

22 April 2020

COVID-19 Projections

Didier Darcet

COVID-19 Deaths' Projection Method

At the beginning, epidemic processes are exponential by nature, in other words, the number of cases of infection or death accelerates.

Making projections therefore requires to capture the derivative of the acceleration, named 'the jolt' by mathematicians. In the following projections, we fit the accelerating or fading nature of the jolt, and project its dynamics over the subsequent four weeks.

The jolt is fitted with an exponential function over, respectively, the previous 5, 6, 7, 8 and 9 days. Large numbers are truncated to facilitate the reading of the charts.

Fitting over various windows provides an information on the most recent dynamics of the COVID-19 diffusion. The thicker dotted red line is the shortest trend, i.e. calculated over the previous five days.

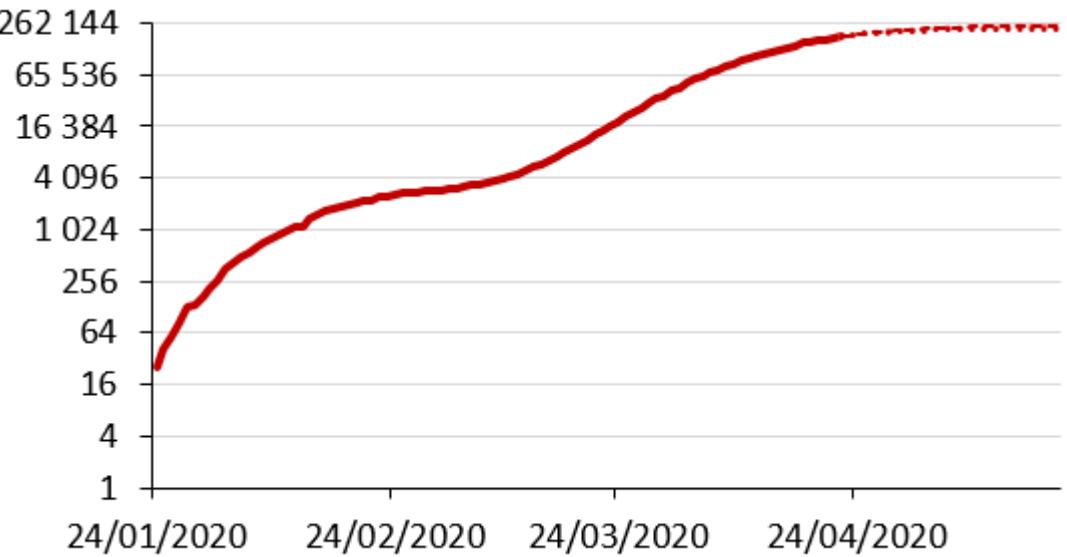
During the early days of an epidemic, projections can be extremely volatile, and it is therefore recommended not to draw black-and-white conclusions from a daily report, but to follow the evolution over many days.

DEATHS - PROJECTIONS

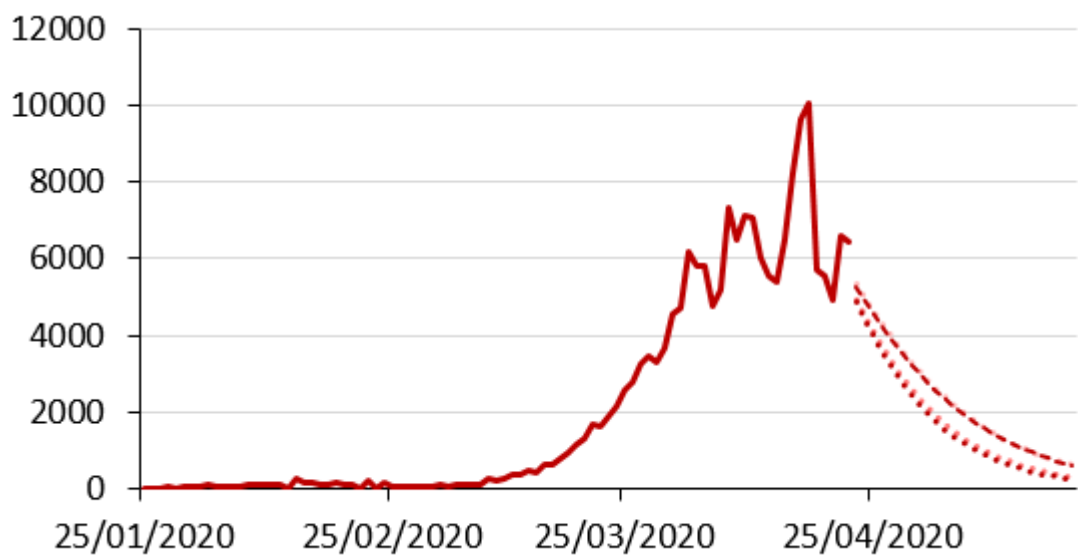
World

CONFIRMED 9 days'fit 8 days'fit 7 days'fit 6 days'fit

Cumulated



Daily

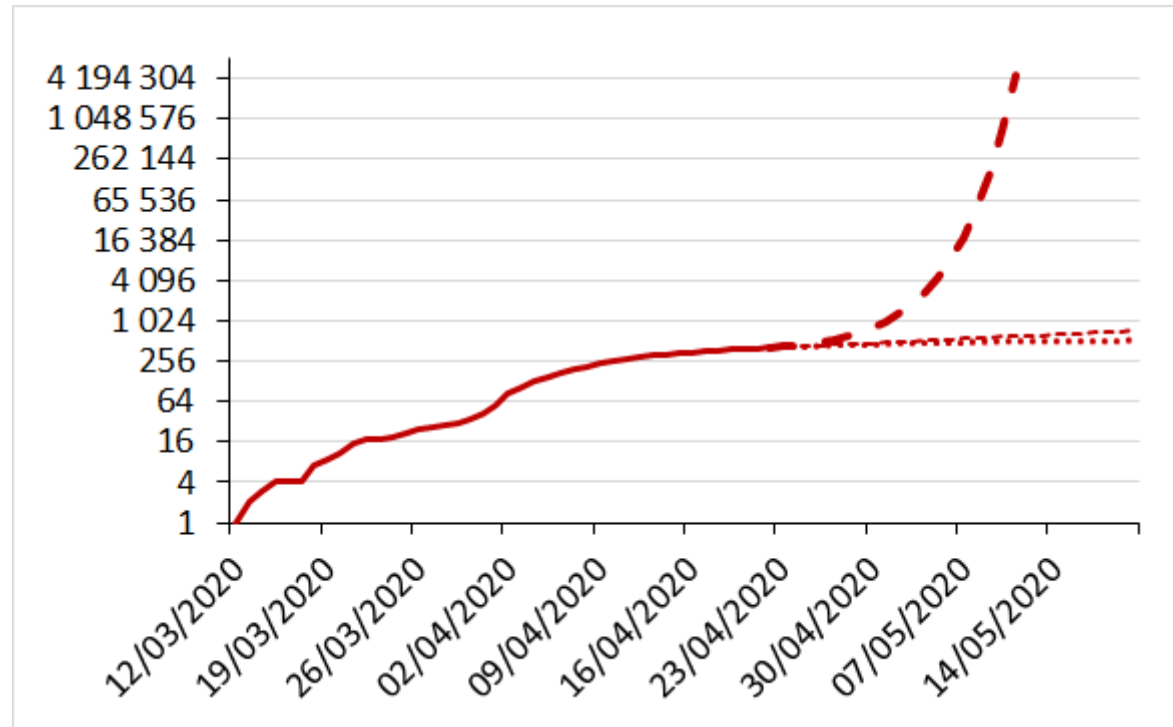


Data: The Johns Hopkins University, Politolog.com

Algeria

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated

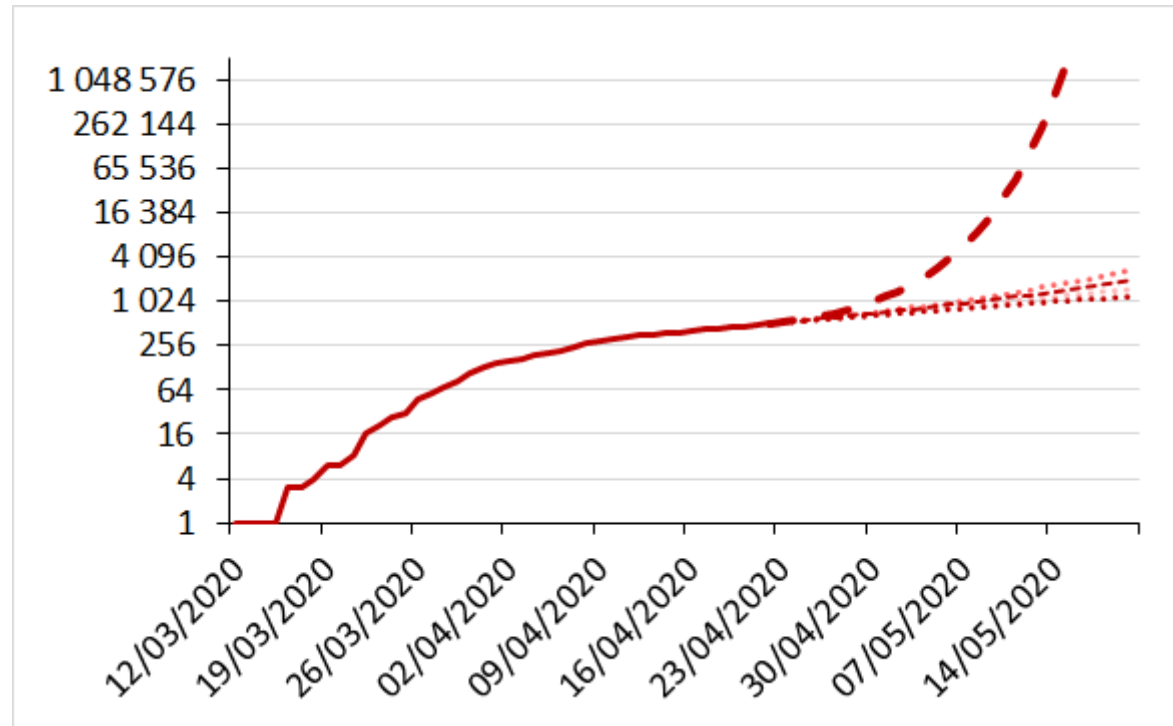


Data: The Johns Hopkins University, Politolog.com

Austria

— CONFIRMED 9 days' fit 8 days' fit 7 days' fit - - - 6 days' fit - - - 5 days' fit

