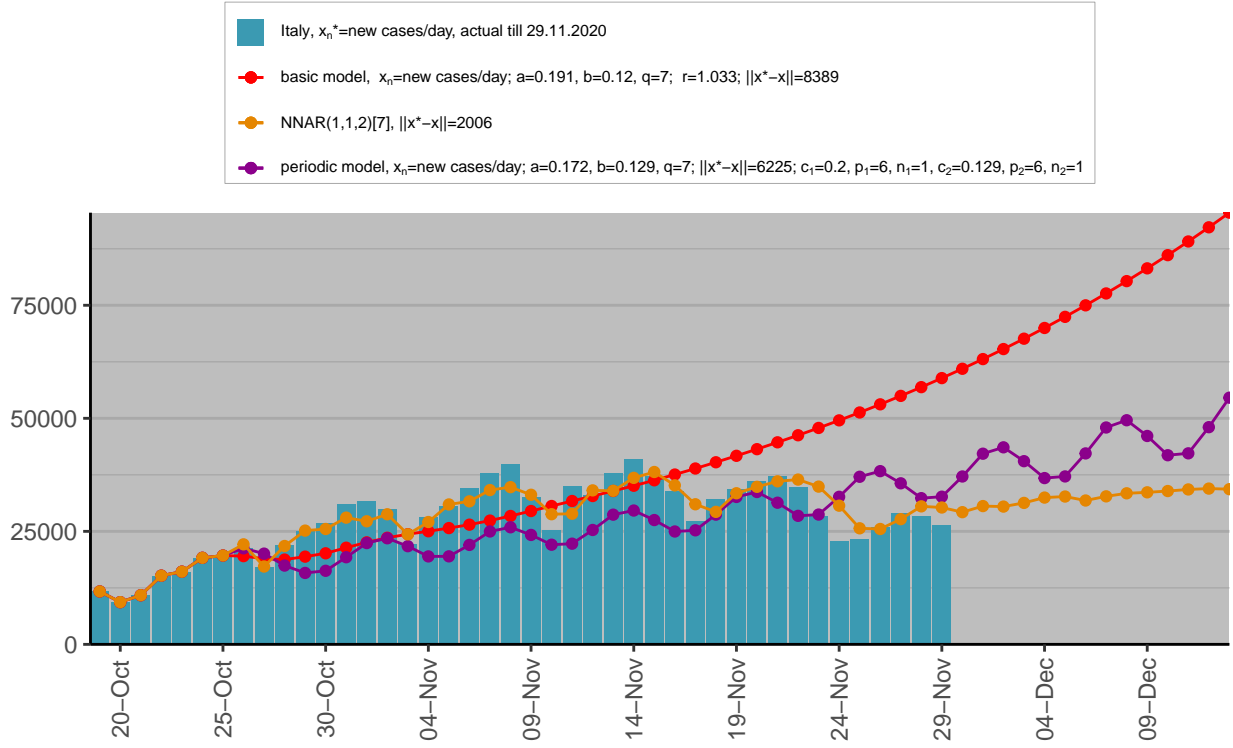


Figure 22: Comparison of basic and periodic models with Neural Network model, Italy

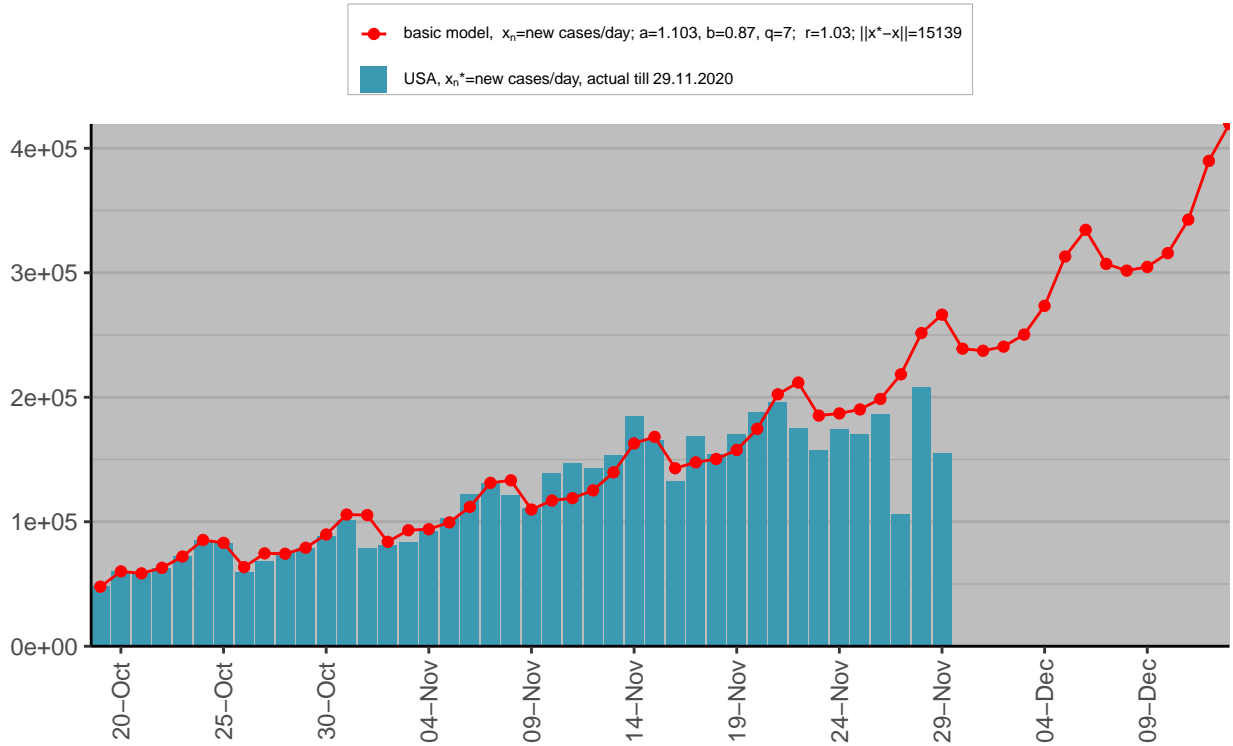


Figure 23: Comparison of the basic model with the actual data, USA ( $x$ -diagram)

