Branching stochastic processes as models of Covid-19 epidemic development

Iraq - week 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 Iraq. 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 1.1. Number of the weekly reported laboratory-confirmed cases
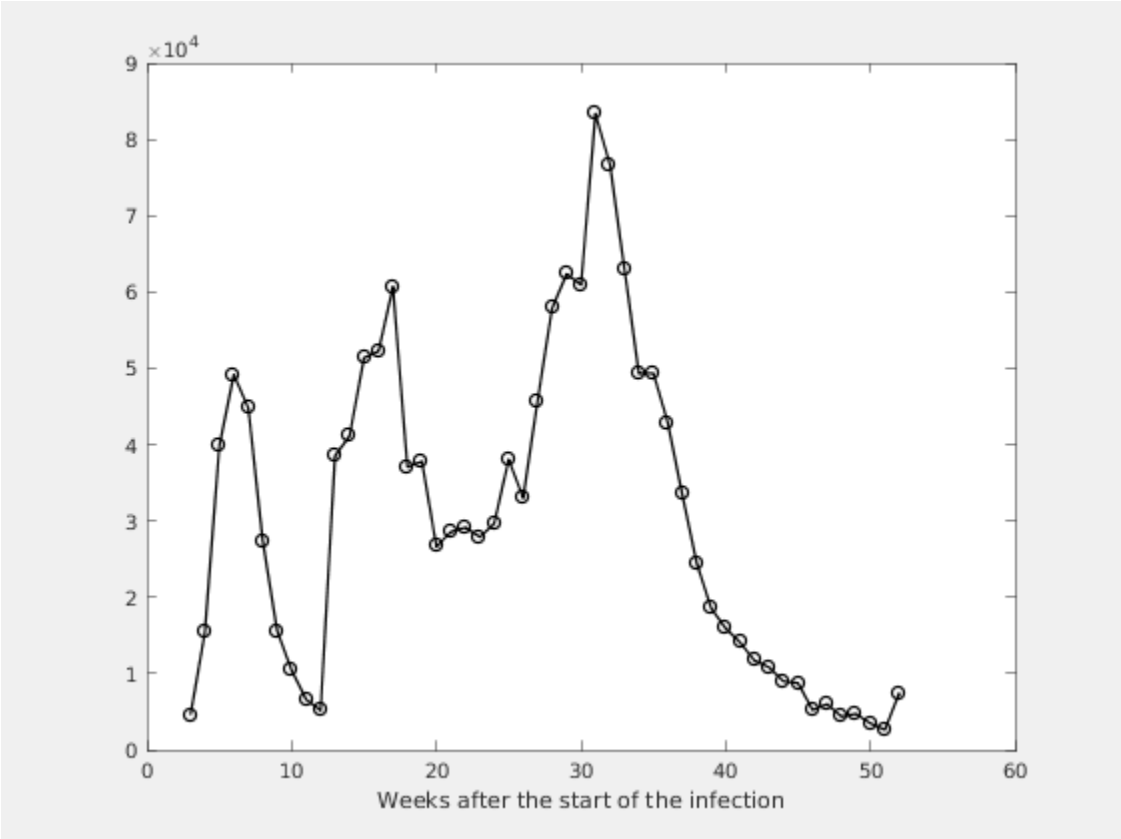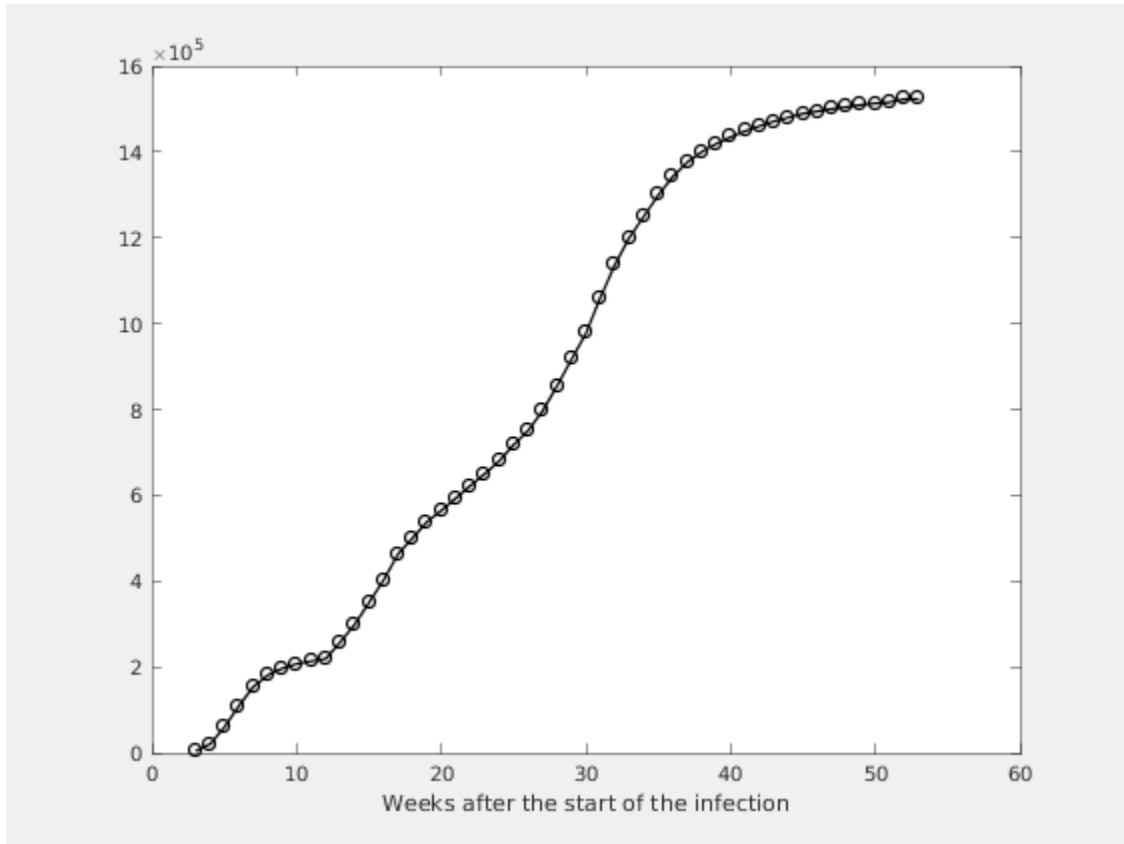
Figure 1.2. Number of the total registered cases