Cumulated

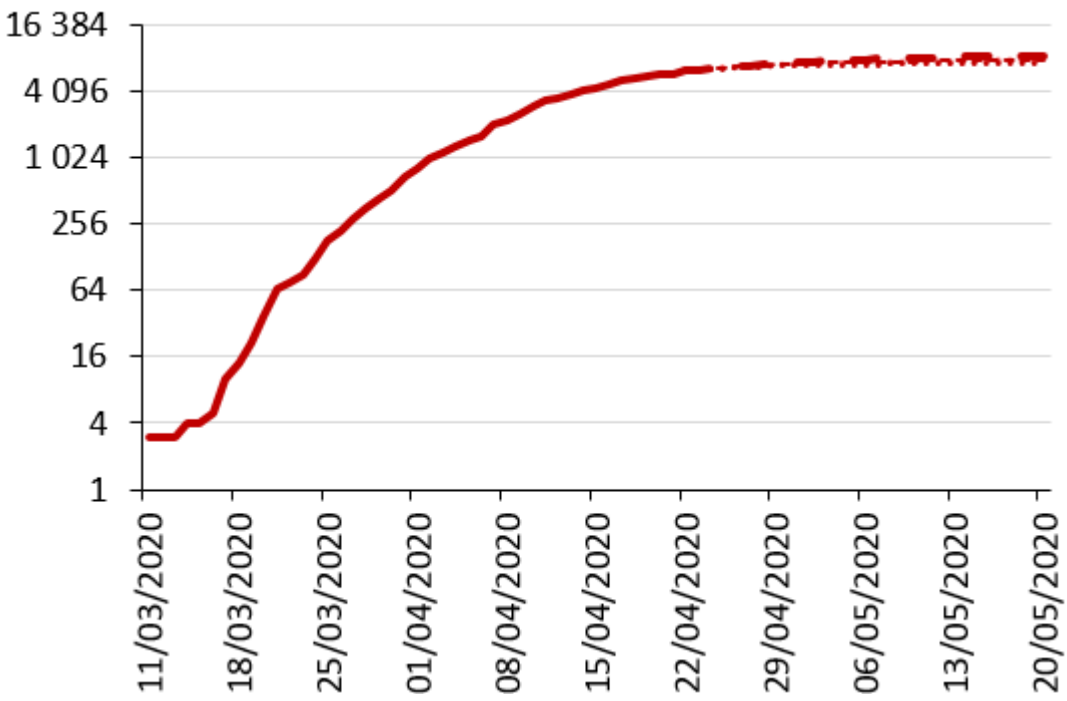


Data: The Johns Hopkins University, Politolog.com

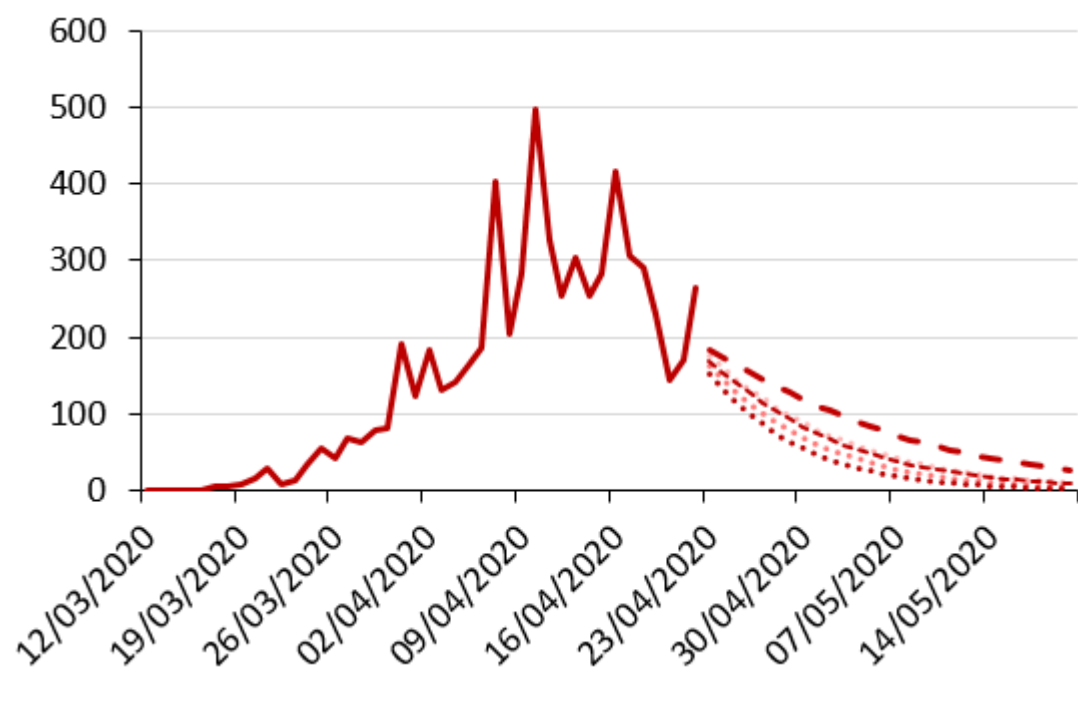
Belgium

— CONFIRMED ····· 9 days'fit ····· 8 days'fit ····· 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated



Daily

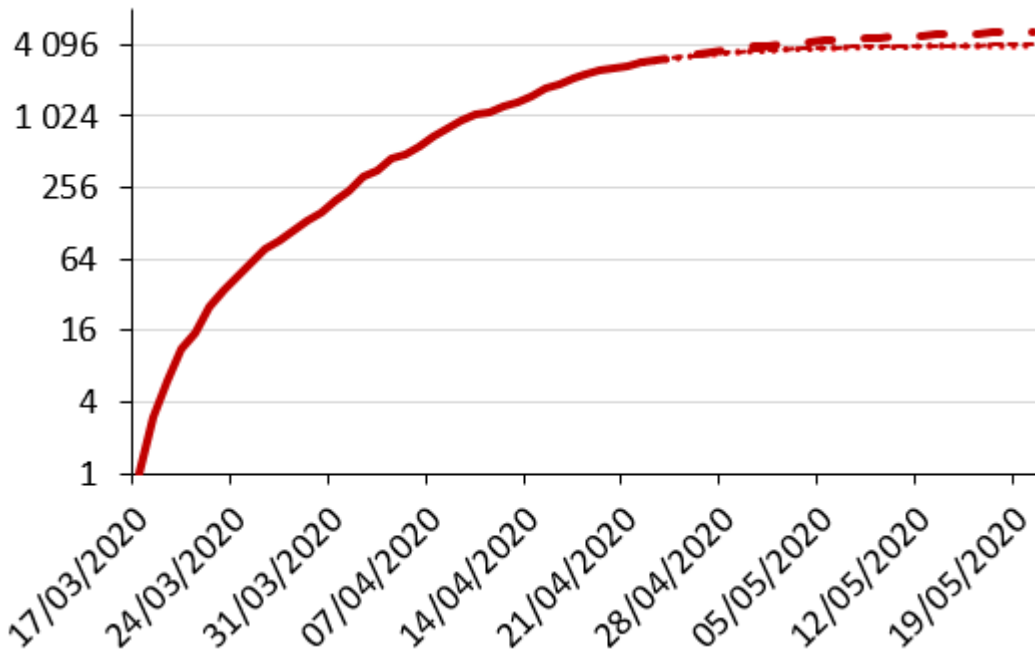


Data: The Johns Hopkins University, Politolog.com

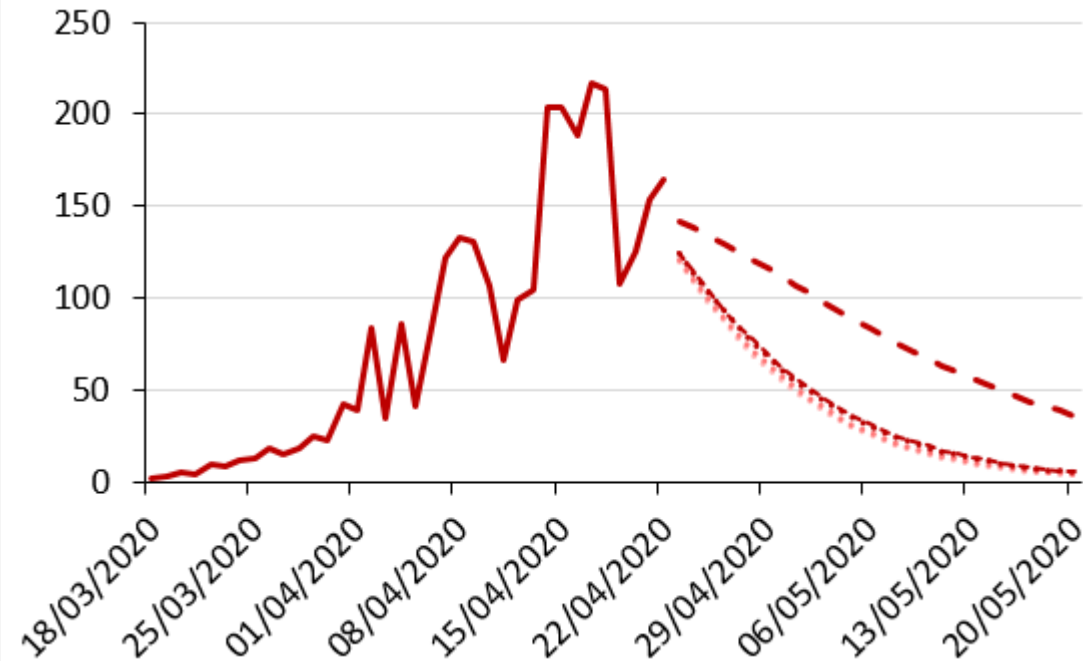
Brazil

— CONFIRMED ····· 9 days' fit ····· 8 days' fit ····· 7 days' fit - - - - 6 days' fit - - - - 5 days' fit

Cumulated



Daily

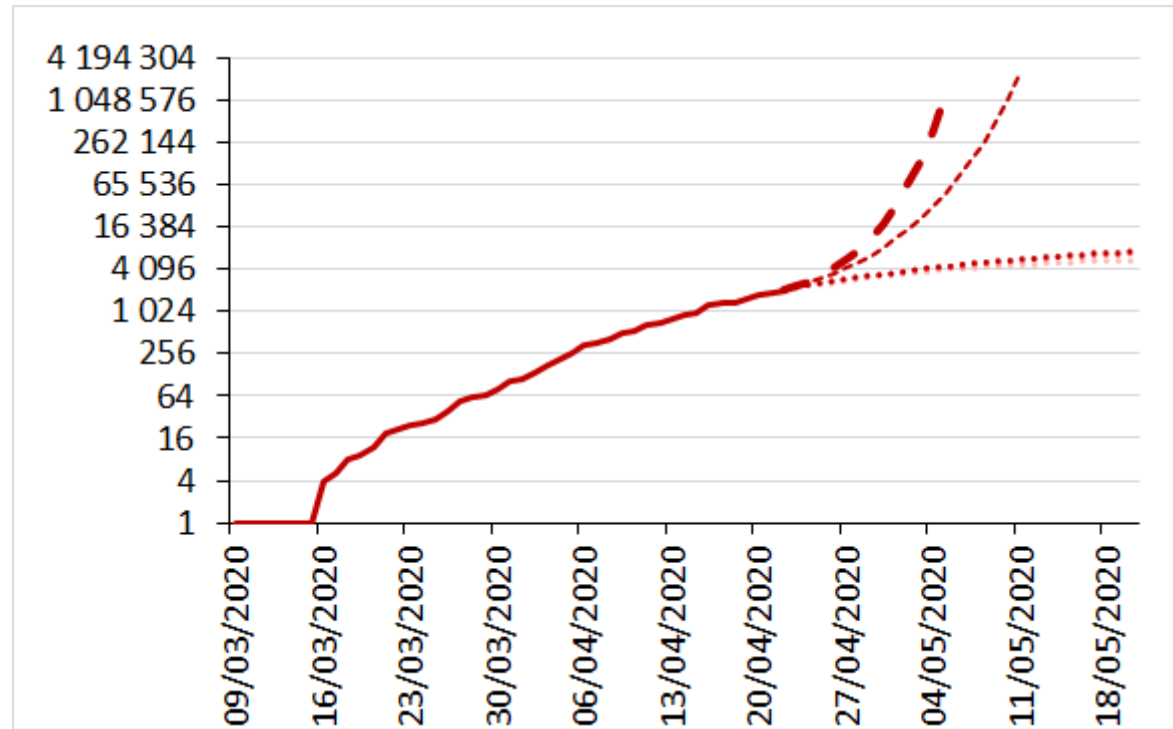


Data: The Johns Hopkins University, Politolog.com

Canada

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated

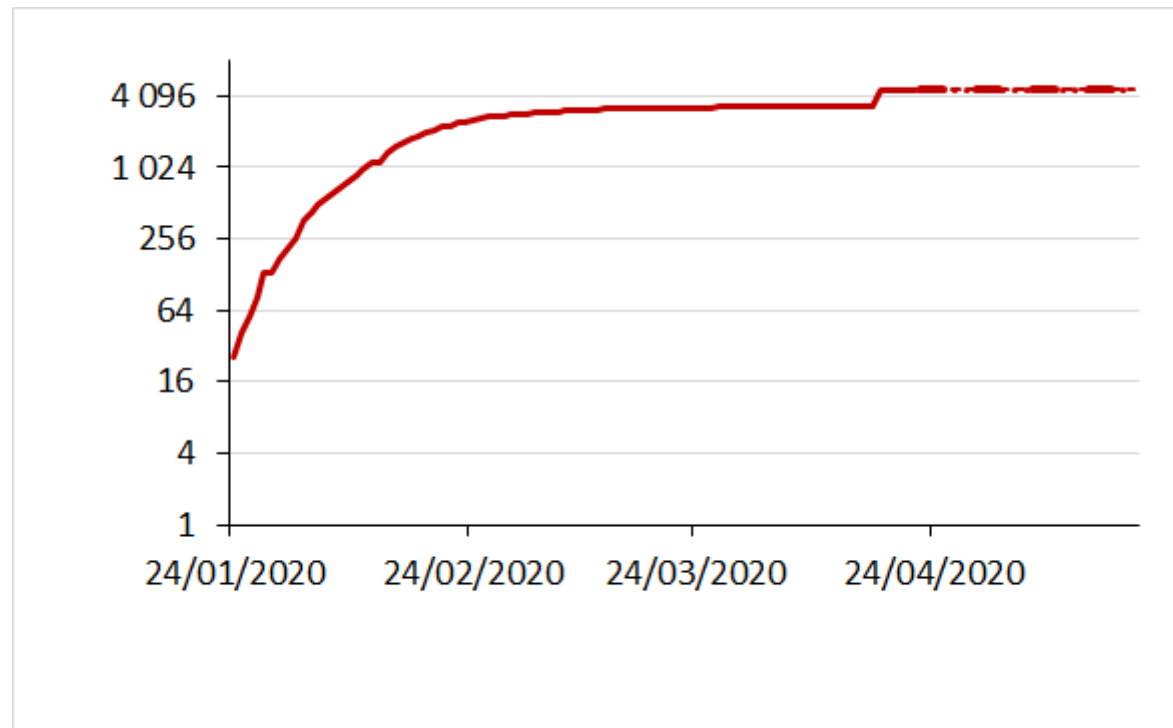


Data: The Johns Hopkins University, Politolog.com

China

— CONFIRMED 9 days' fit 8 days' fit 7 days' fit - - - - 6 days' fit - - - - 5 days' fit