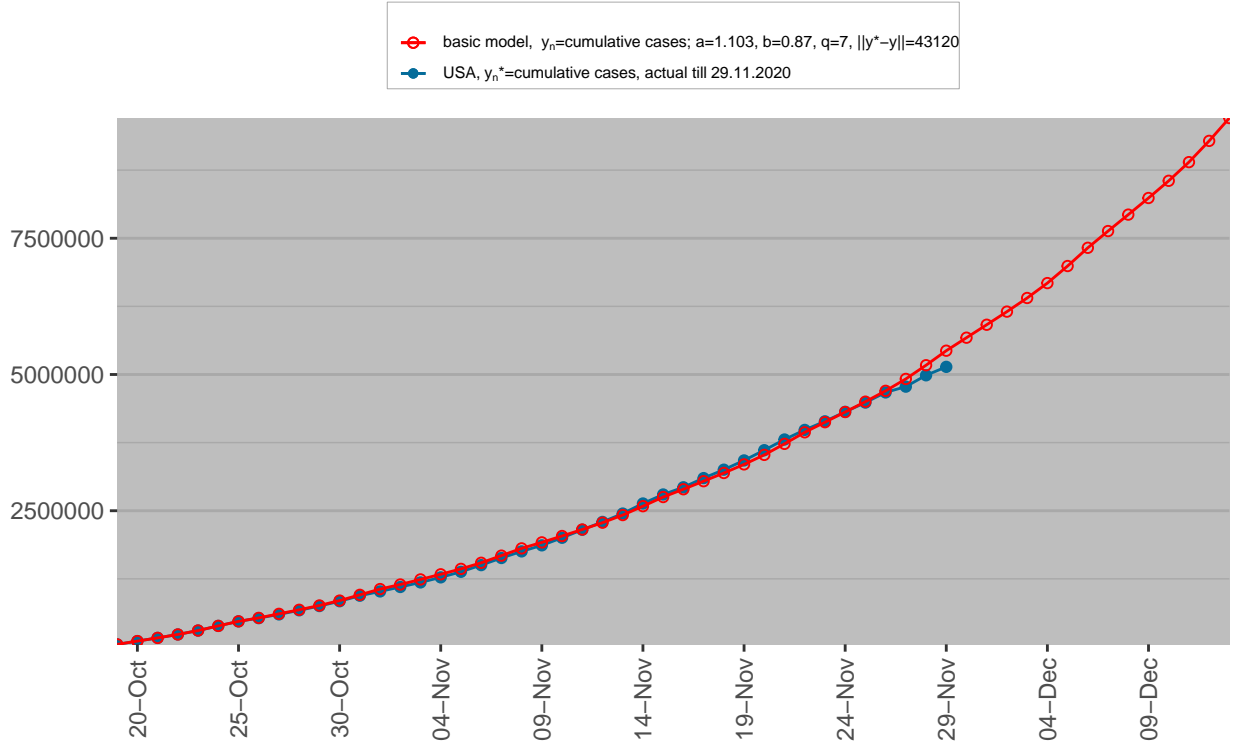


Figure 24: Comparison of the basic model with the actual data, USA ( $x$ -diagram)

