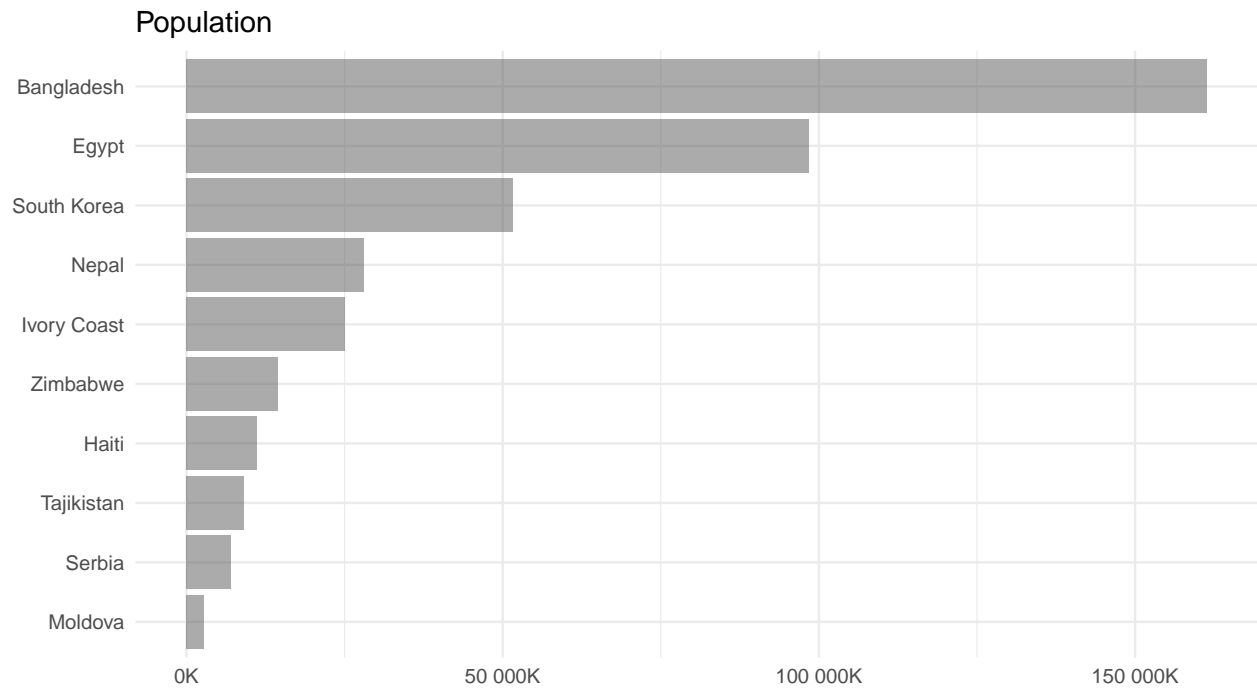


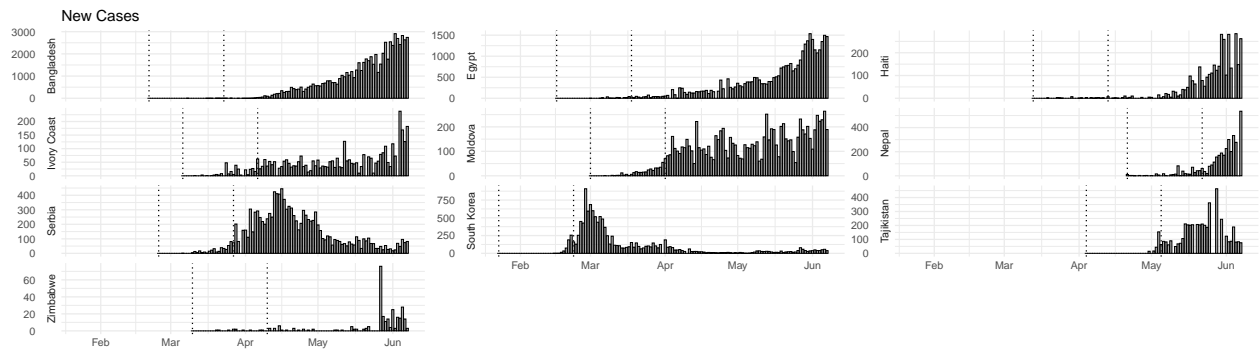
Multiple Countries

Countries:

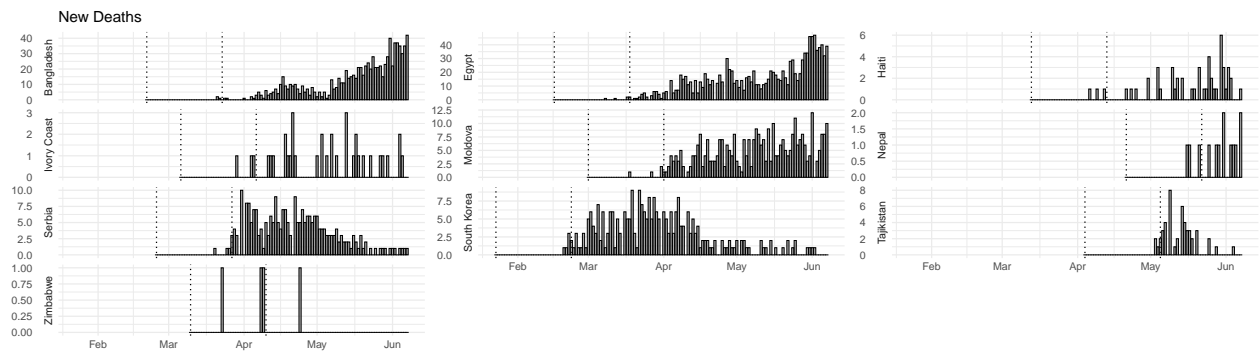
- Bangladesh
- Ivory Coast
- Egypt
- Haiti
- South Korea
- Moldova
- Nepal
- Serbia
- Tajikistan
- Zimbabwe

Data





Vertical dotted lines represent the first seeding day and the epidemic start date.



Vertical dotted lines represent the first seeding day and the epidemic start date.



Vertical dotted lines represent the first seeding day and the epidemic start date.

Analysis

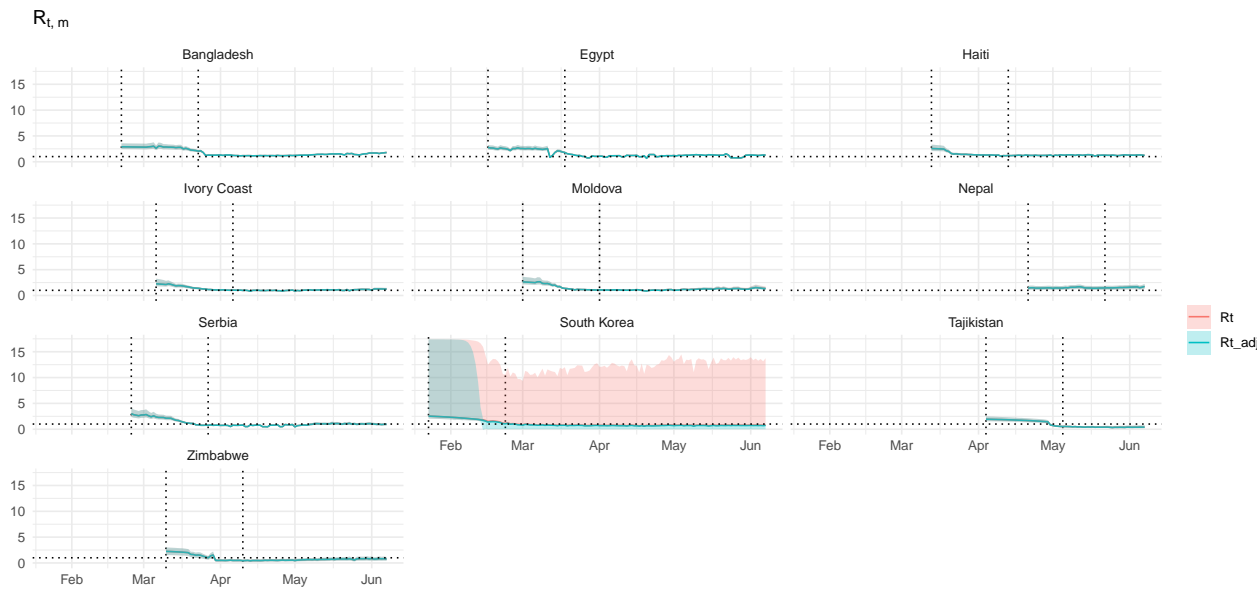
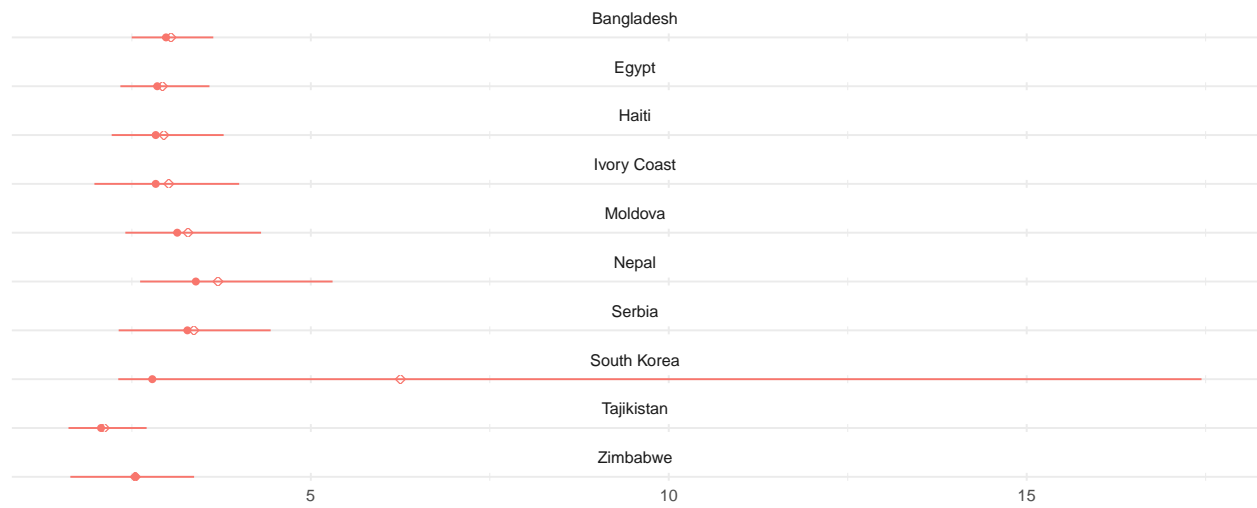
Number of divergent transitions =