Cumulated

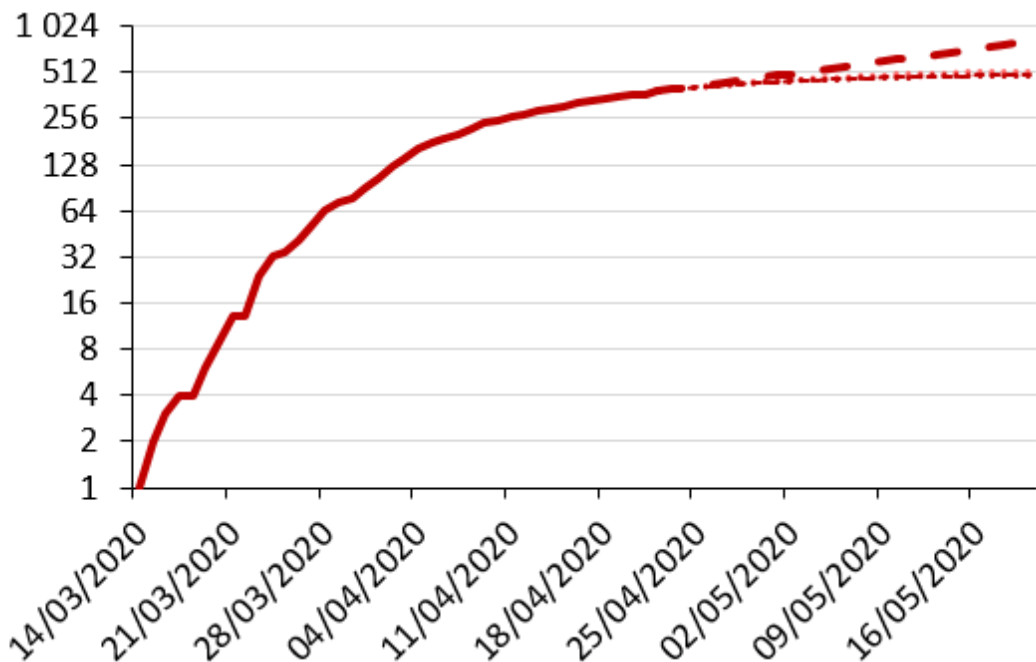


Data: The Johns Hopkins University, Politolog.com

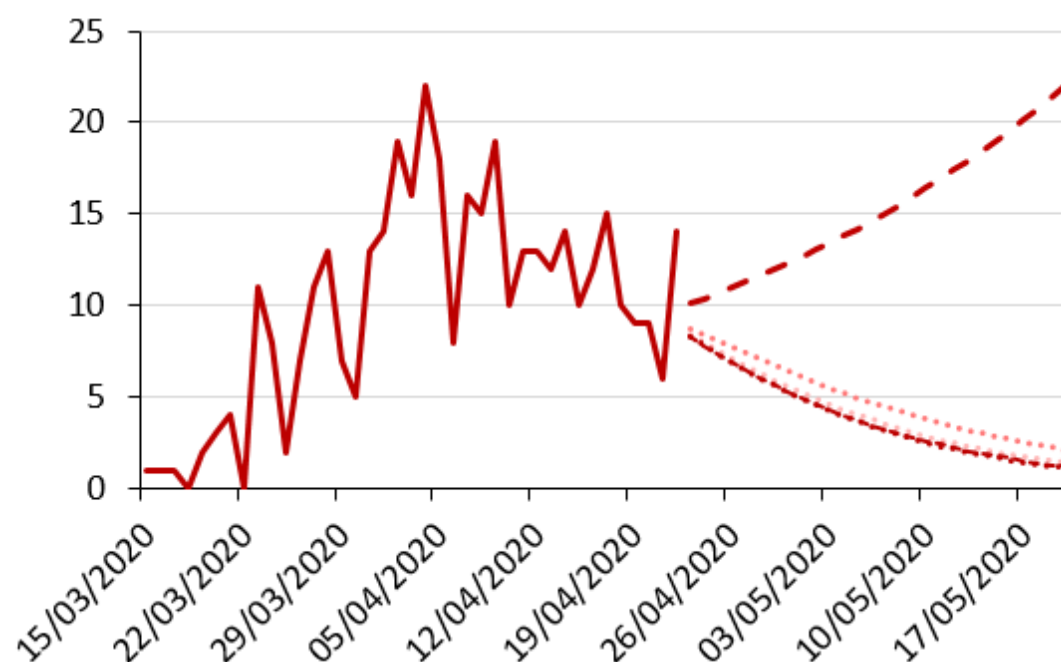
Denmark

— CONFIRMED 9 days' fit 8 days' fit 7 days' fit - - - 6 days' fit - - - 5 days' fit