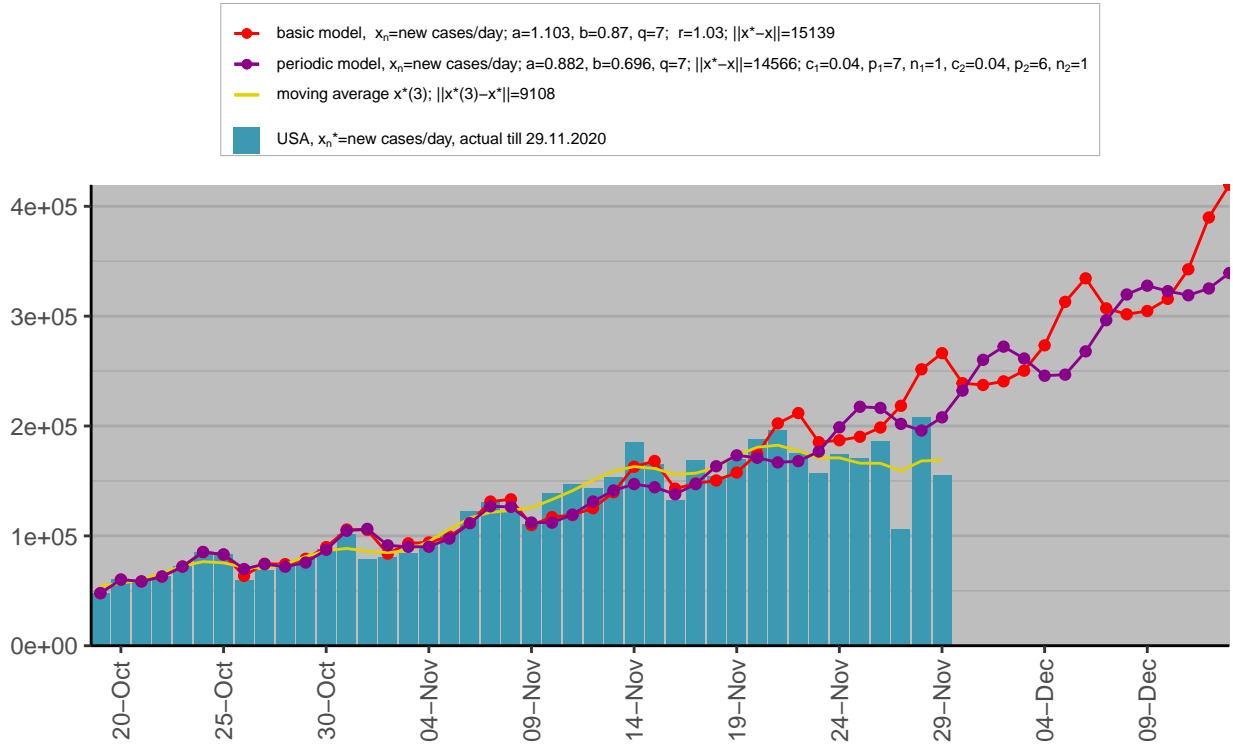


Figure 25: Comparison of basic and periodic models with moving averages, USA

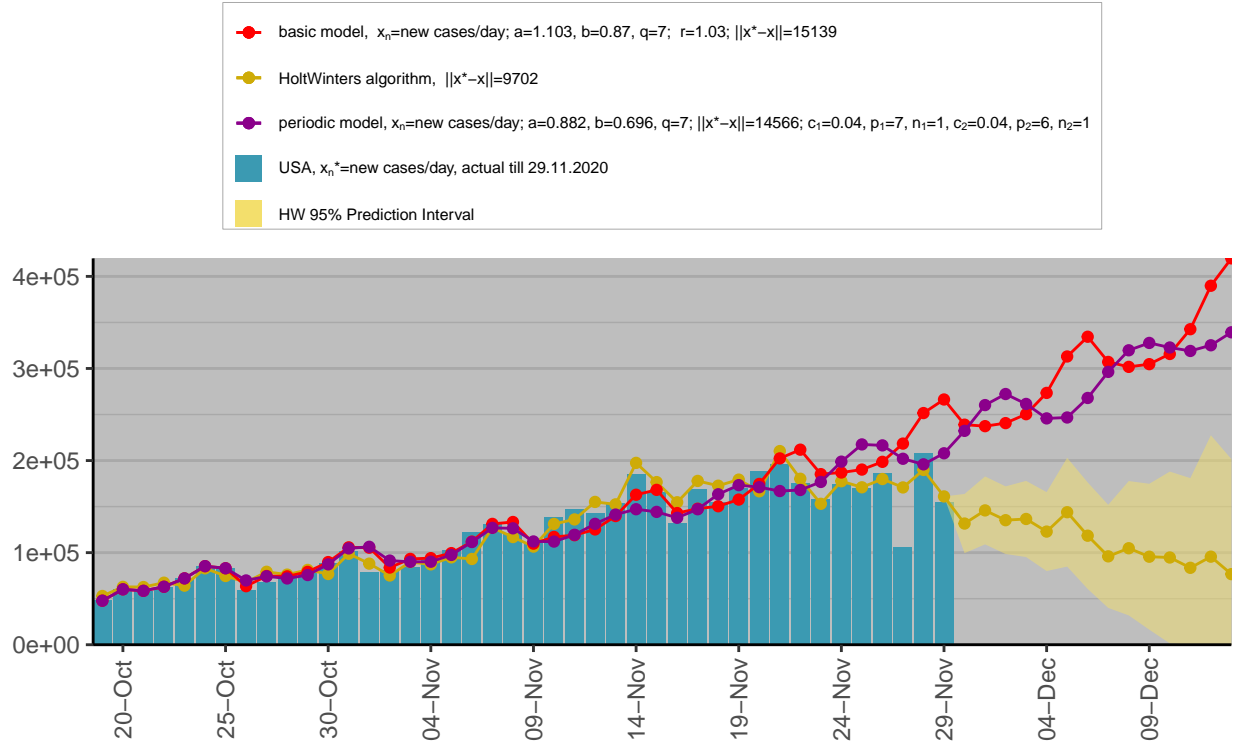


Figure 26: Comparison of basic and periodic models with HoltWinters model, USA

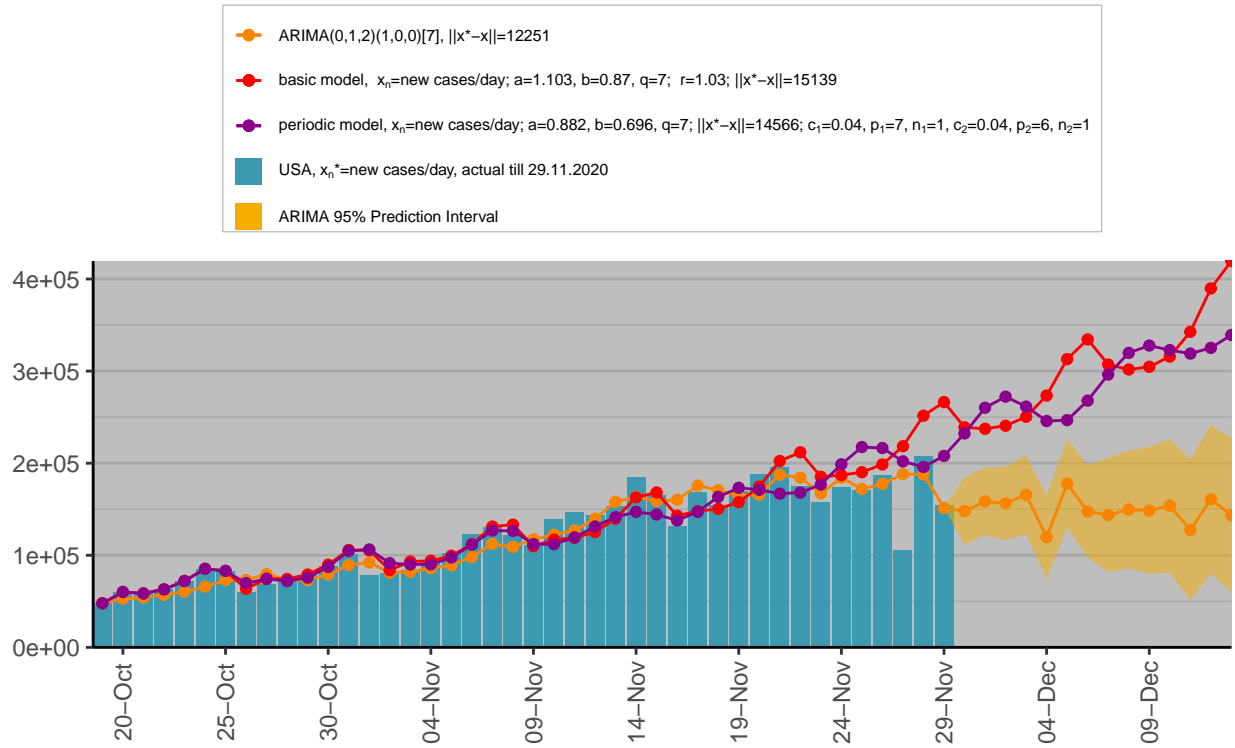


Figure 27: Comparison of basic and periodic models with ARIMA model, USA