Maximum $\hat{R} = 1.6643365$

Minimum Bulk ESS = 6.4066235

Minimum Tail ESS = 13.2595485

$R_{0,m}$



Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.

Contact rate function:

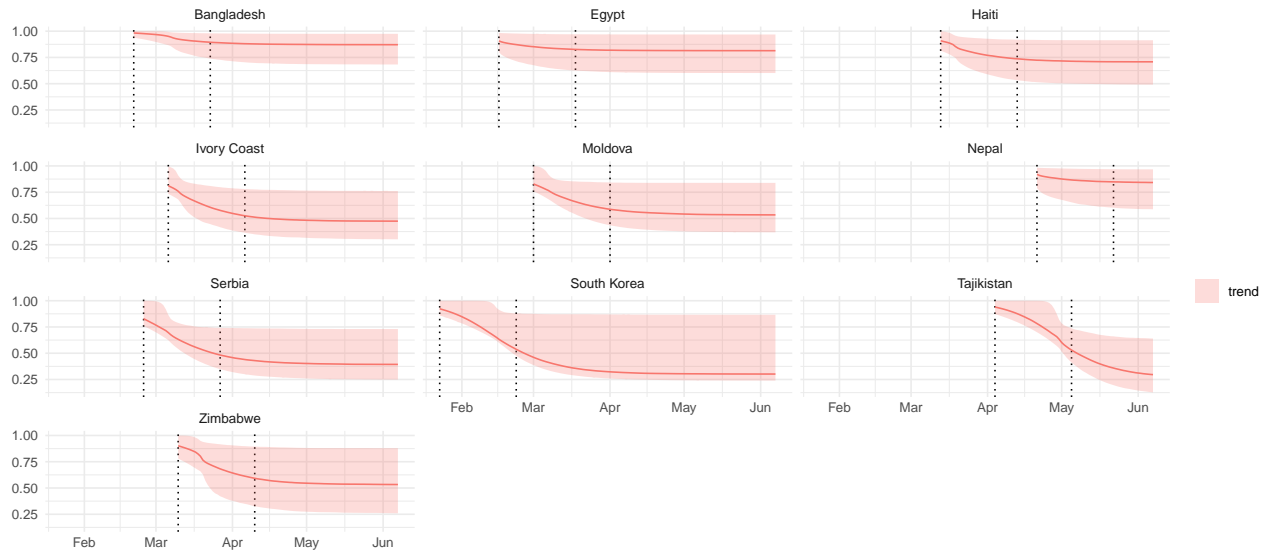
$$cr(t; t^*, \lambda_j, \kappa) = \lambda_j + \frac{1 - \lambda_j}{1 + \exp(\kappa(t - t^*))}$$