Cumulated



Daily

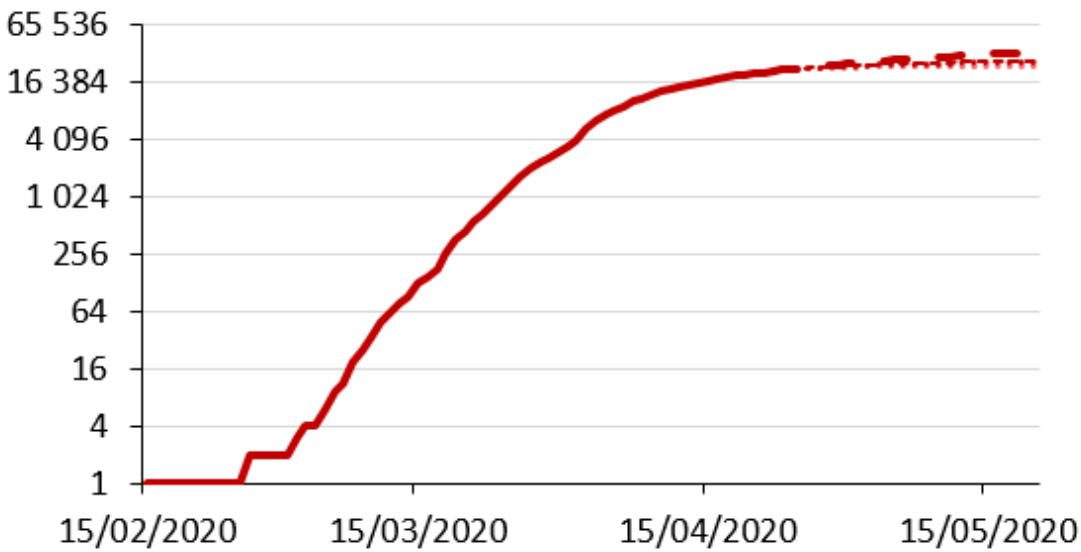


Data: The Johns Hopkins University, Politolog.com

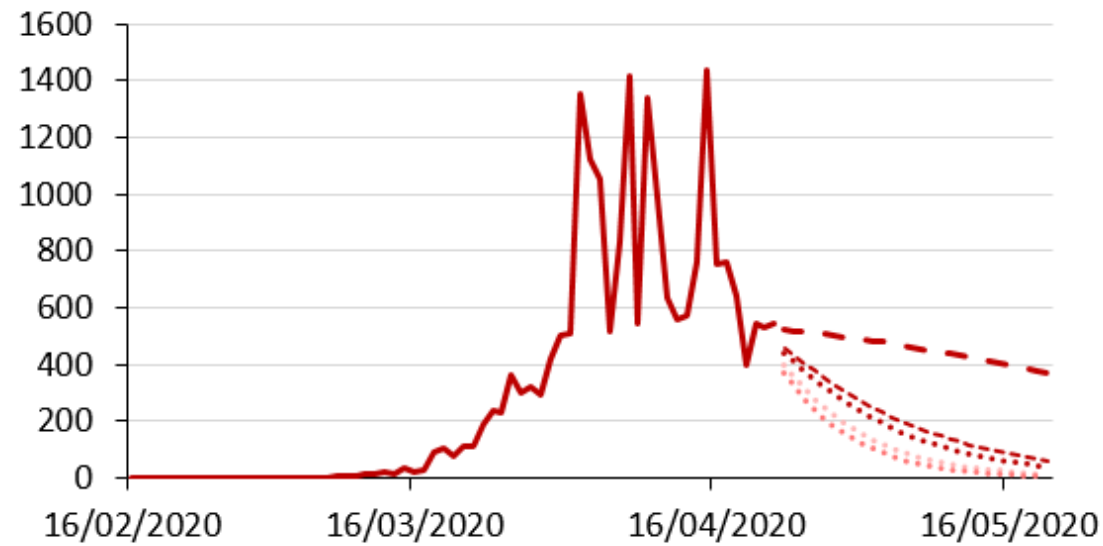
France

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated



Daily

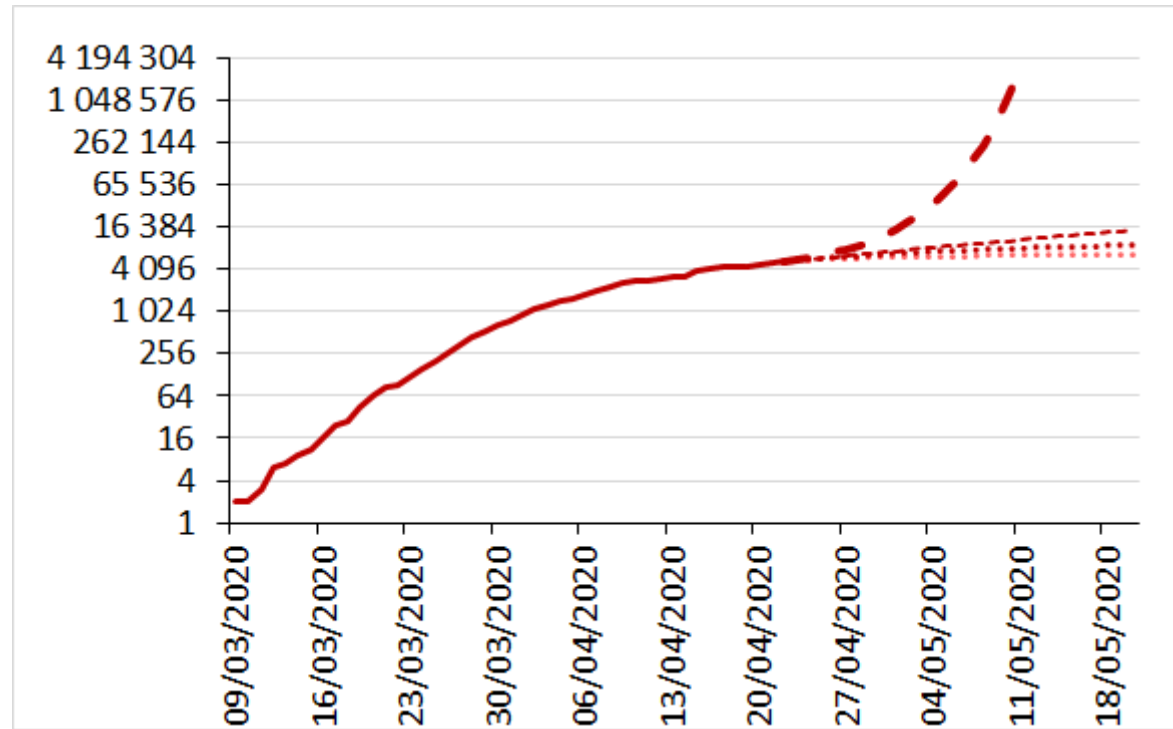


Data: The Johns Hopkins University, Politolog.com

Germany

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated

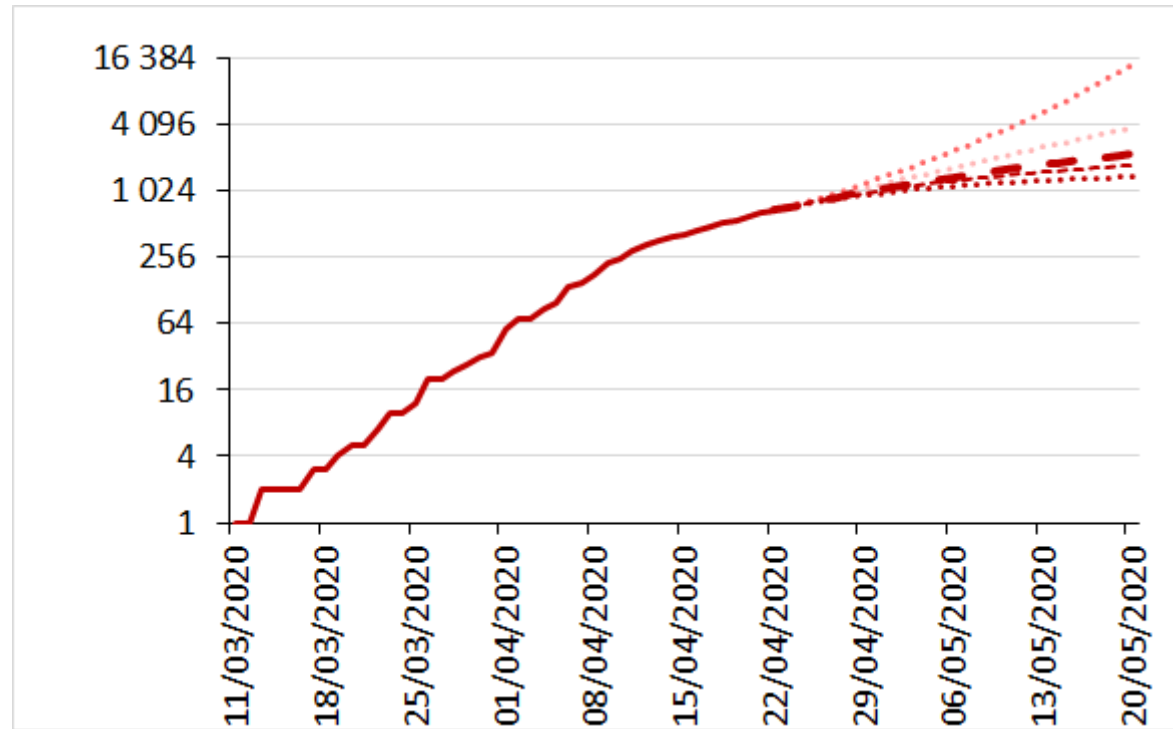


Data: The Johns Hopkins University, Politolog.com

India

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated

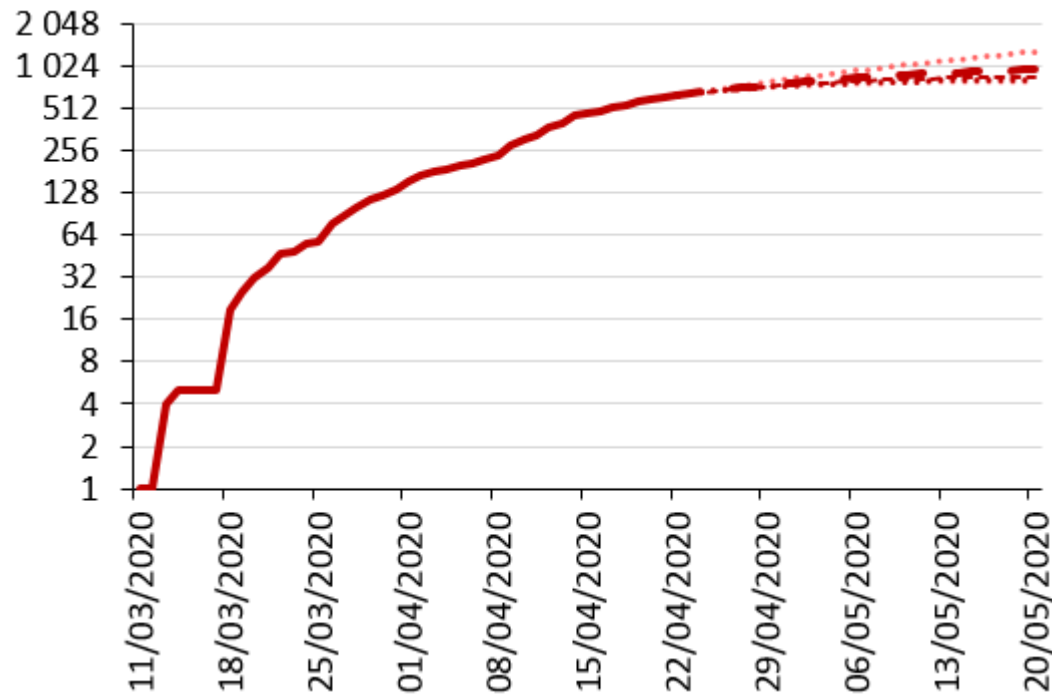


