Branching stochastic processes as models of Covid-19 epidemic development

SaoTomeAndPrincipe - week 53

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Publication date 20-Mar-2022 03:19:53

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Abstract

The results presented here are obtained using the methologi proposed in the paper https://arxiv.org/abs/2004.14838 for the country SaoTomeAndPrincipe. The data comes from European Centre for Disease Prevention and Control available at https://opendata.ecdc.europa.eu/covid19/casedistribution/csv.

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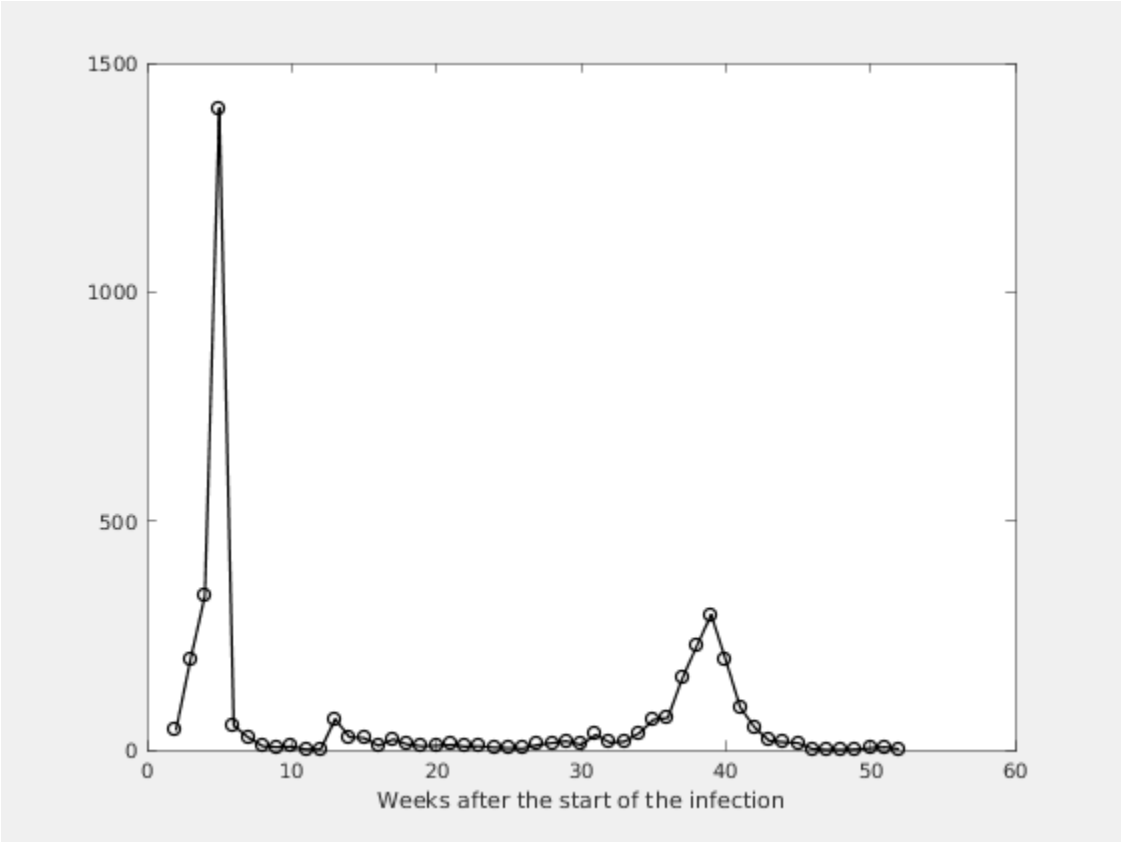
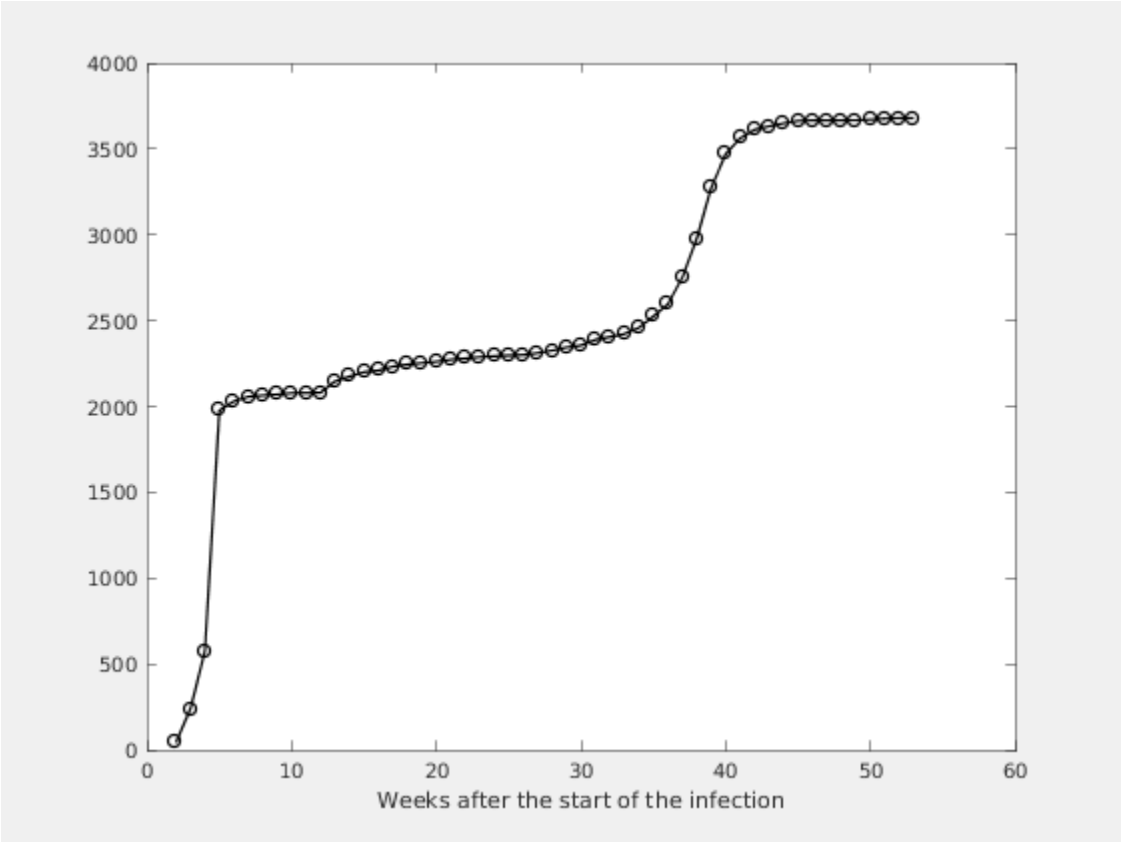