where

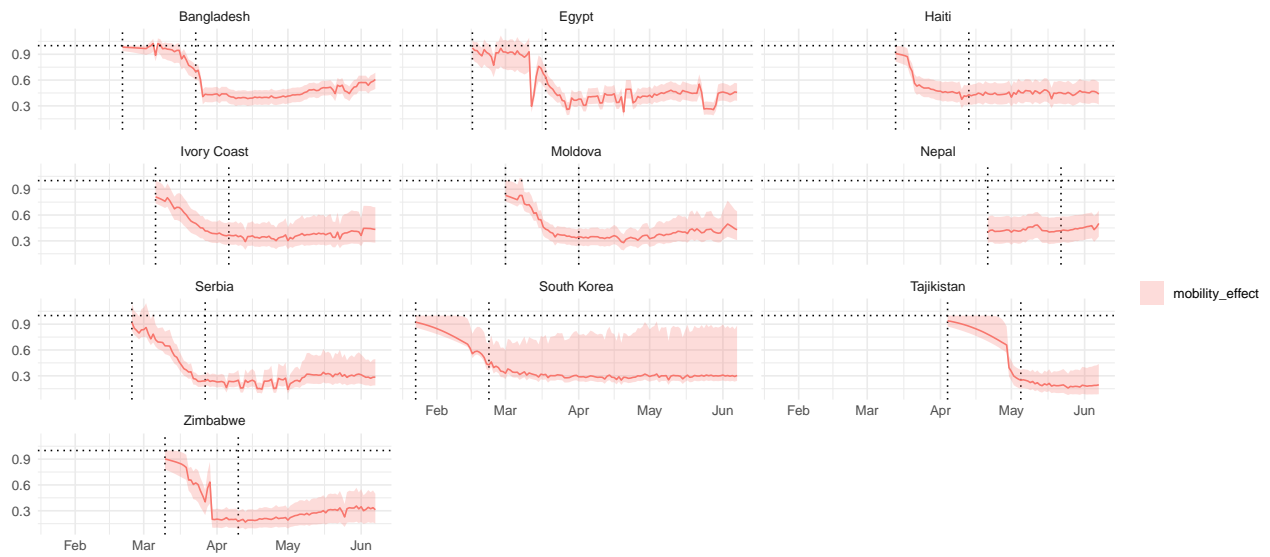
$$\lambda_j \sim \text{Beta}(3, 1)$$

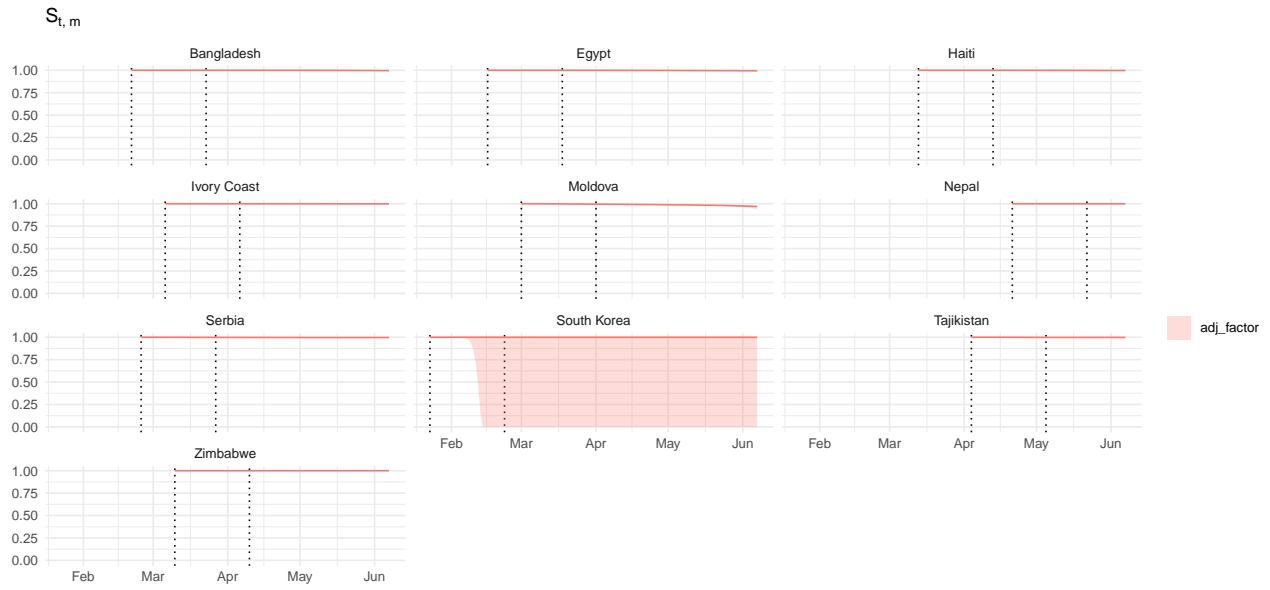
$$\kappa \sim \text{NegHalfNormal}(0, 1).$$