Data: The Johns Hopkins University, Politolog.com

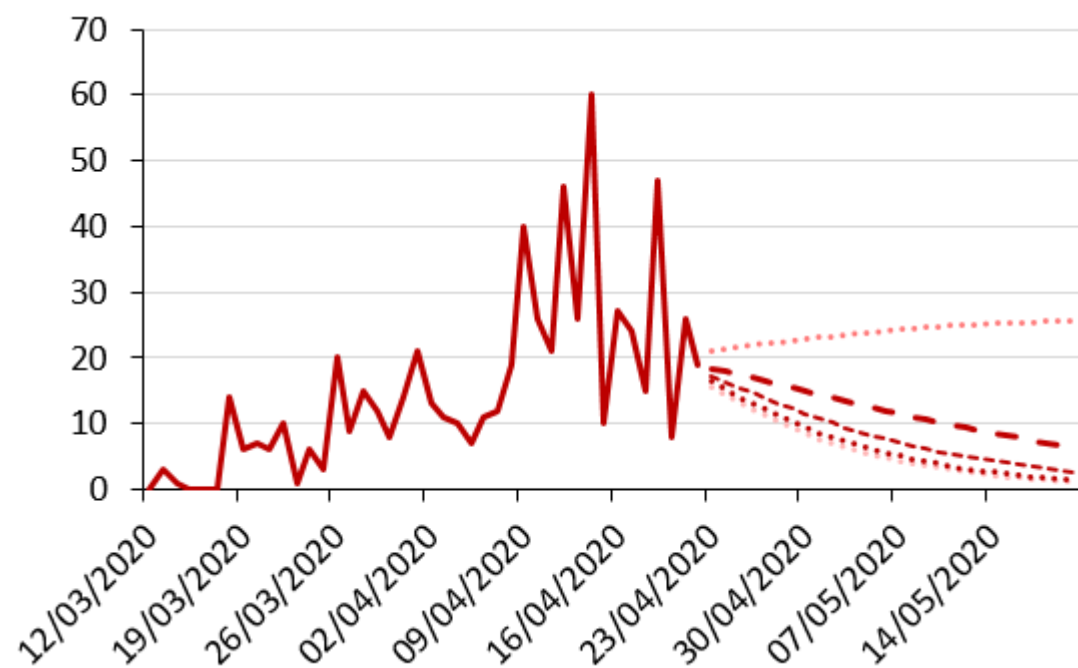
Indonesia

— CONFIRMED ····· 9 days'fit ····· 8 days'fit ····· 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated



Daily

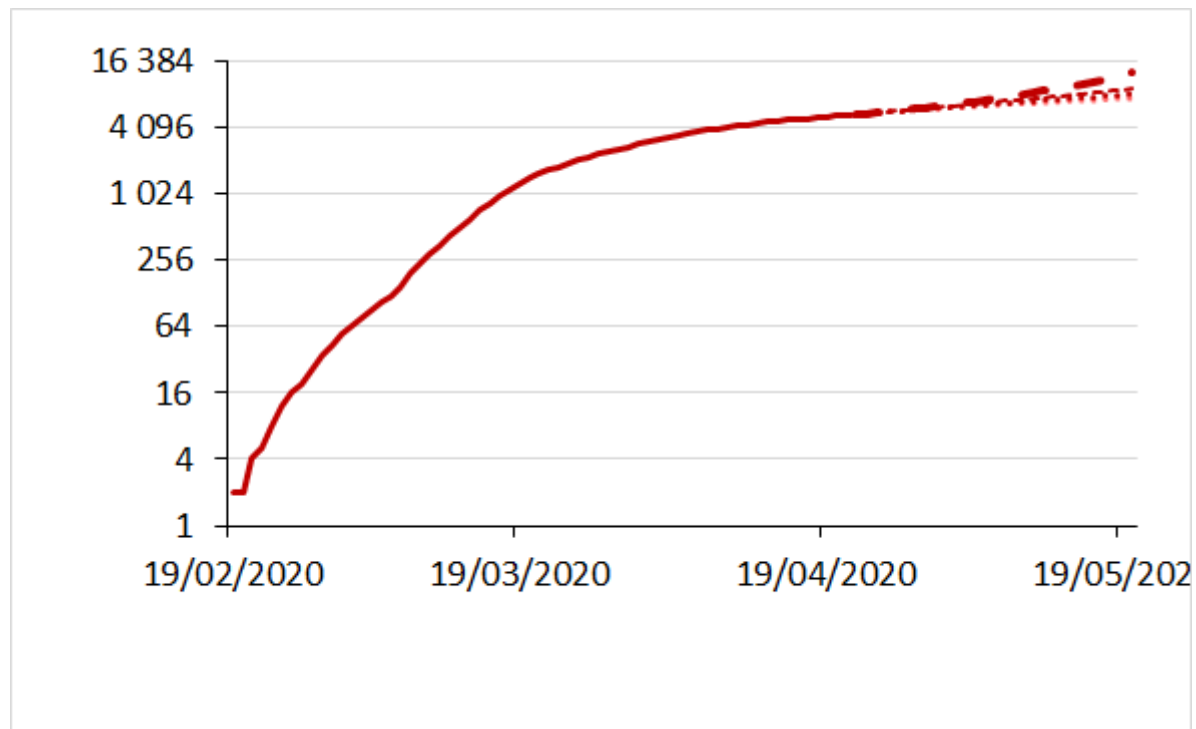


Data: The Johns Hopkins University, Politolog.com

Iran

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated

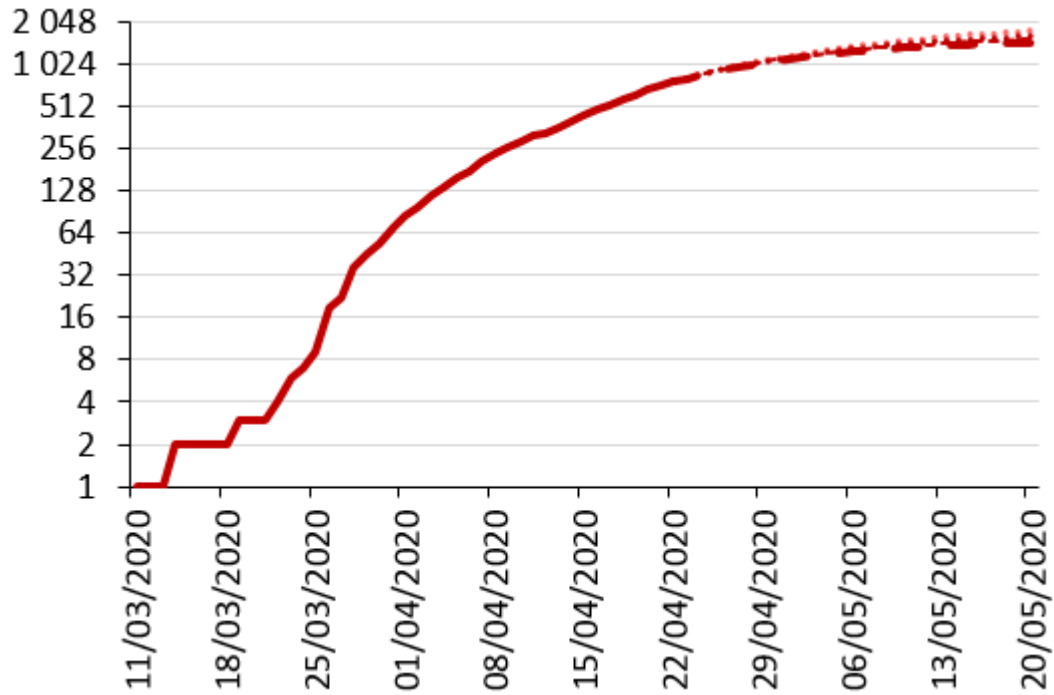


Data: The Johns Hopkins University, Politolog.com

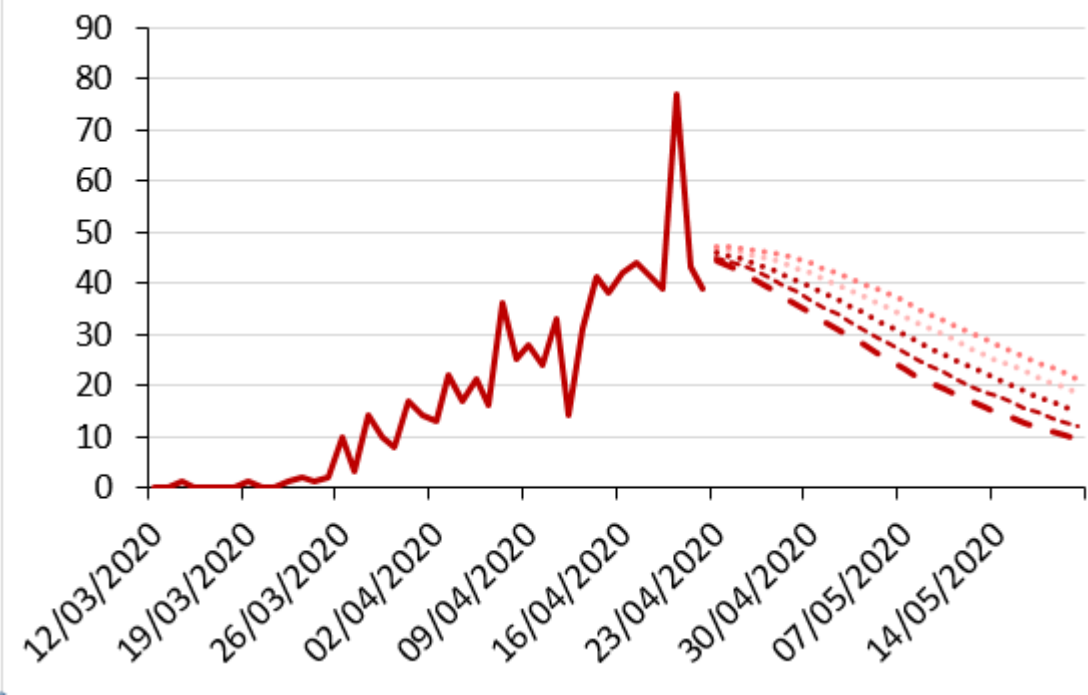
Ireland

— CONFIRMED ····· 9 days'fit ····· 8 days'fit ····· 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated