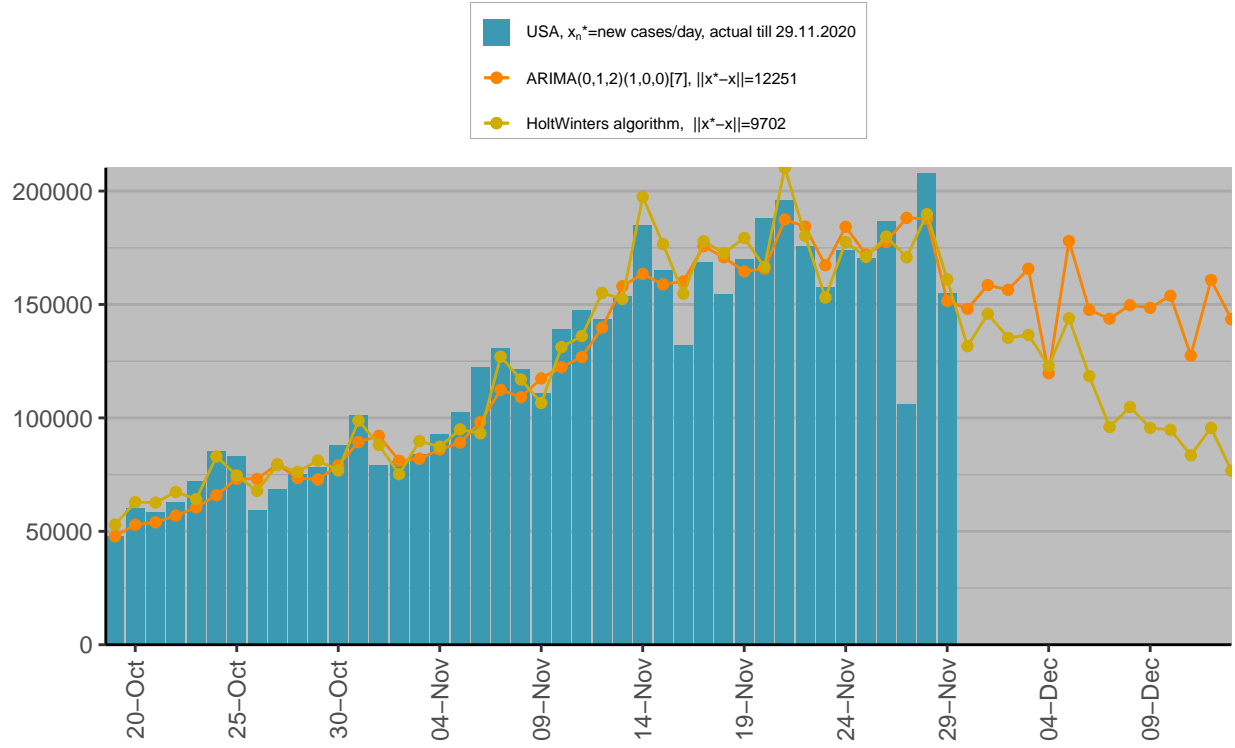


Figure 28: Comparison of HoltWinters and ARIMA models, USA

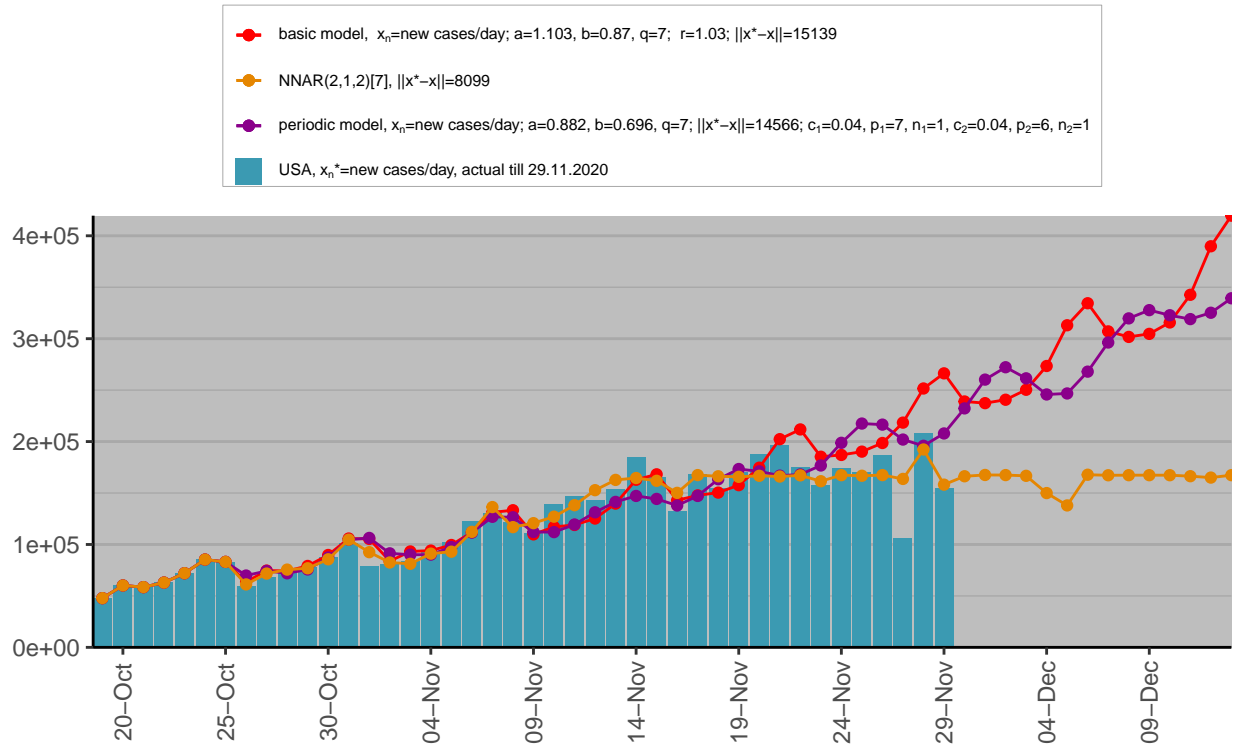


Figure 29: Comparison of basic and periodic models with Neural Network model, USA

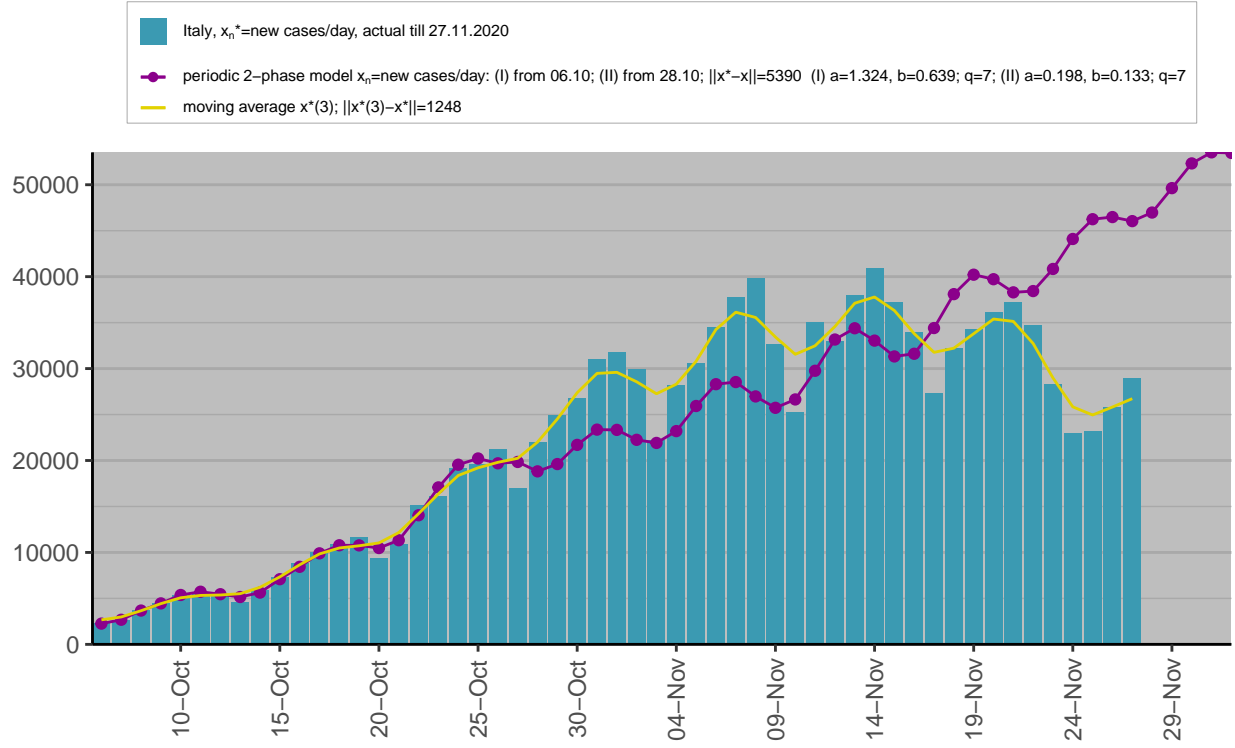


Figure 30: A multi-phase periodic model for Italy (x-diagram)