Contact Rate



Mobility effect

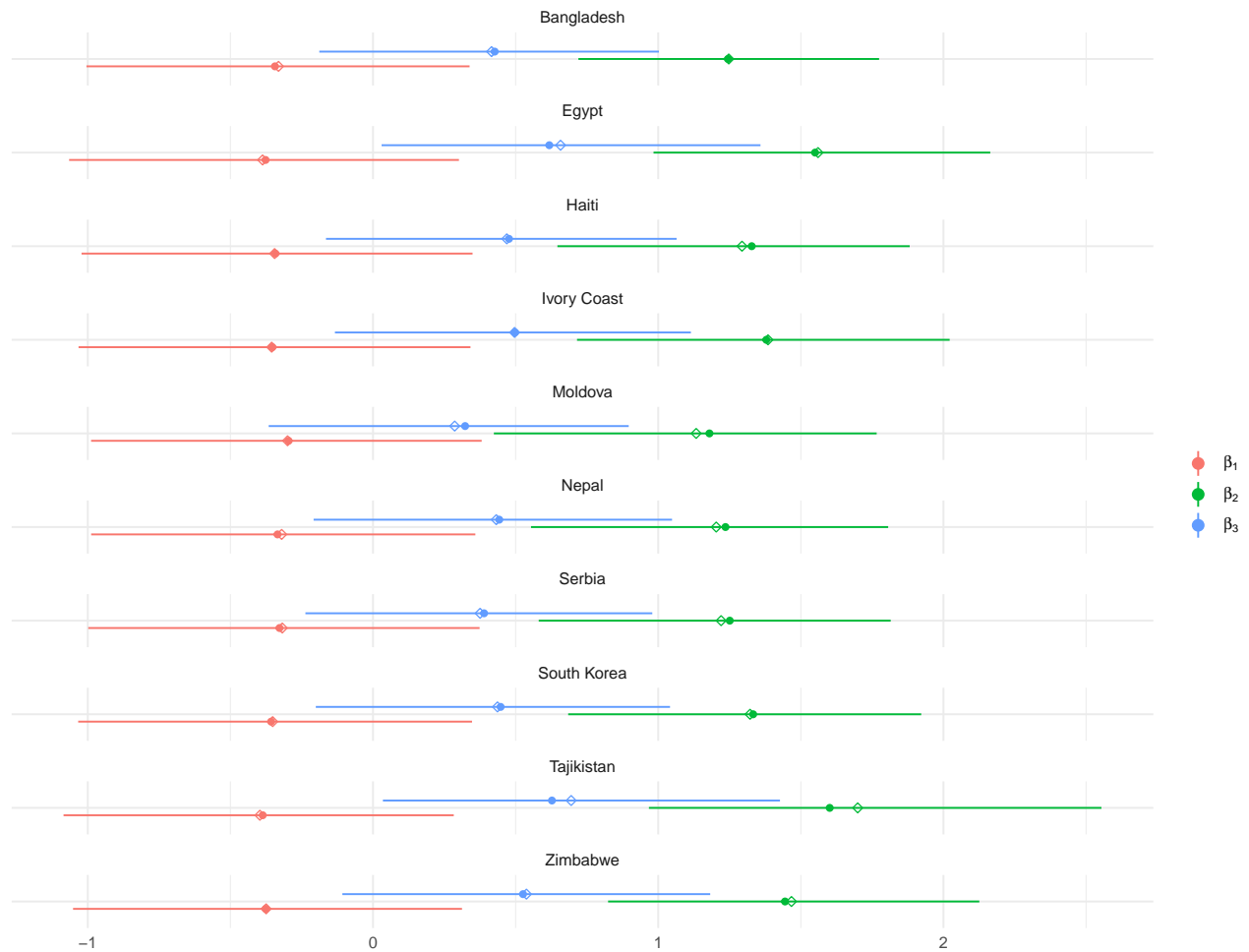