Daily

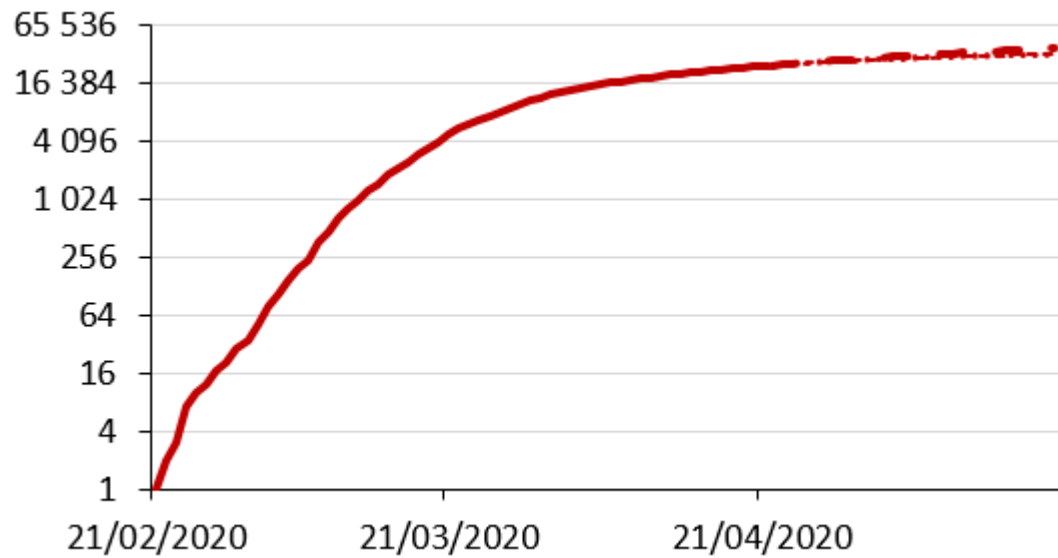


Data: The Johns Hopkins University, Politolog.com

Italy

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated



Daily

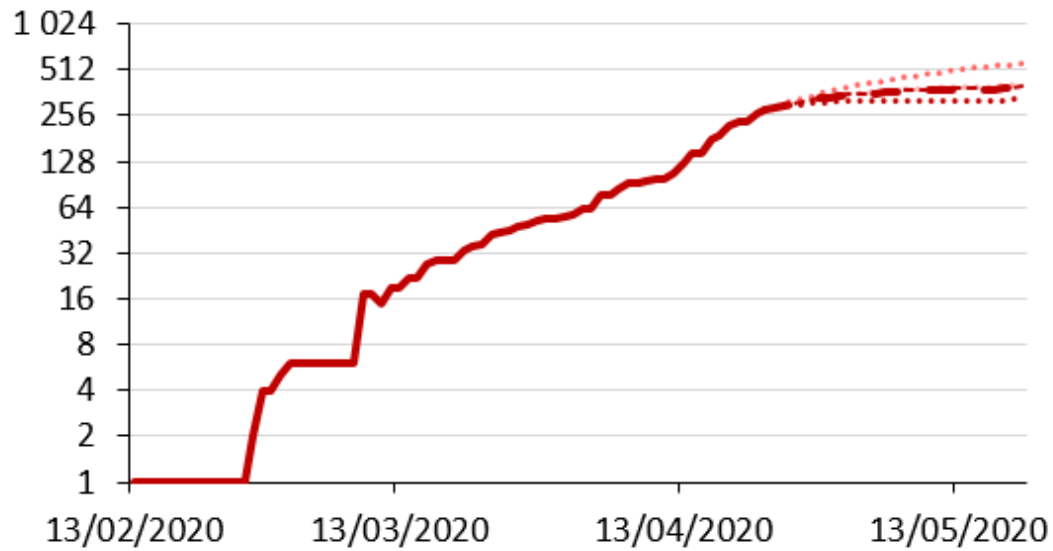


Data: The Johns Hopkins University, Politolog.com

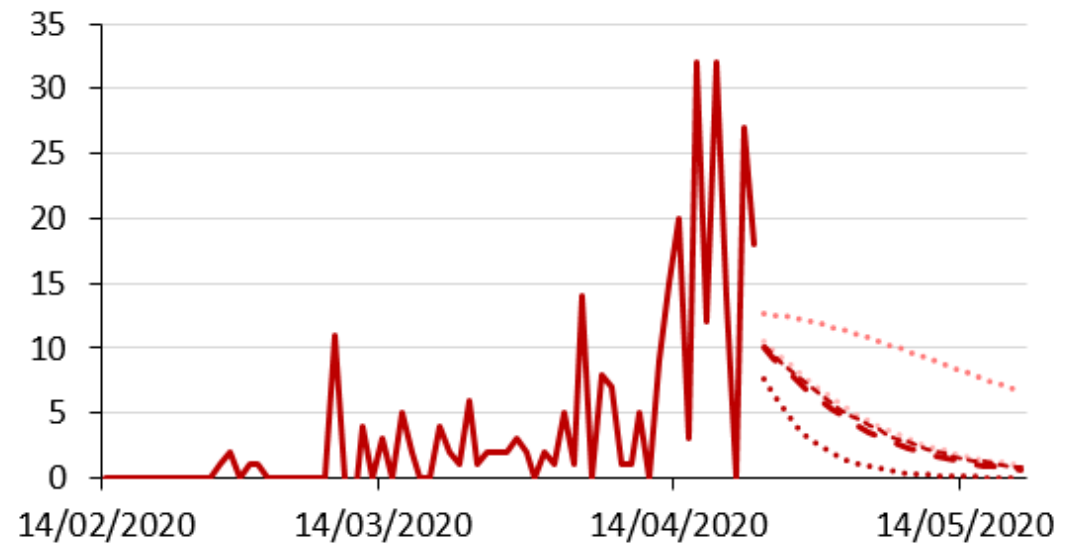
Japan

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated



Daily

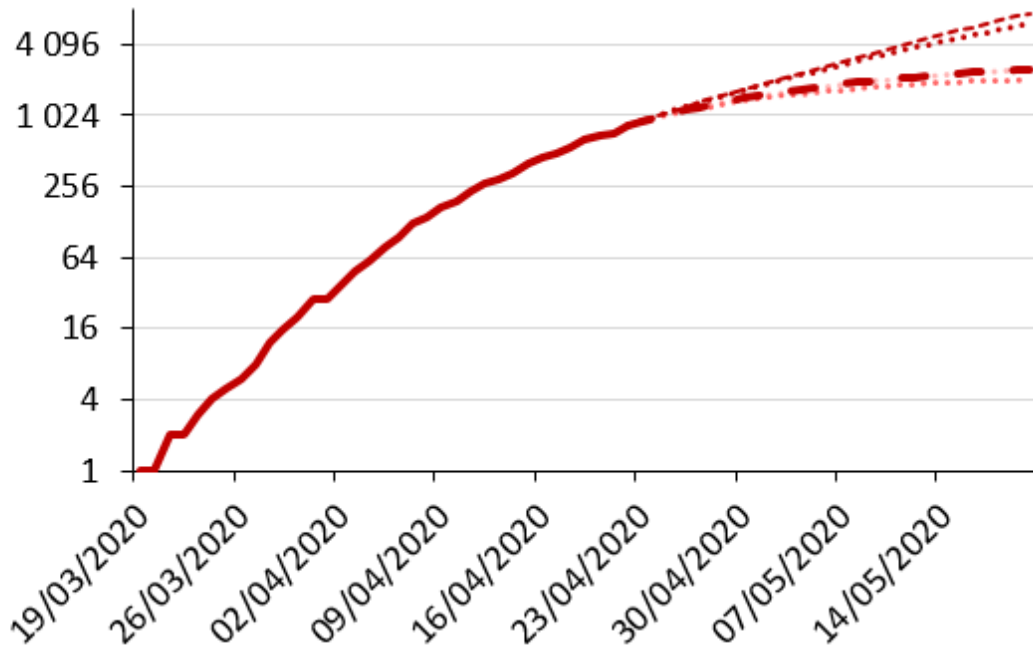


Data: The Johns Hopkins University, Politolog.com

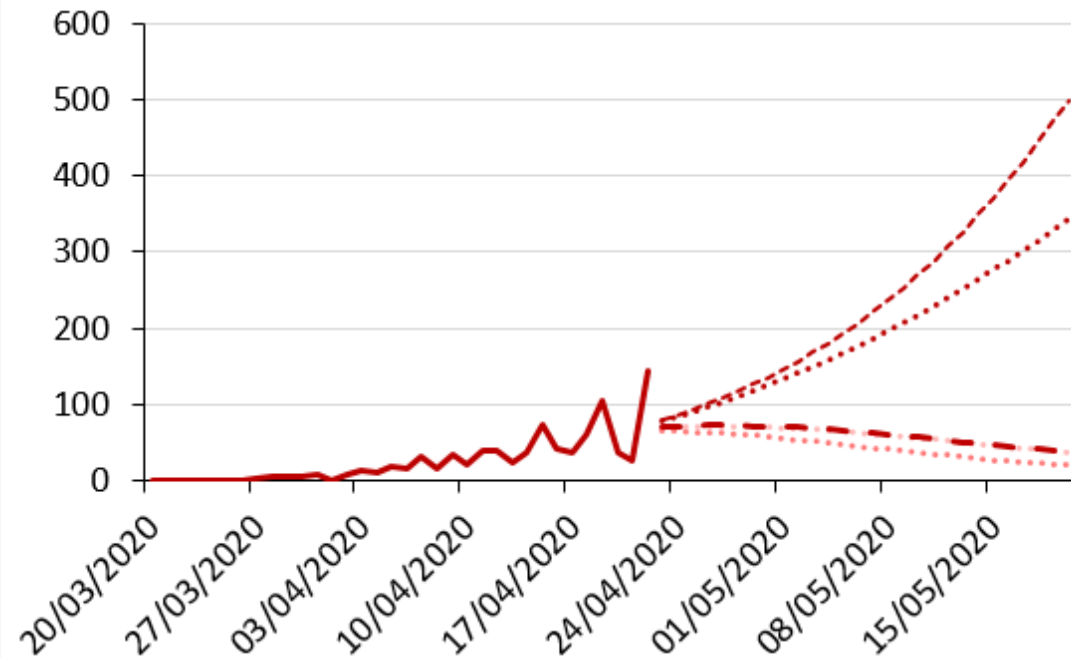
Mexico

CONFIRMED 9 days'fit 8 days'fit 7 days'fit 6 days'fit 5 days'fit

Cumulated



Daily

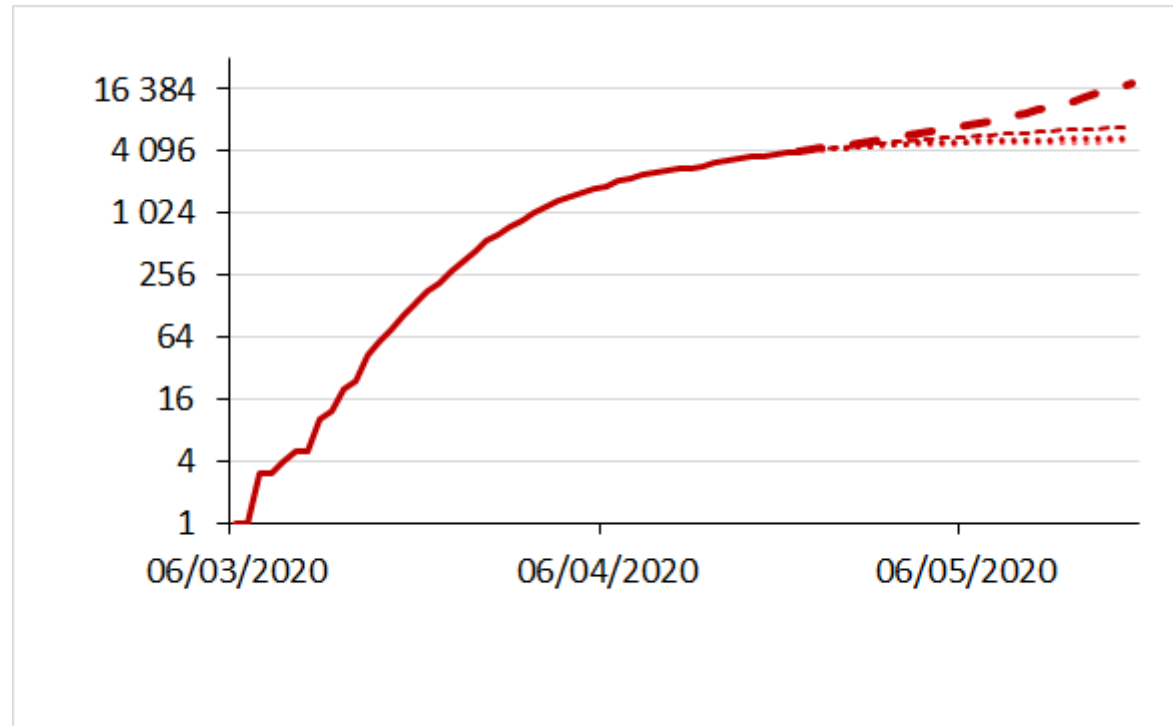


Data: The Johns Hopkins University, Politolog.com

Netherlands

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated

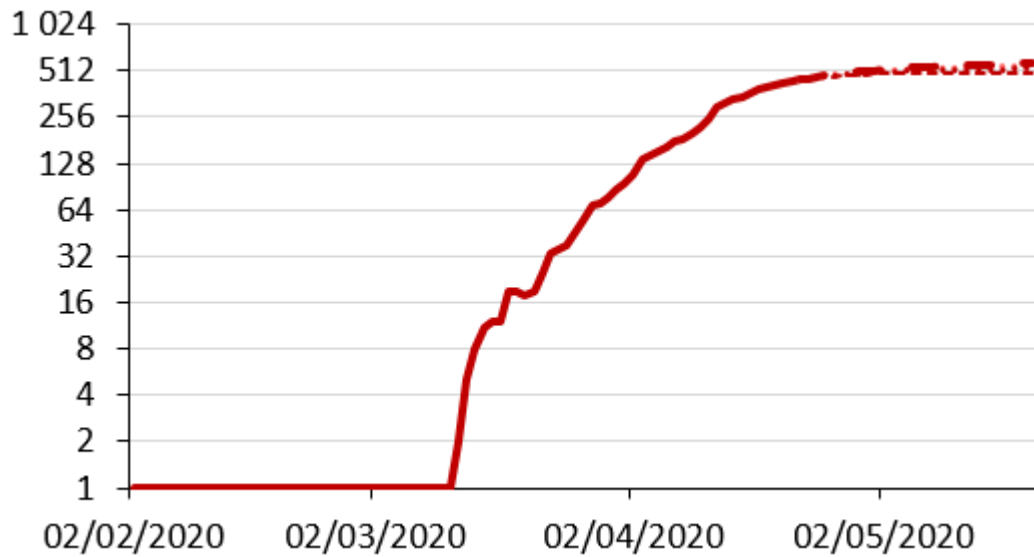


Data: The Johns Hopkins University, Politolog.com

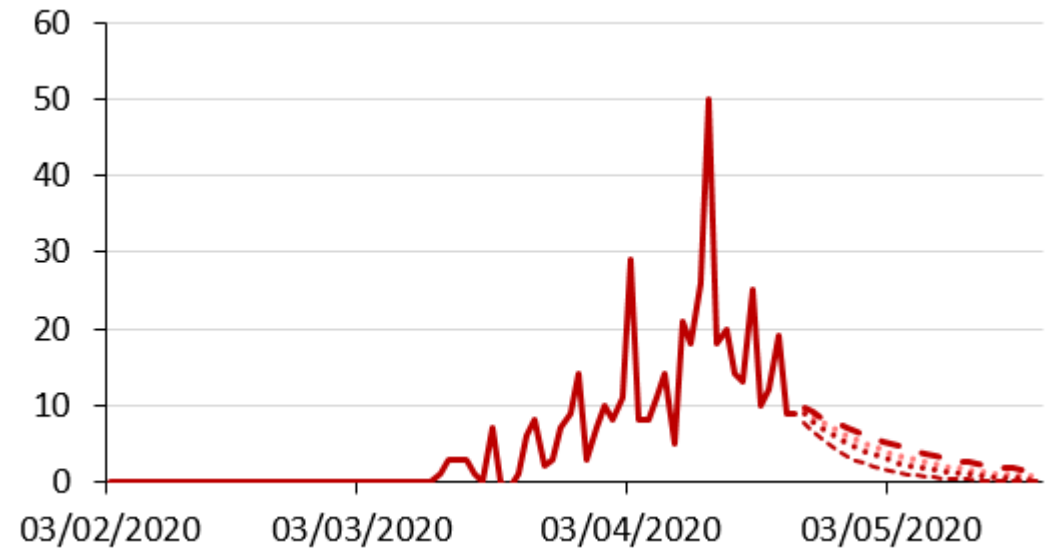
Philippines

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated



Daily