Figure 1.2. Number of the total registered cases



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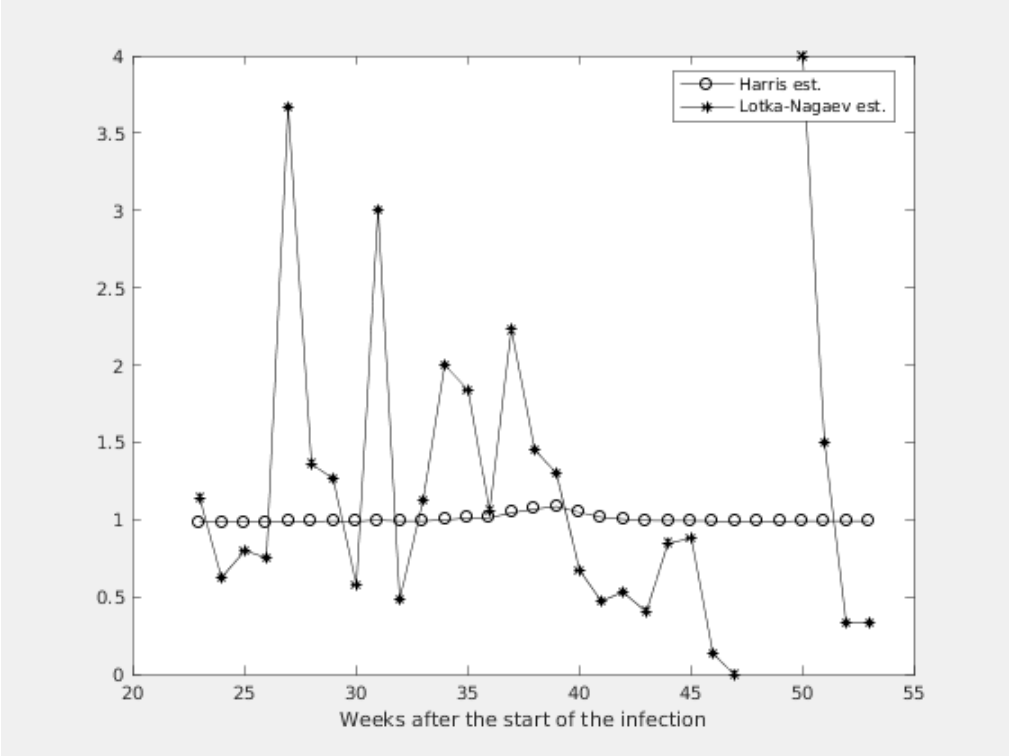