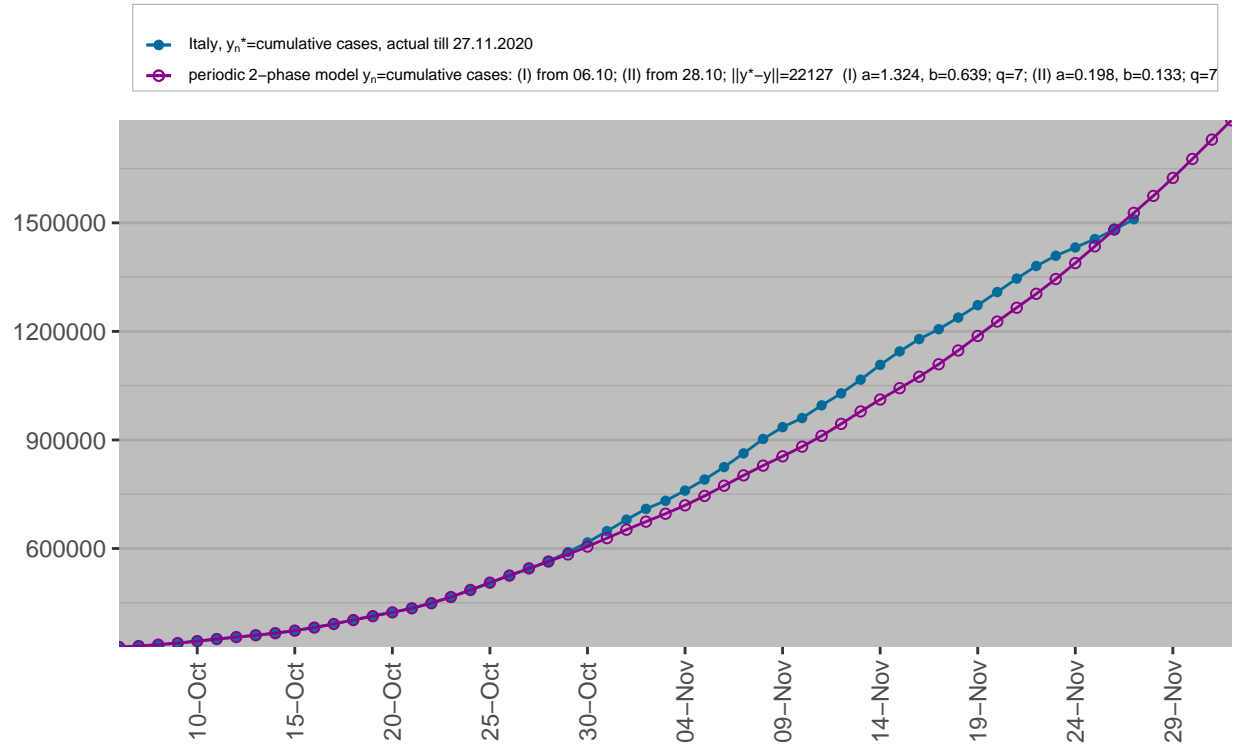


Figure 31: A multi-phase periodic model for Italy (y-diagram)



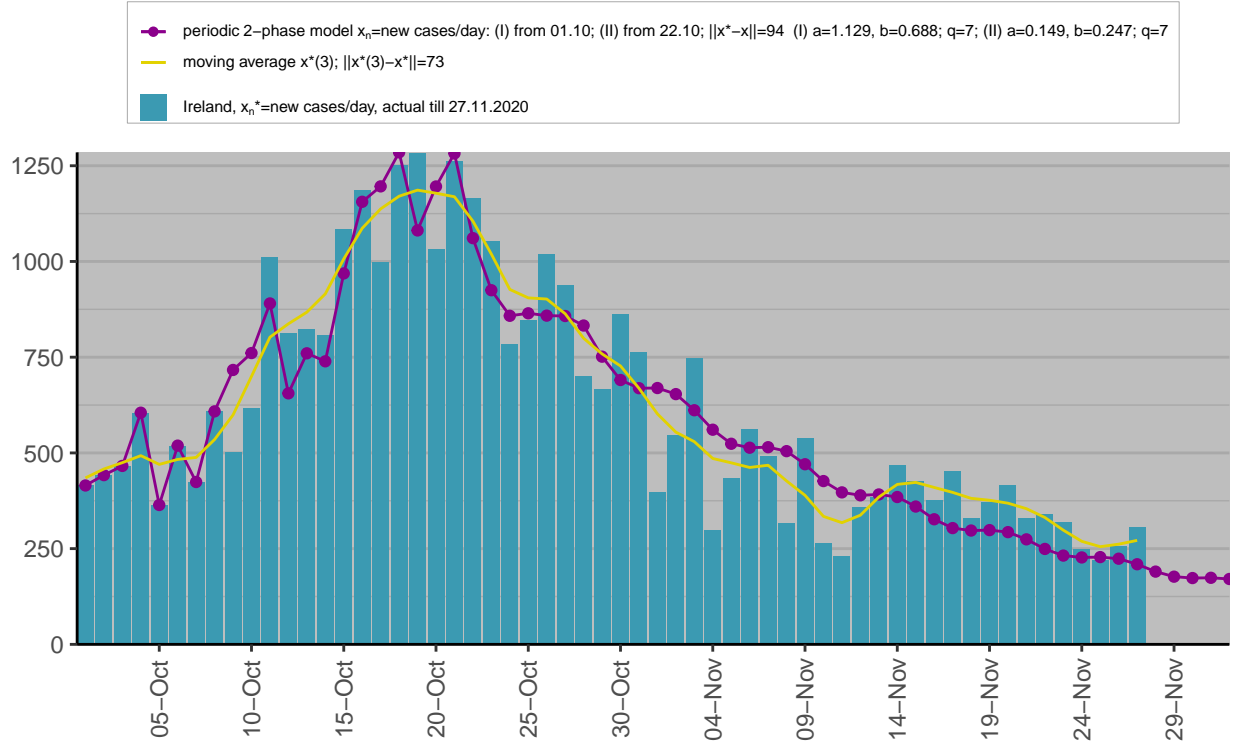


Figure 32: A multi-phase periodic model for Ireland (x-diagram)

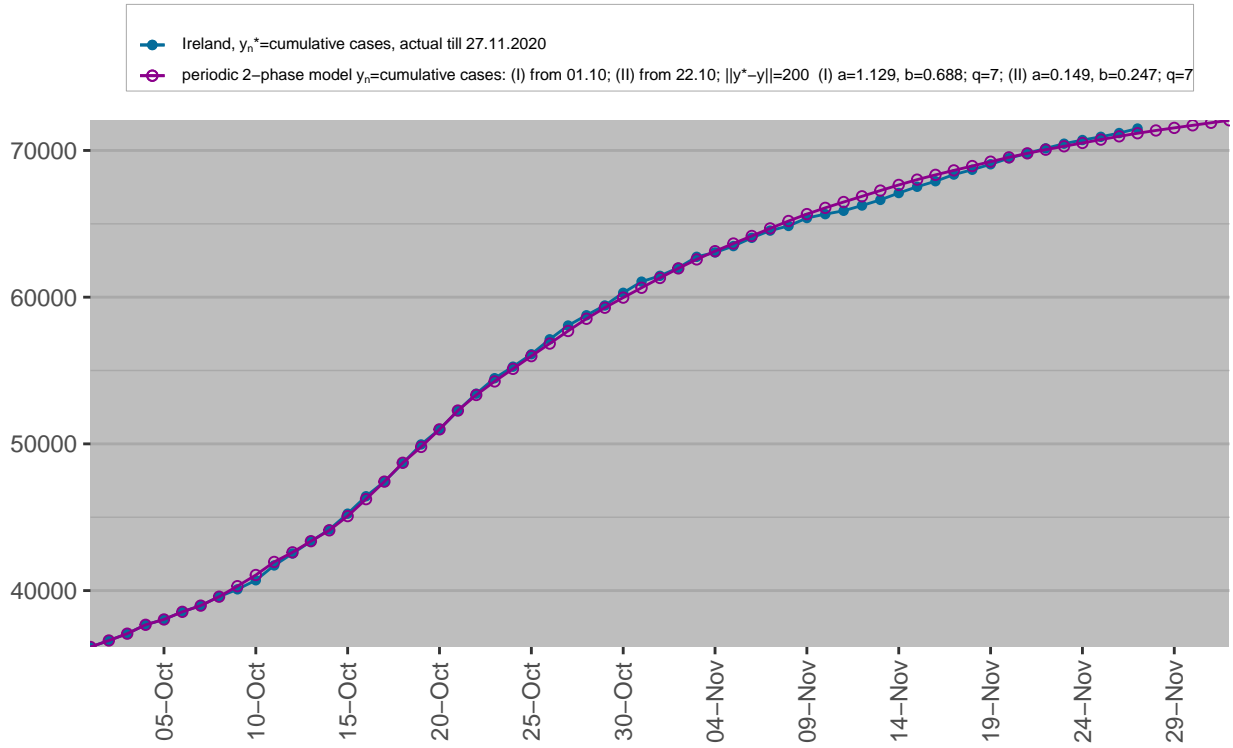


Figure 33: A multi-phase periodic model for Ireland (y-diagram)