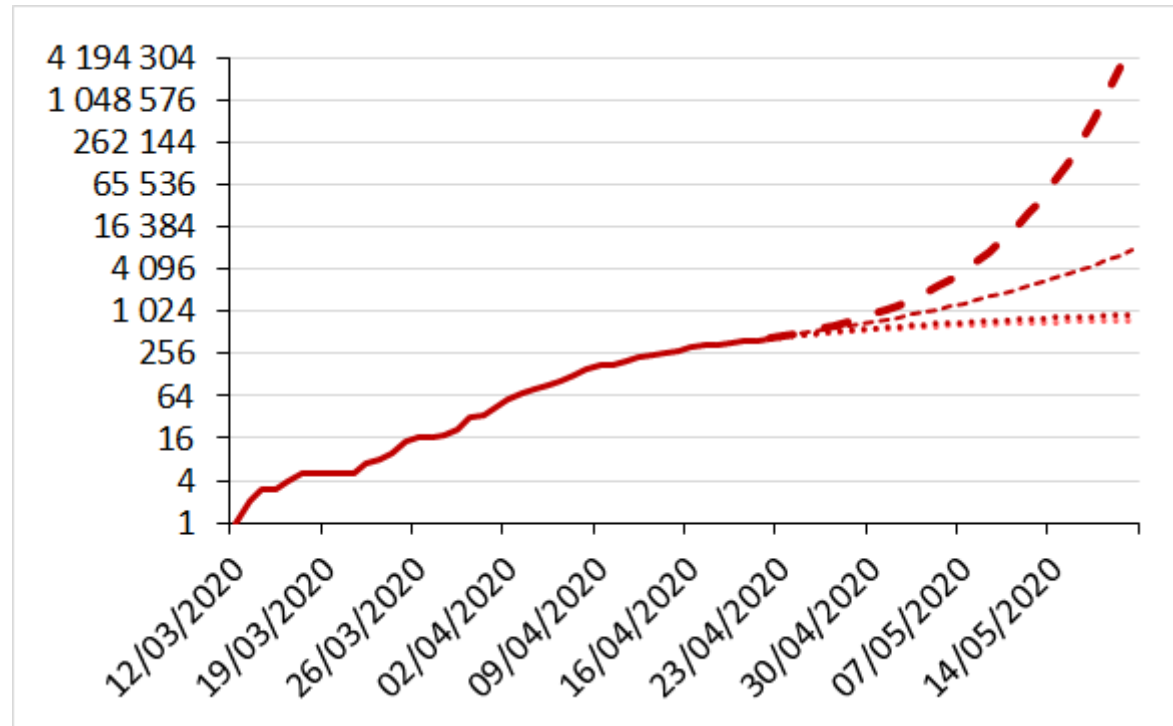


Data: The Johns Hopkins University, Politolog.com

Poland

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated

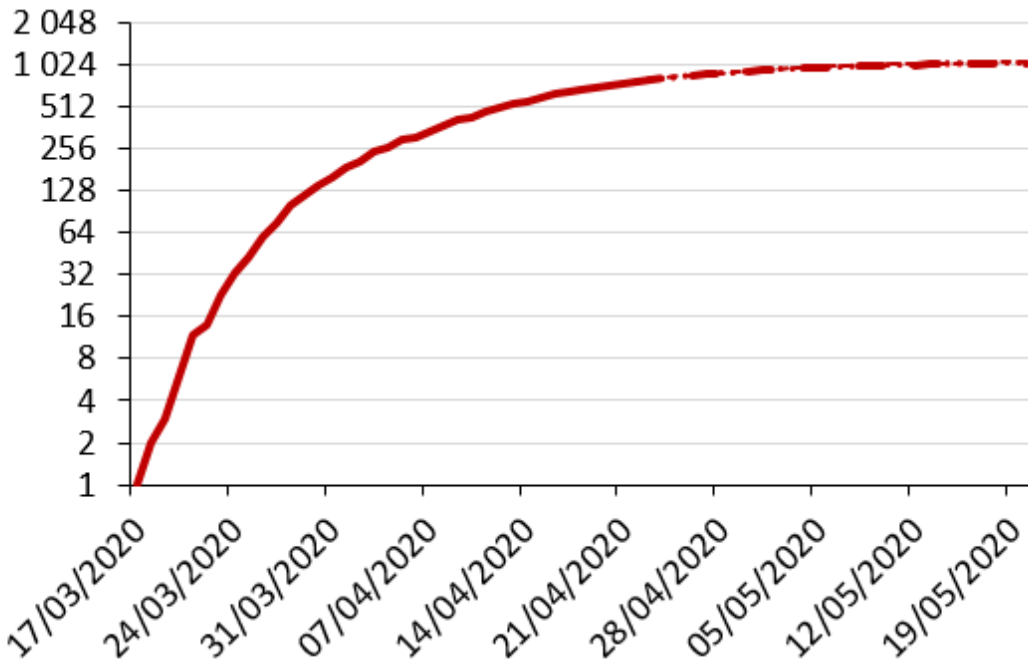


Data: The Johns Hopkins University, Politolog.com

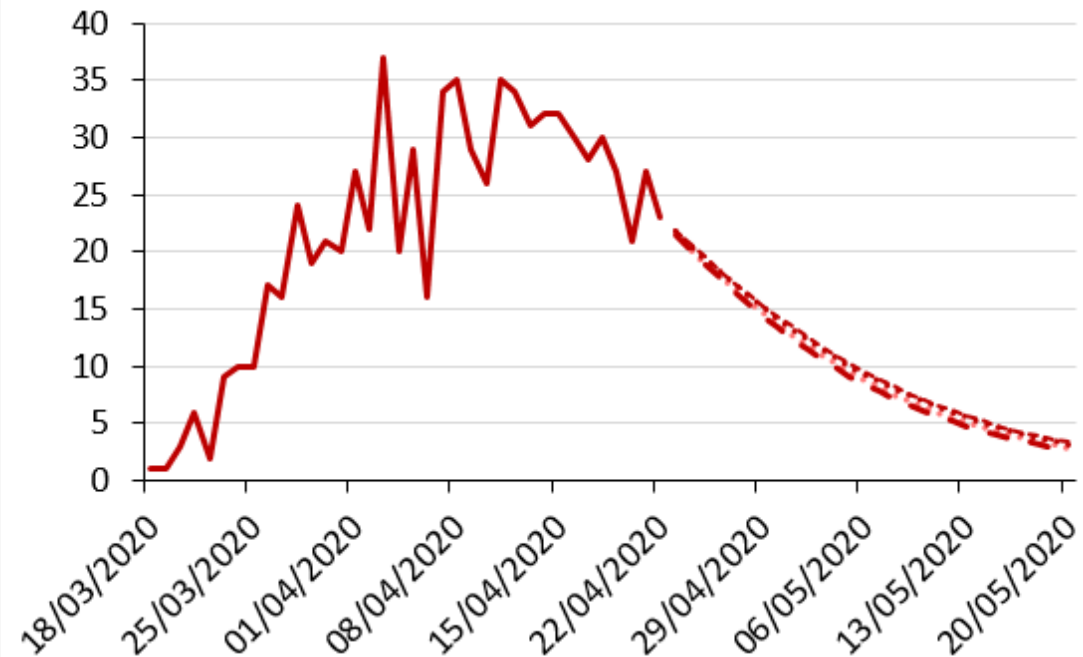
Portugal

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated



Daily

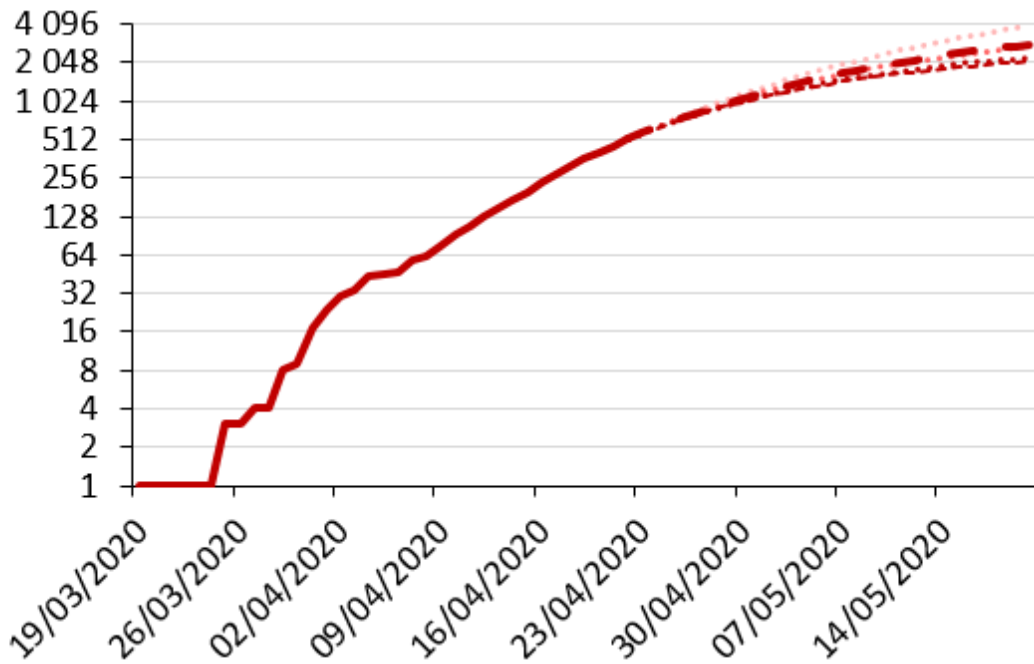


Data: The Johns Hopkins University, Politolog.com

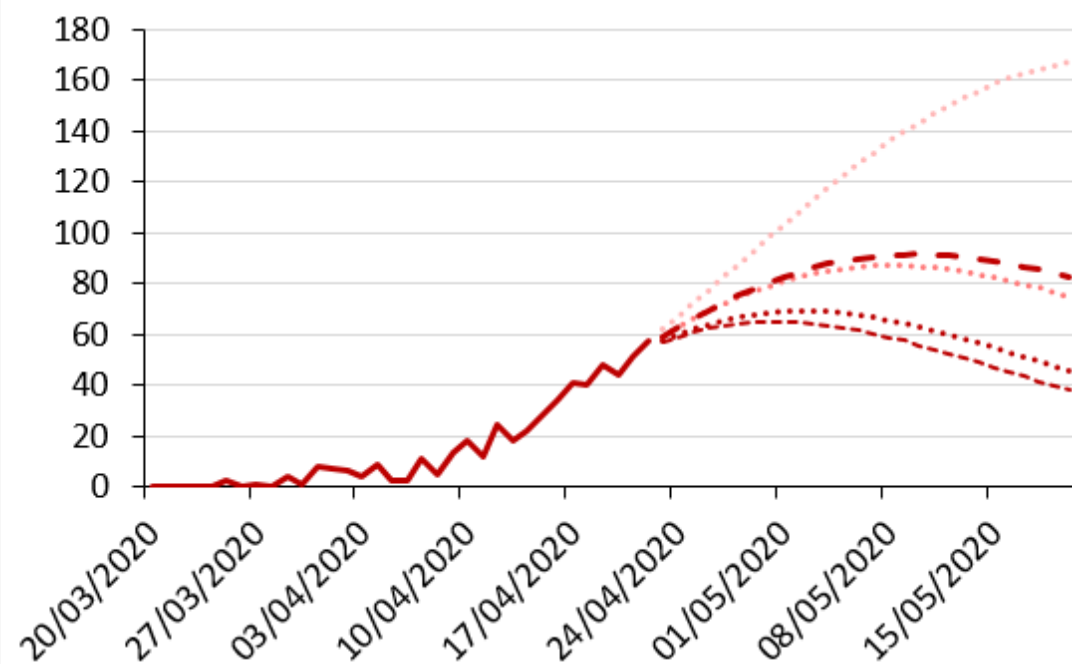
Russia

— CONFIRMED ····· 9 days' fit ····· 8 days' fit ····· 7 days' fit - - - - 6 days' fit - - - - 5 days' fit

Cumulated



Daily

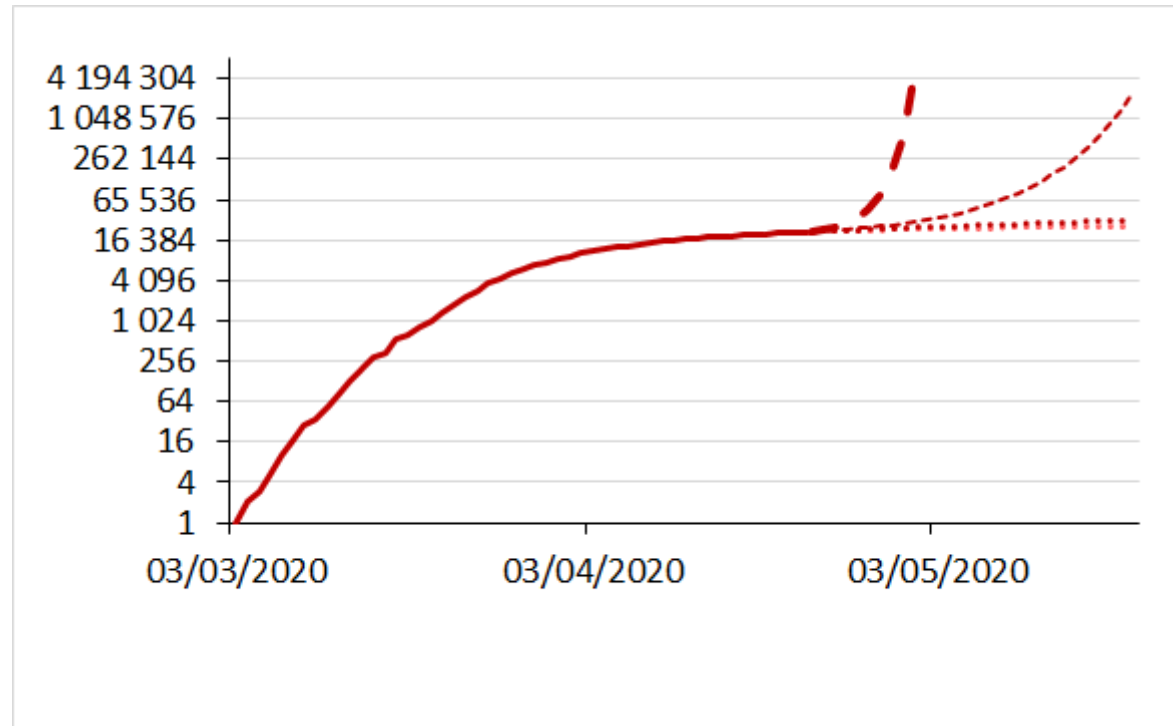


Data: The Johns Hopkins University, Politolog.com

Spain

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated

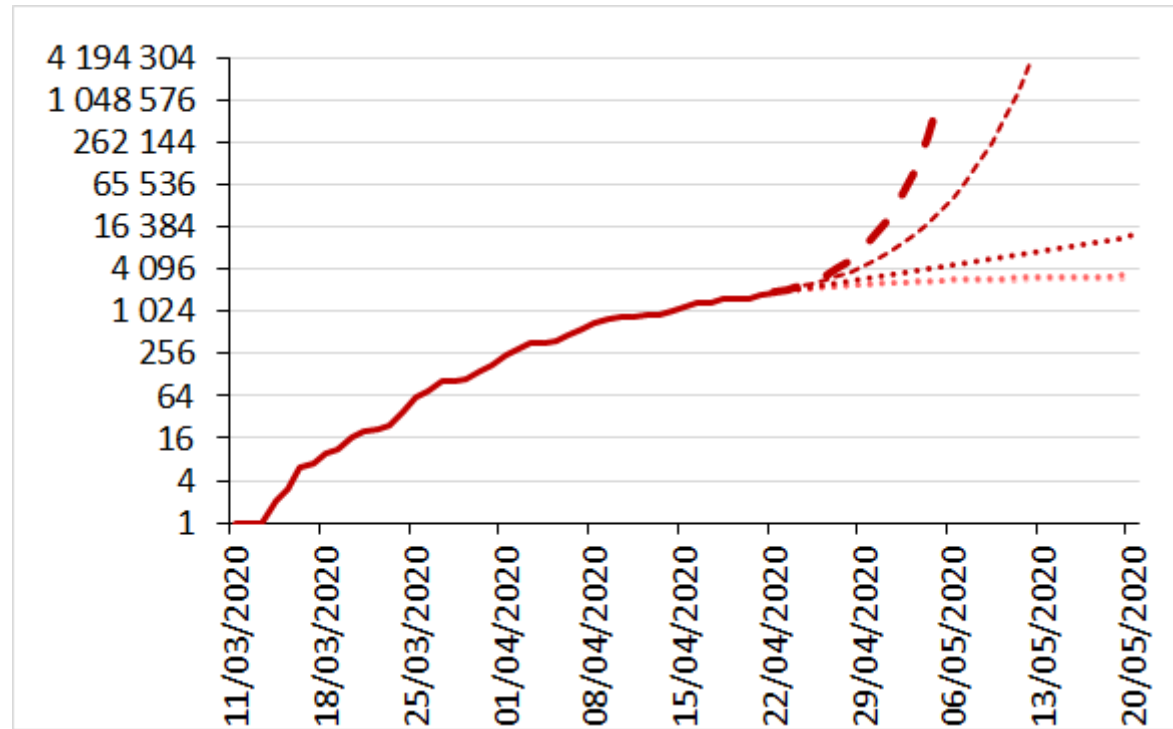


Data: The Johns Hopkins University, Politolog.com

Sweden

— CONFIRMED 9 days' fit 8 days' fit 7 days' fit - - - 6 days' fit - - - 5 days' fit