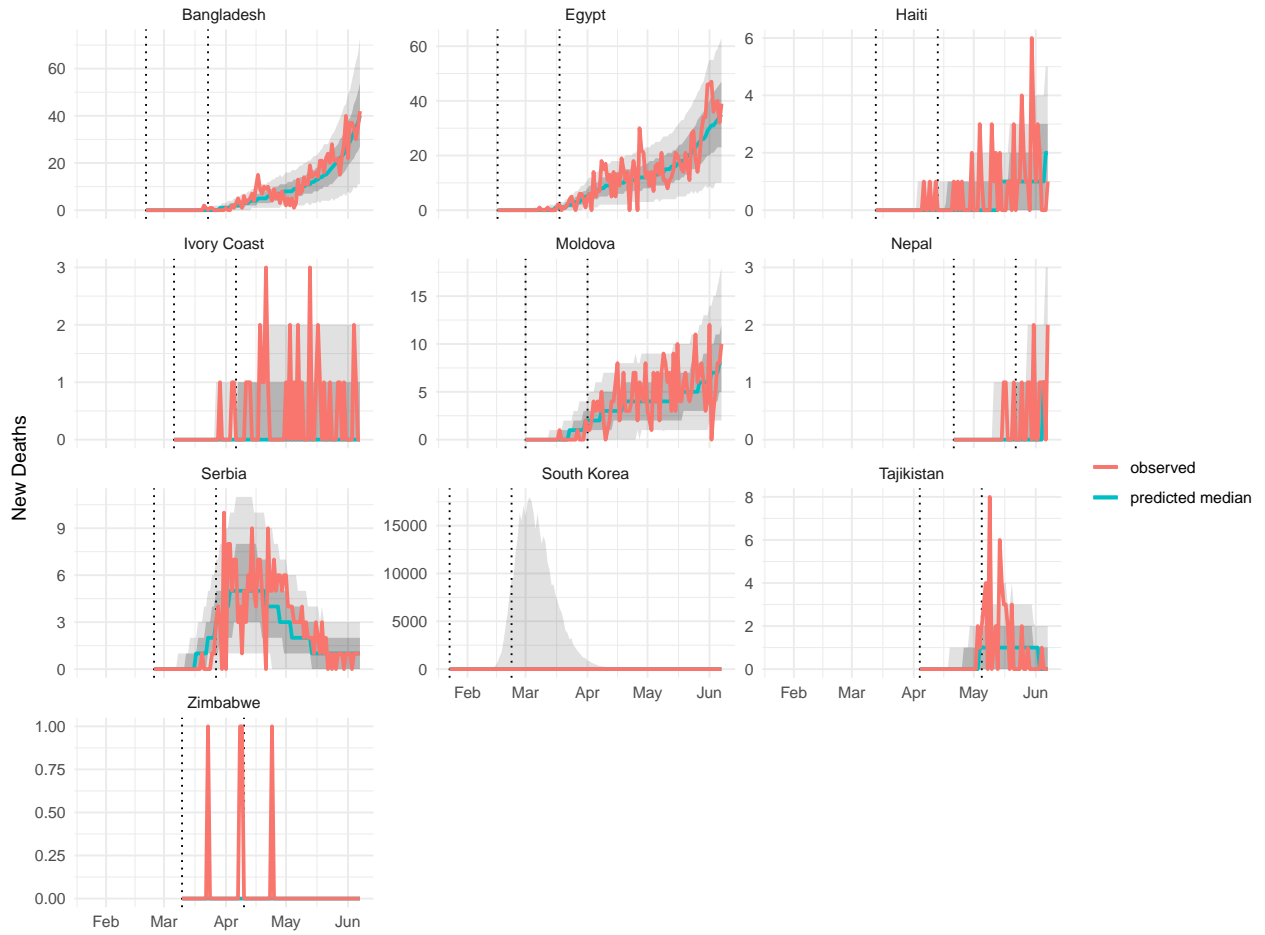


Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.