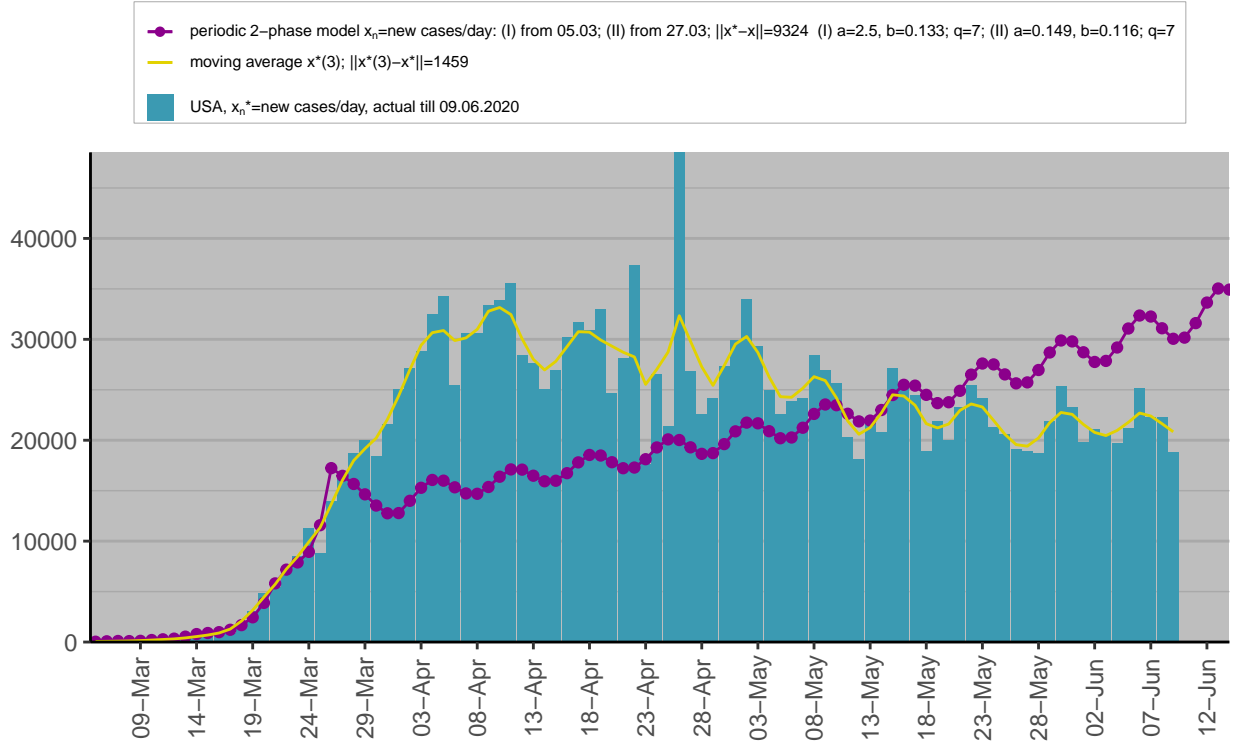


Figure 34: A multi-phase periodic model for the USA (x-diagram)

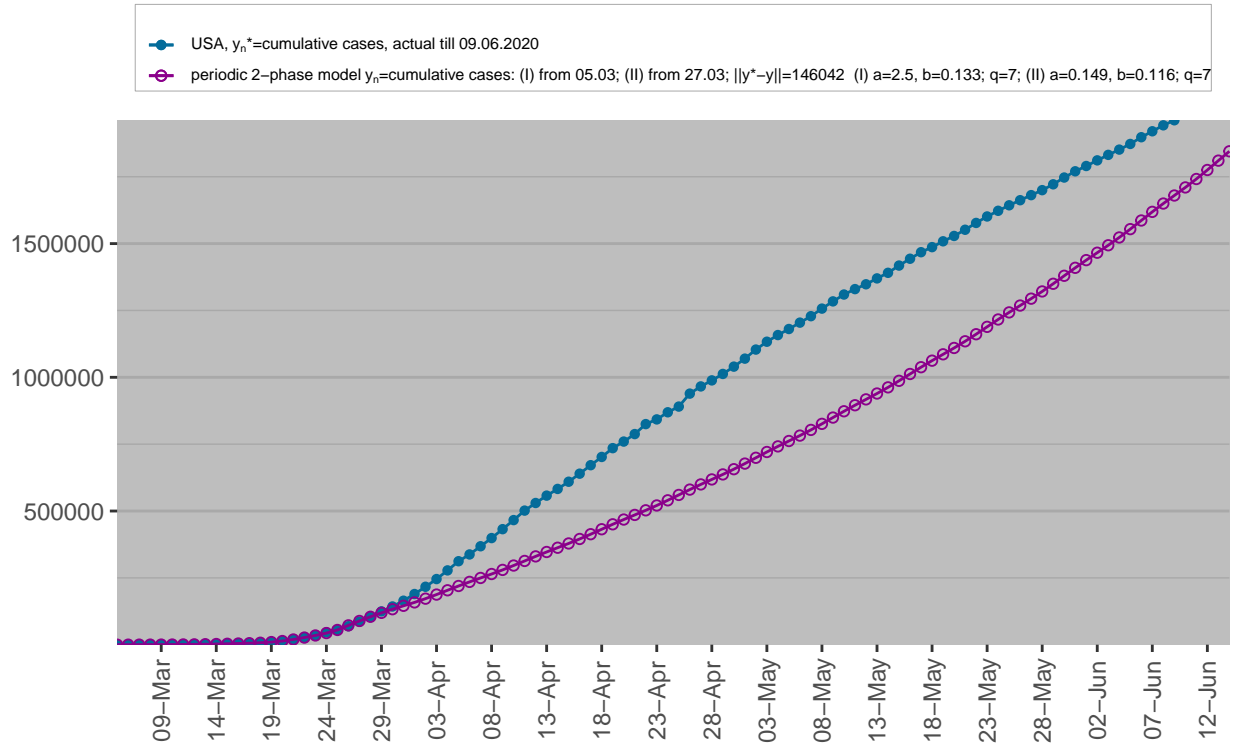


Figure 35: A multi-phase periodic model for the USA (y-diagram)