Cumulated

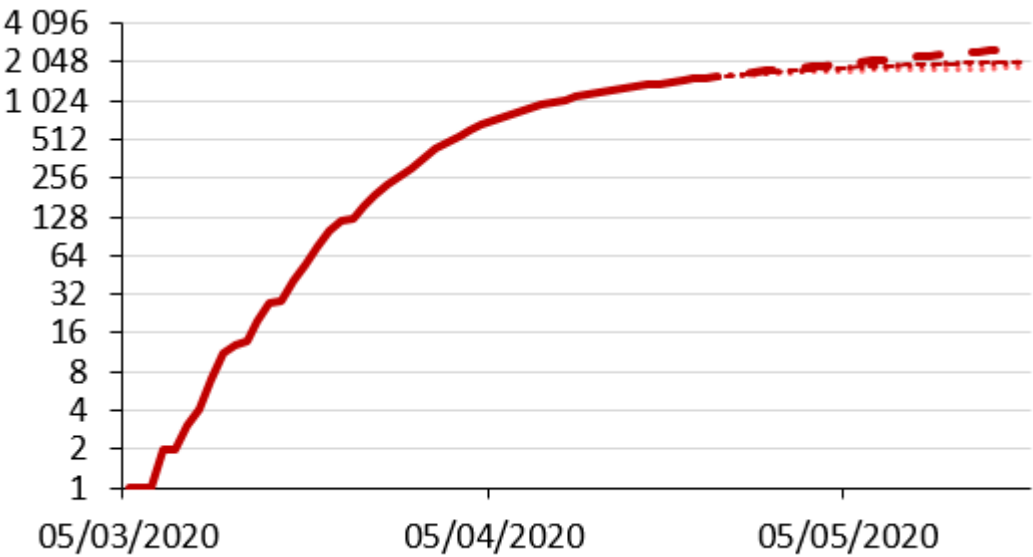


Data: The Johns Hopkins University, Politolog.com

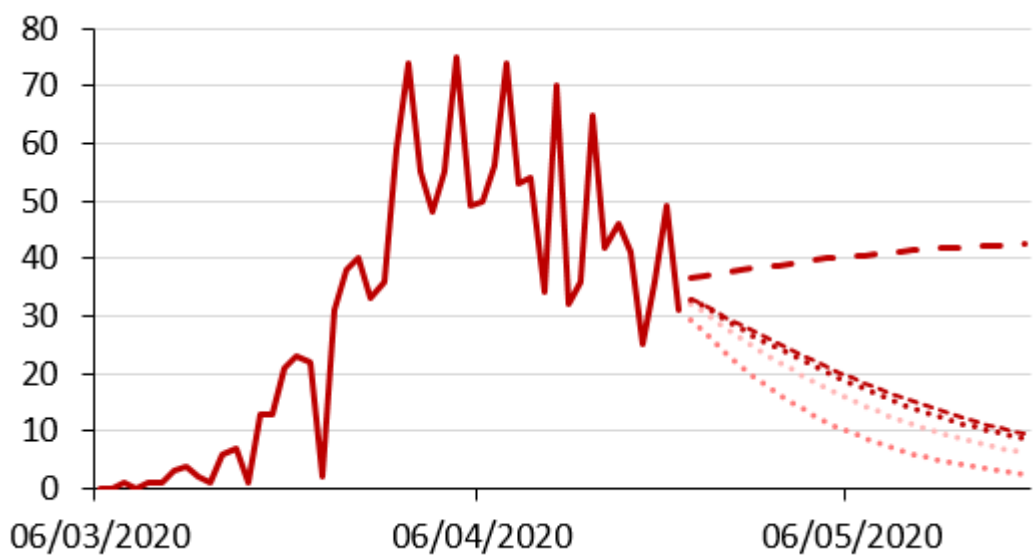
Switzerland

CONFIRMED 9 days'fit 8 days'fit 7 days'fit 6 days'fit 5 days'fit

Cumulated



Daily

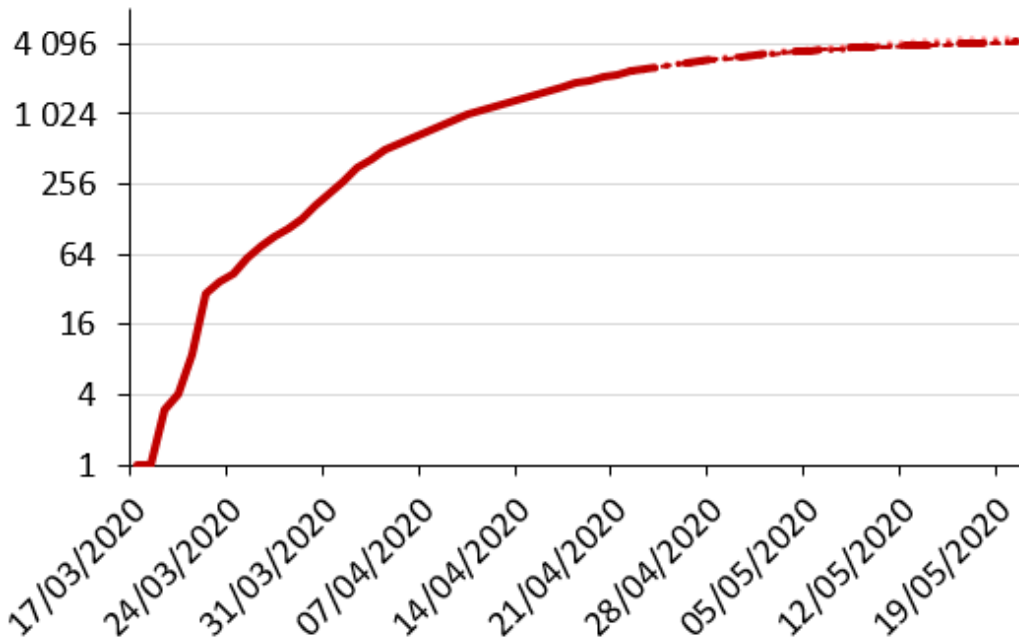


Data: The Johns Hopkins University, Politolog.com

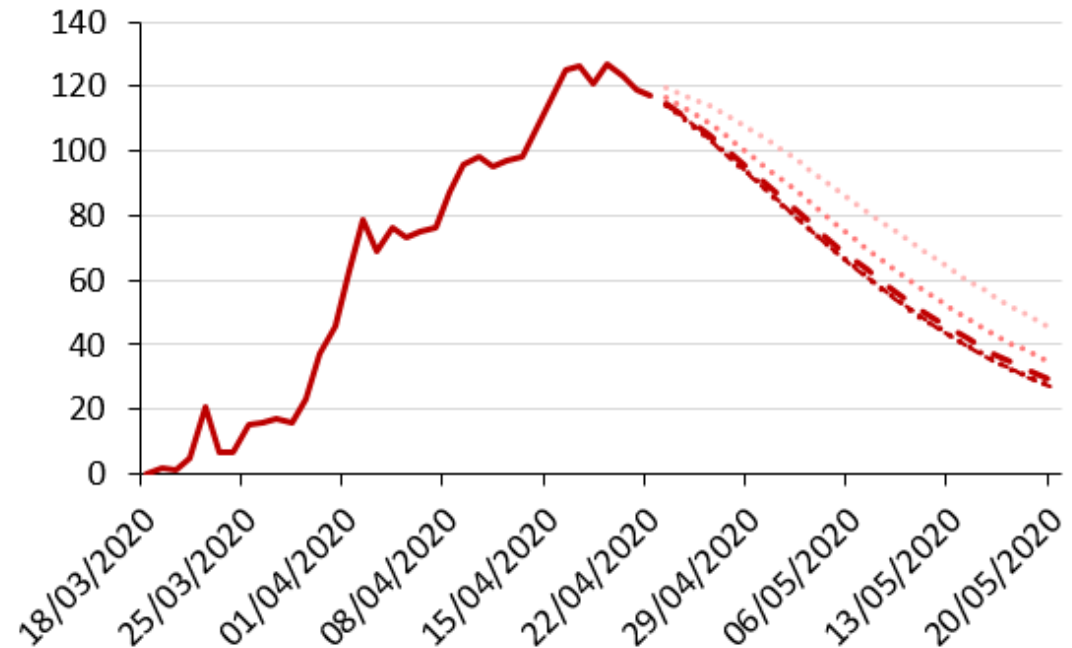
Turkey

— CONFIRMED ····· 9 days'fit ····· 8 days'fit ····· 7 days'fit - - - 6 days'fit - - - 5 days'fit

Cumulated



Daily

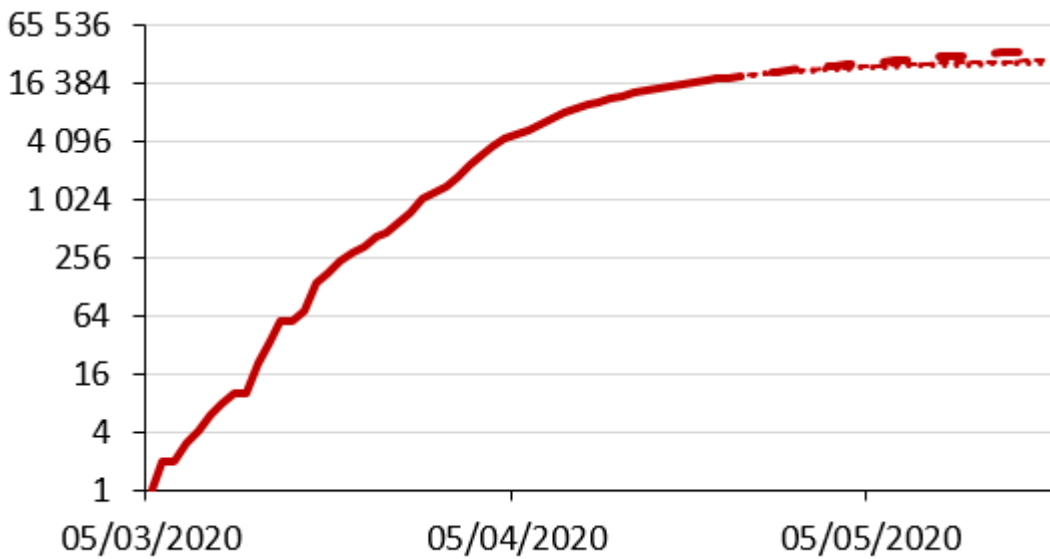


Data: The Johns Hopkins University, Politolog.com

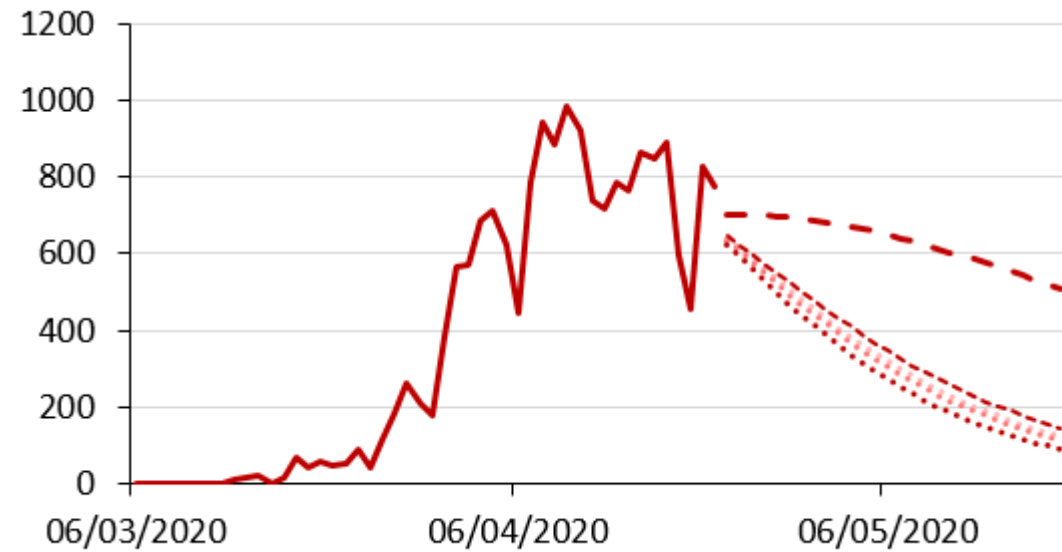
United Kingdom

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - - 6 days'fit - - - - 5 days'fit

Cumulated



Daily

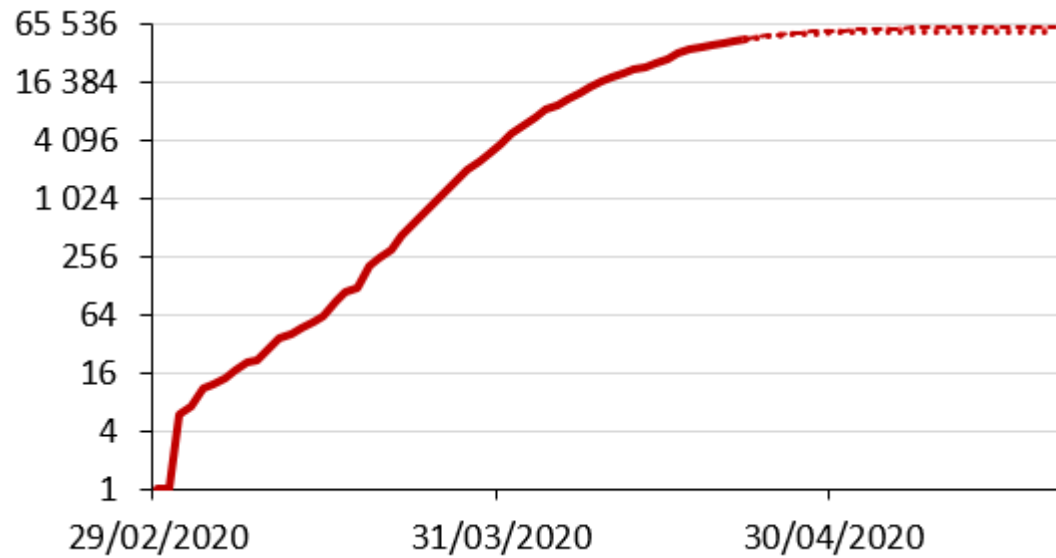


Data: The Johns Hopkins University, Politolog.com

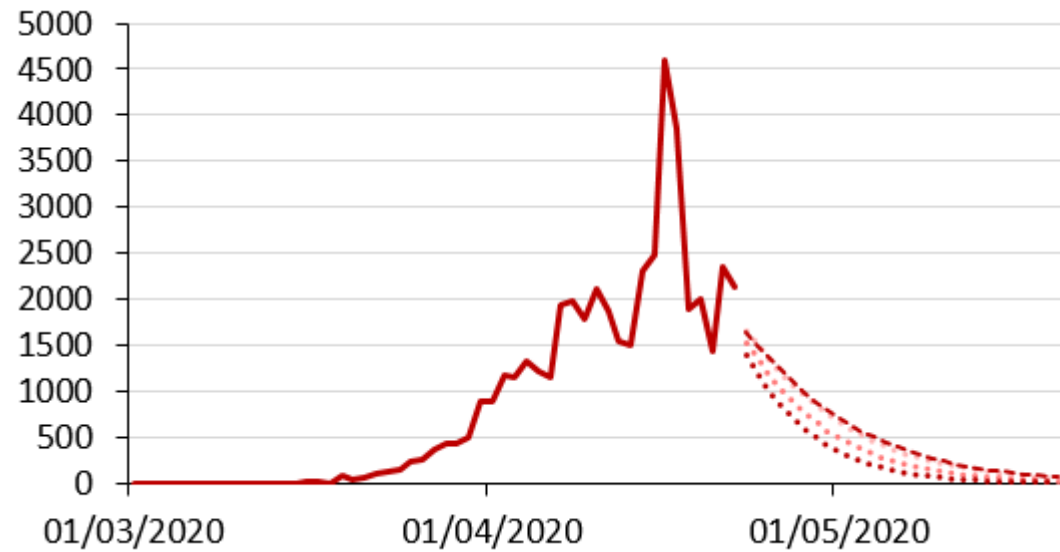
USA

— CONFIRMED 9 days'fit 8 days'fit 7 days'fit - - - 6 days'fit

Cumulated



Daily



Data: The Johns Hopkins University, Politolog.com



Gavekal Intelligence Software

Contact

Tel: +33 7 85 82 18 03

Email: ddarcet@gavekal.com

Paris Office

27bis rue Copernic
75116 Paris
France

Nice Office

Le Consul - 37 Boulevard Dubouchage
06000 Nice
France

www.gavekal-intelligence-software.com