Mobility linear model: $\beta_1 \cdot X_{\text{residential}} + \beta_2 \cdot X_{\text{transit}} + \beta_3 \cdot X_{\text{average}}$.

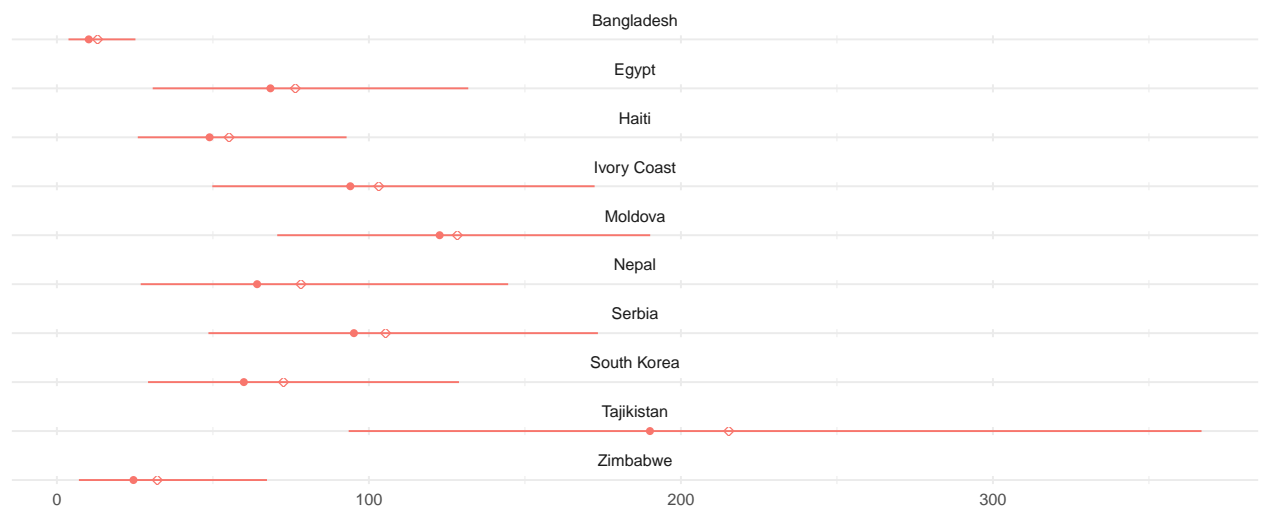
β



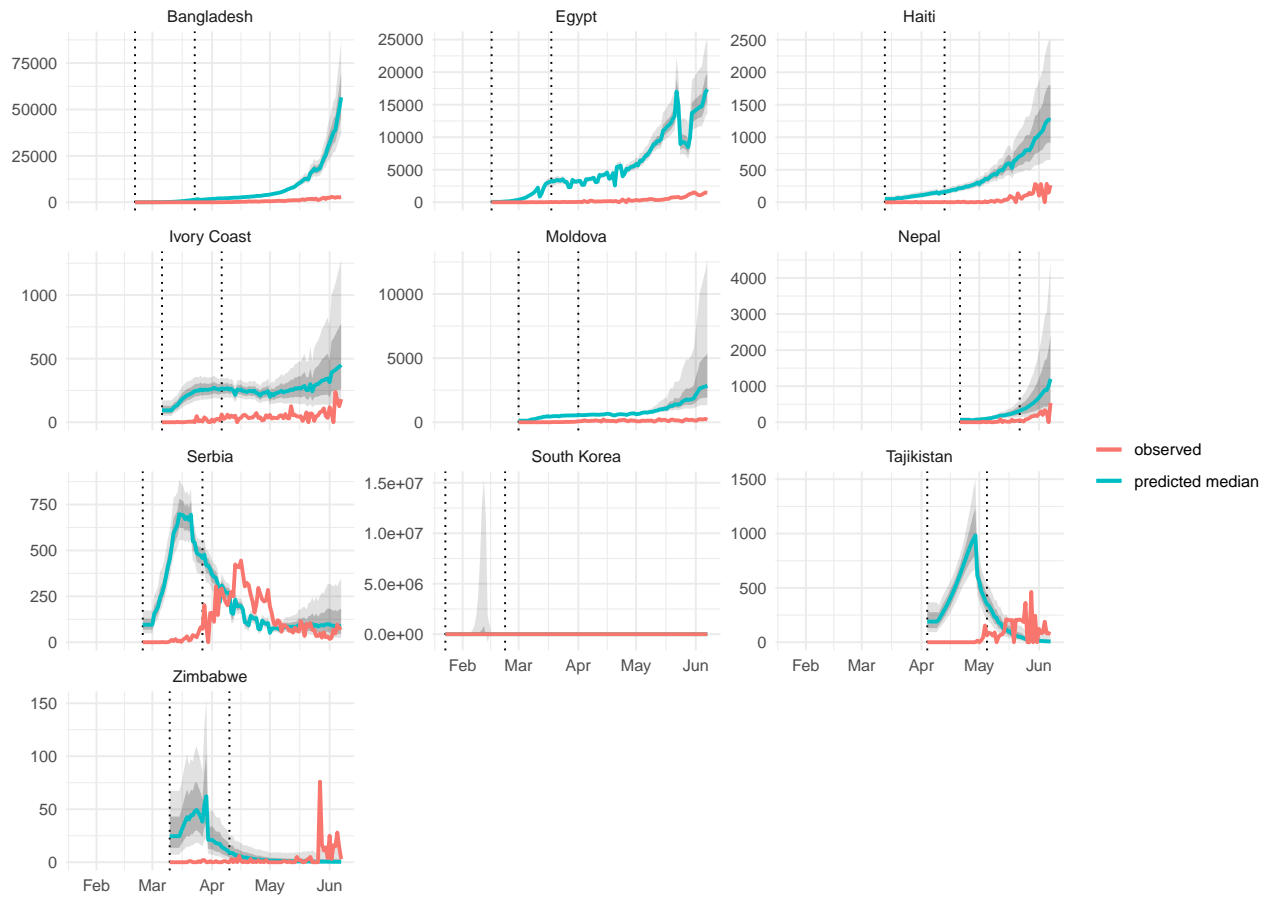


Solid black line: observed new deaths. Grey ribbon: posterior predicted new deaths. Vertical dotted lines represent