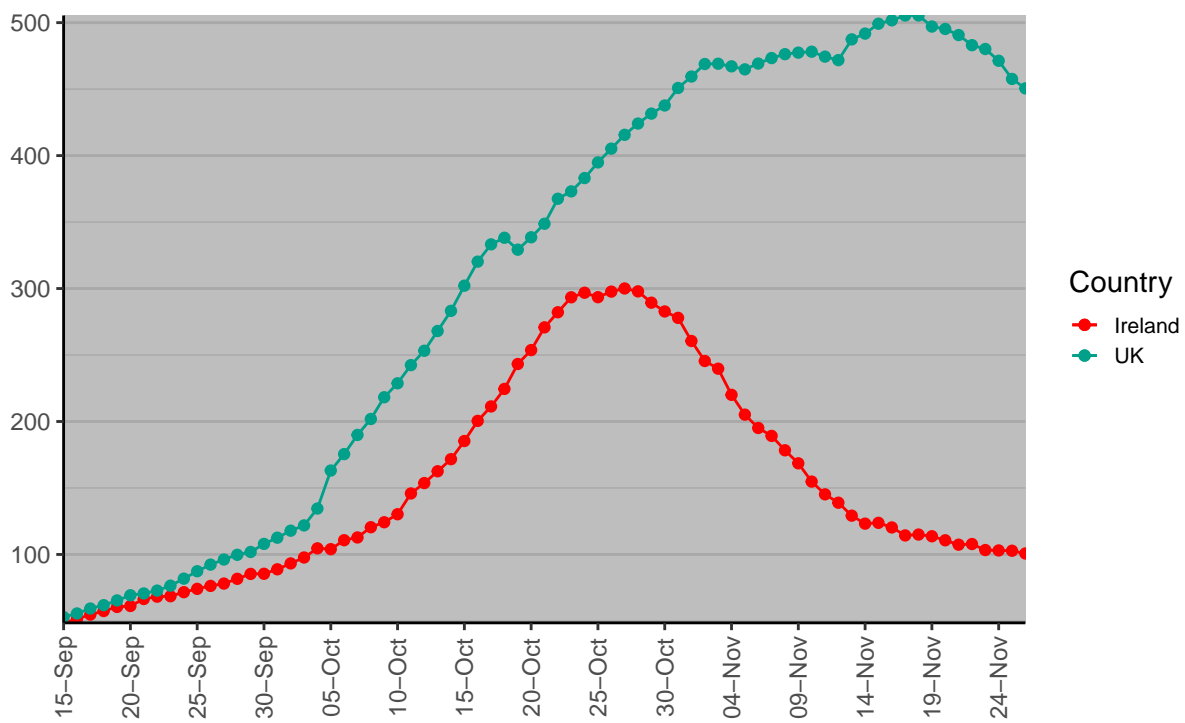


Figure 36: A Comparison of the cumulative number of cases for 14 days per 100,000 of the population - Ireland vs UK

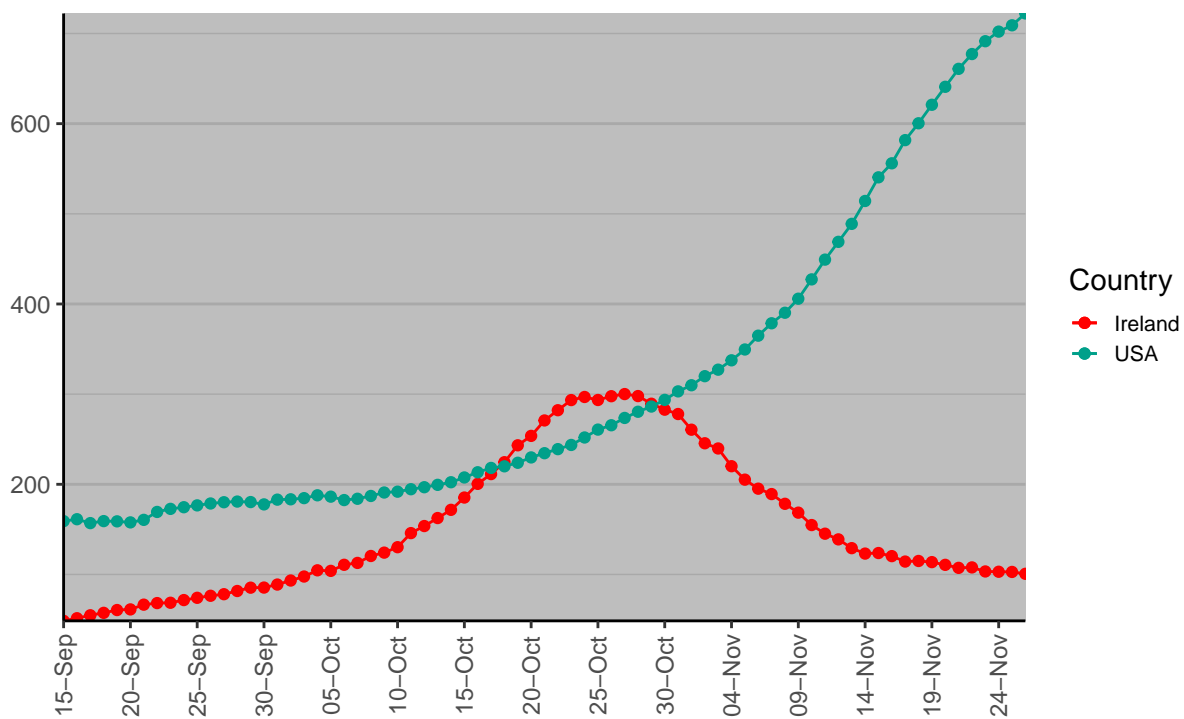


Figure 37: A Comparison of the cumulative number of cases for 14 days per 100,000 of the population - Ireland vs USA