Figure 2.2. Figure

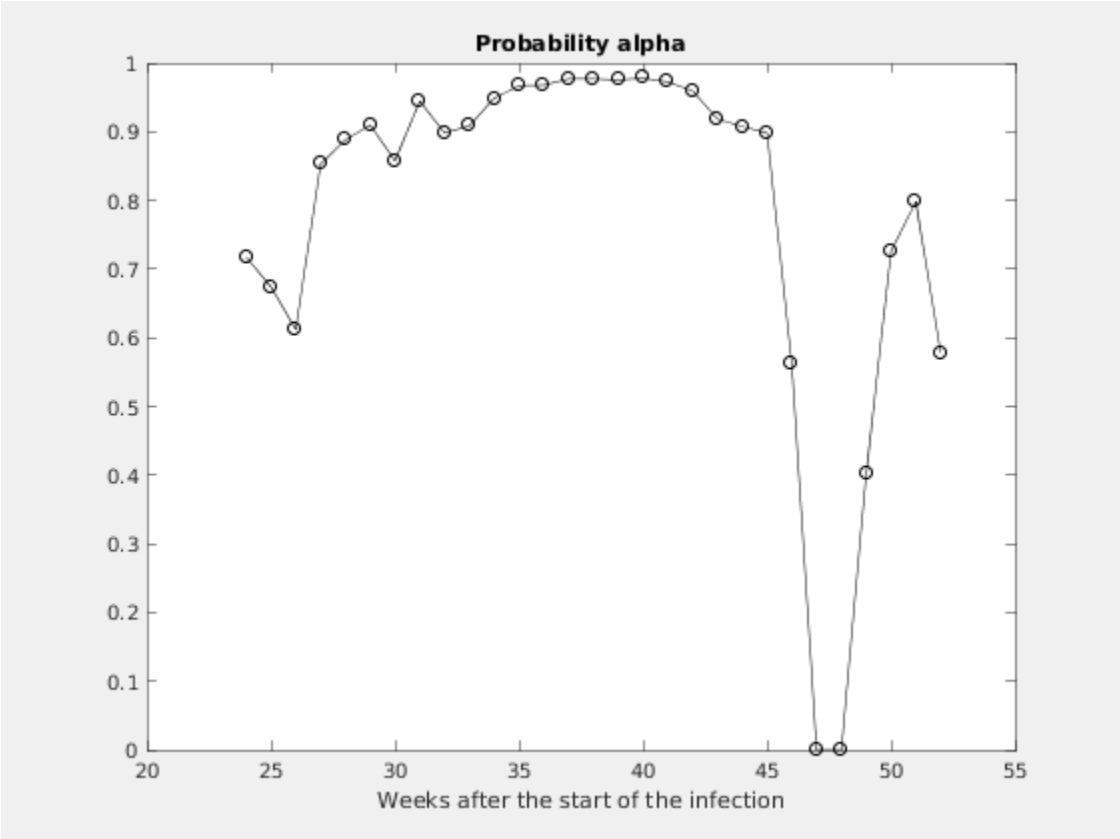


Figure 2.3. Expected number of the nonregistered infected individuals without immigration