the first seeding day and the epidemic start date.

Imputed Cases

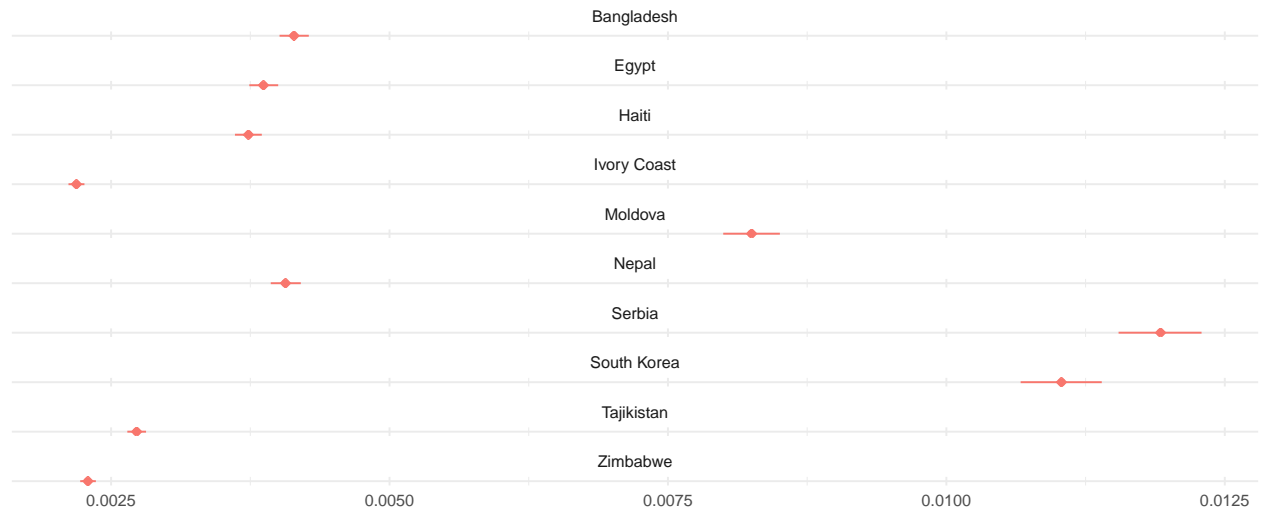


New Cases
predicted vs observed



Solid black line: observed new deaths. Grey ribbon: posterior predicted new deaths.
Vertical dotted lines represent the first seeding day and the epidemic start date.

IFR



Diagnostics