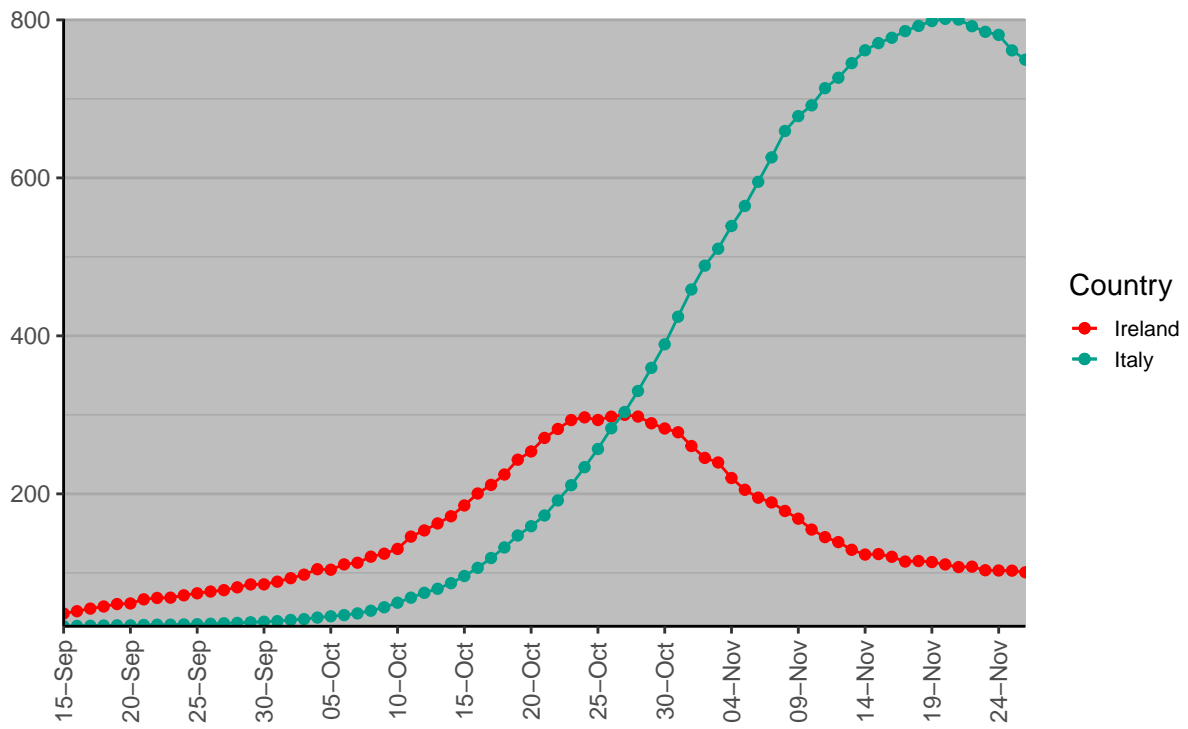


Figure 38: A Comparison of the cumulative number of cases for 14 days per 100,000 of the populaiton - Ireland vs Italy

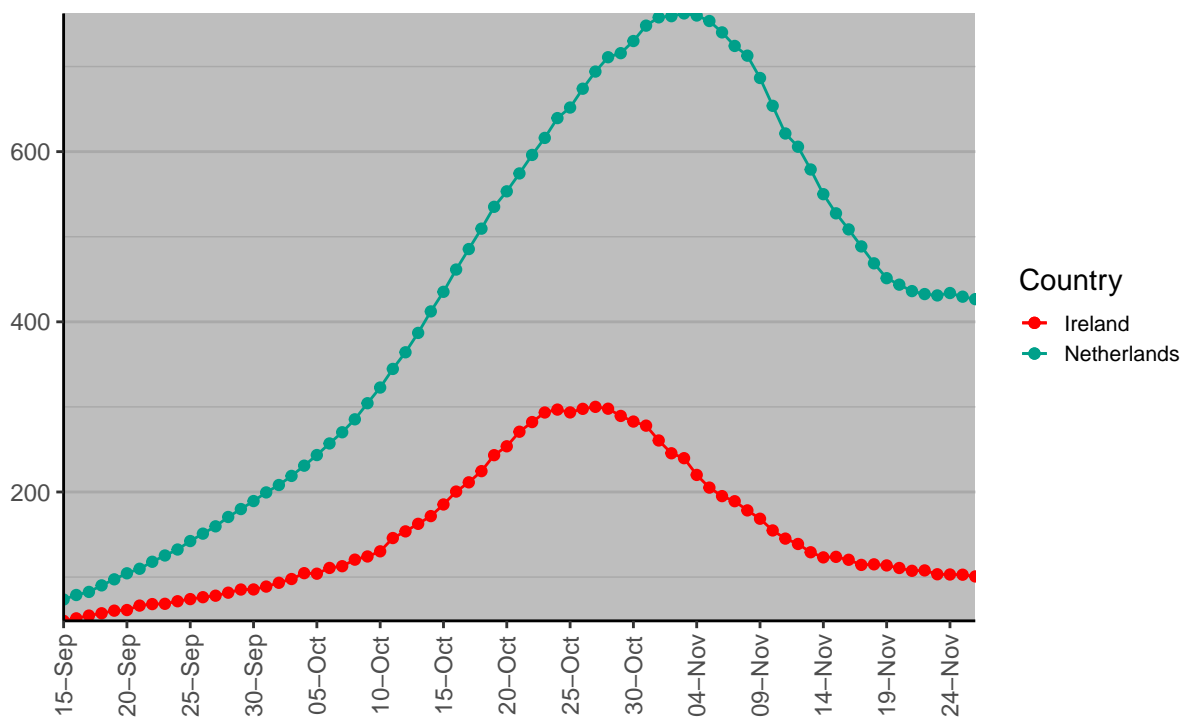


Figure 39: A Comparison of the cumulative number of cases for 14 days per 100,000 of the population - Ireland vs Netherlands

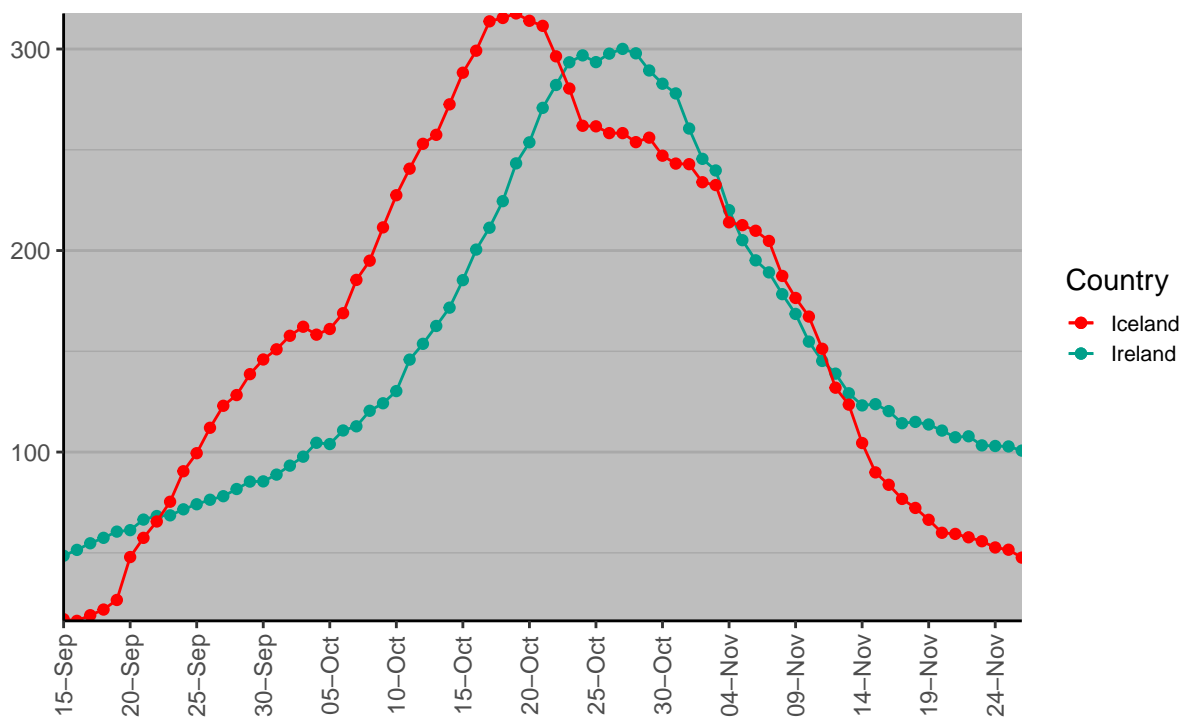


Figure 40: A Comparison of the cumulative number of cases for 14 days per 100,000 of the populaiton - Ireland vs Iceland