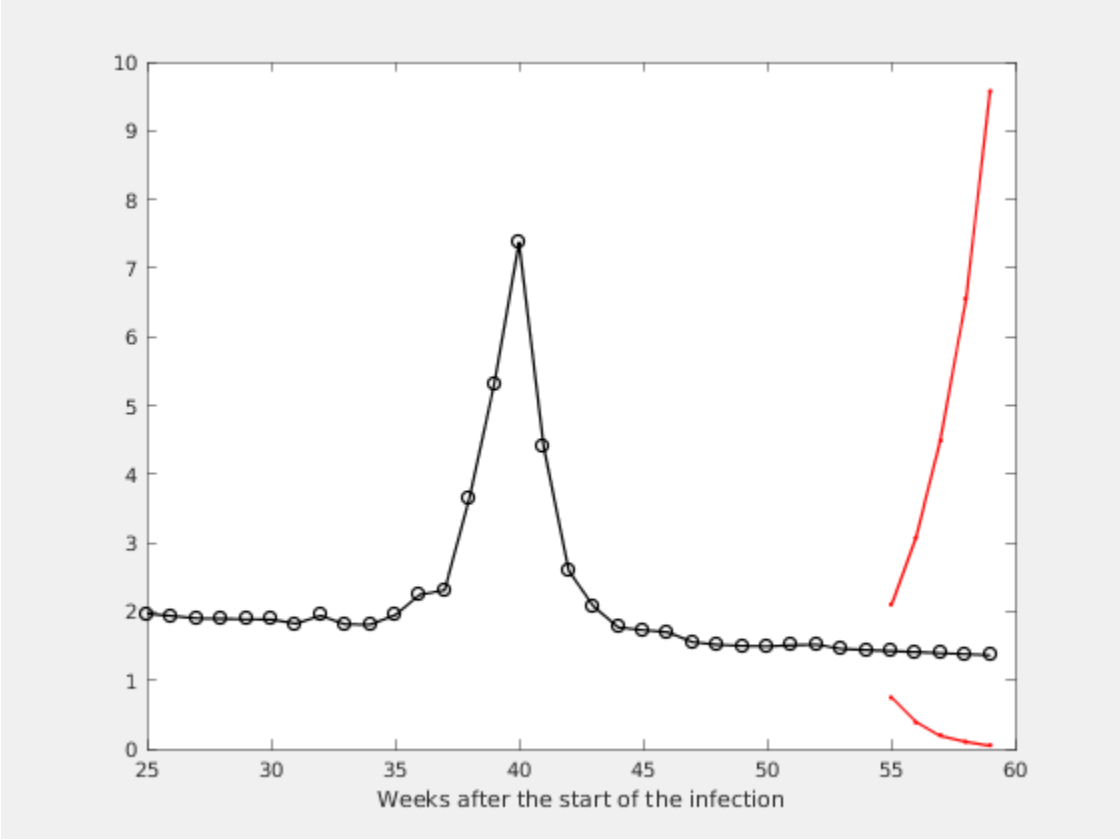
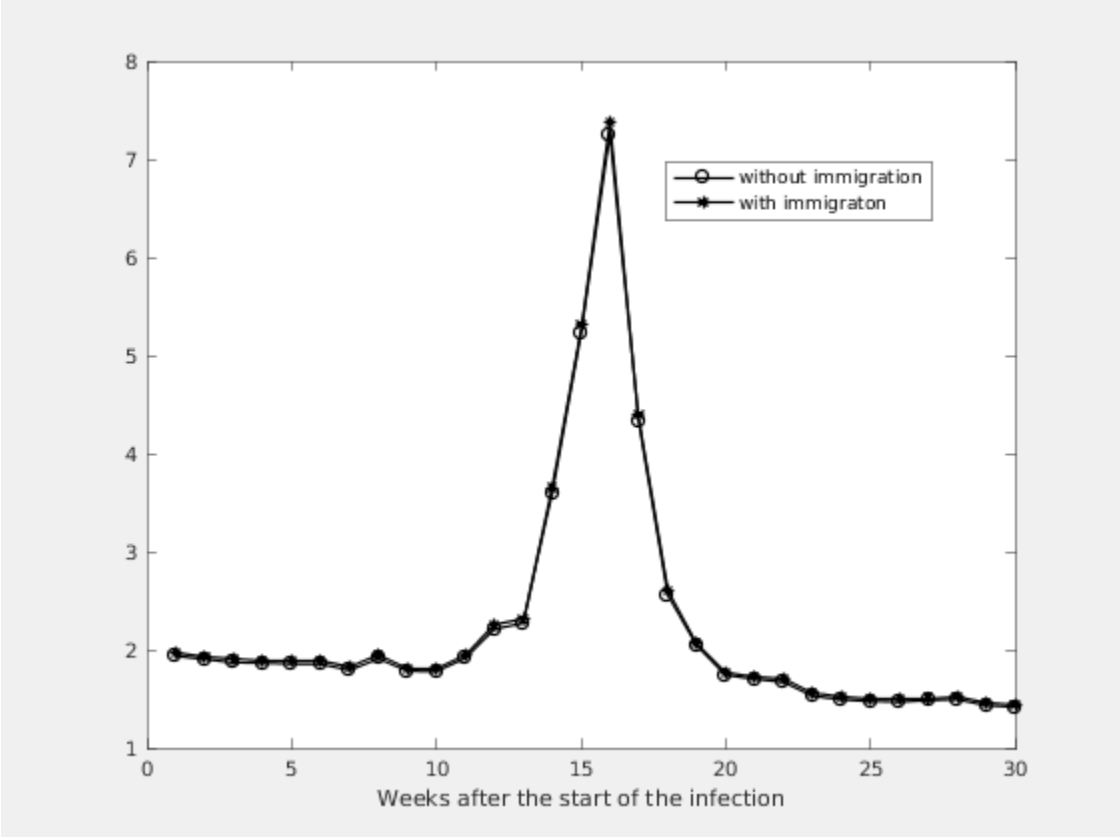


Figure 2.4. Expected number of the nonregistered infected individuals with immigration



Estimation of the model parameters.

k	m	ci	alpha	A1	M1
4	0.9888	0.4959 - 1.4817	0.0000	2	1
3	0.9896	0.4968 - 1.4825	0.0000	1	1
2	0.9902	0.5028 - 1.4776	0.4011	1	1
1	0.9891	0.5069 - 1.4713	0.7260	2	1
0	0.9891	0.5123 - 1.4659	0.7981	2	1