Chapter 2. Estimating of the main parameter and some predictions

Figure 2.1. The Lotka-Nagaev and the Harris type estimator of the growth rate
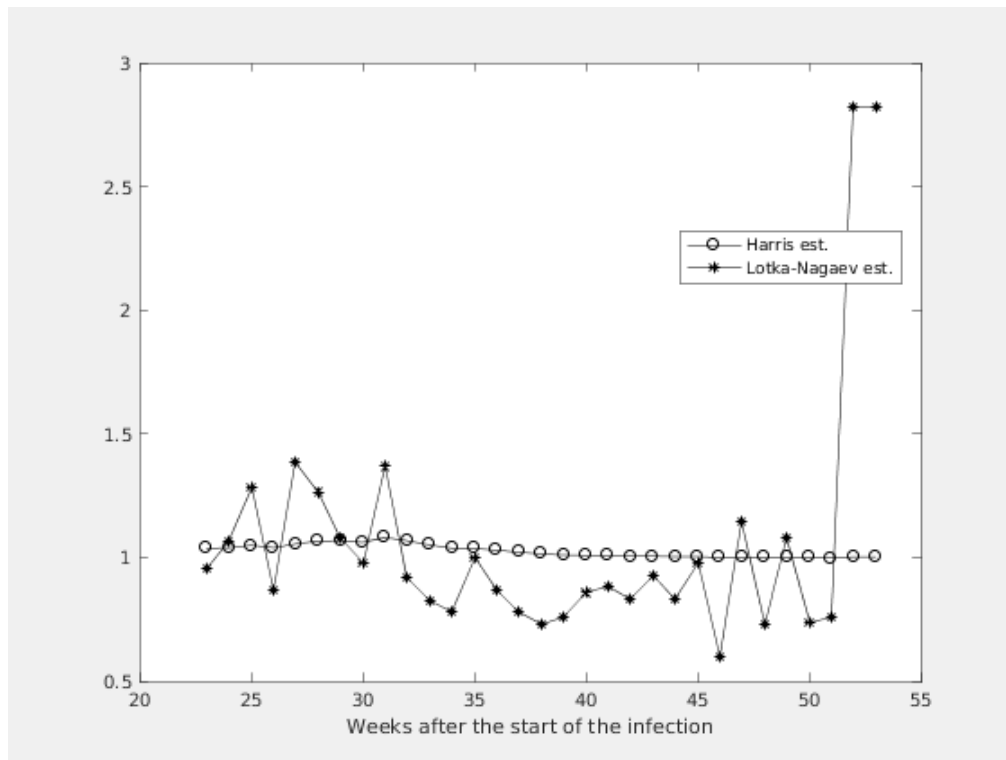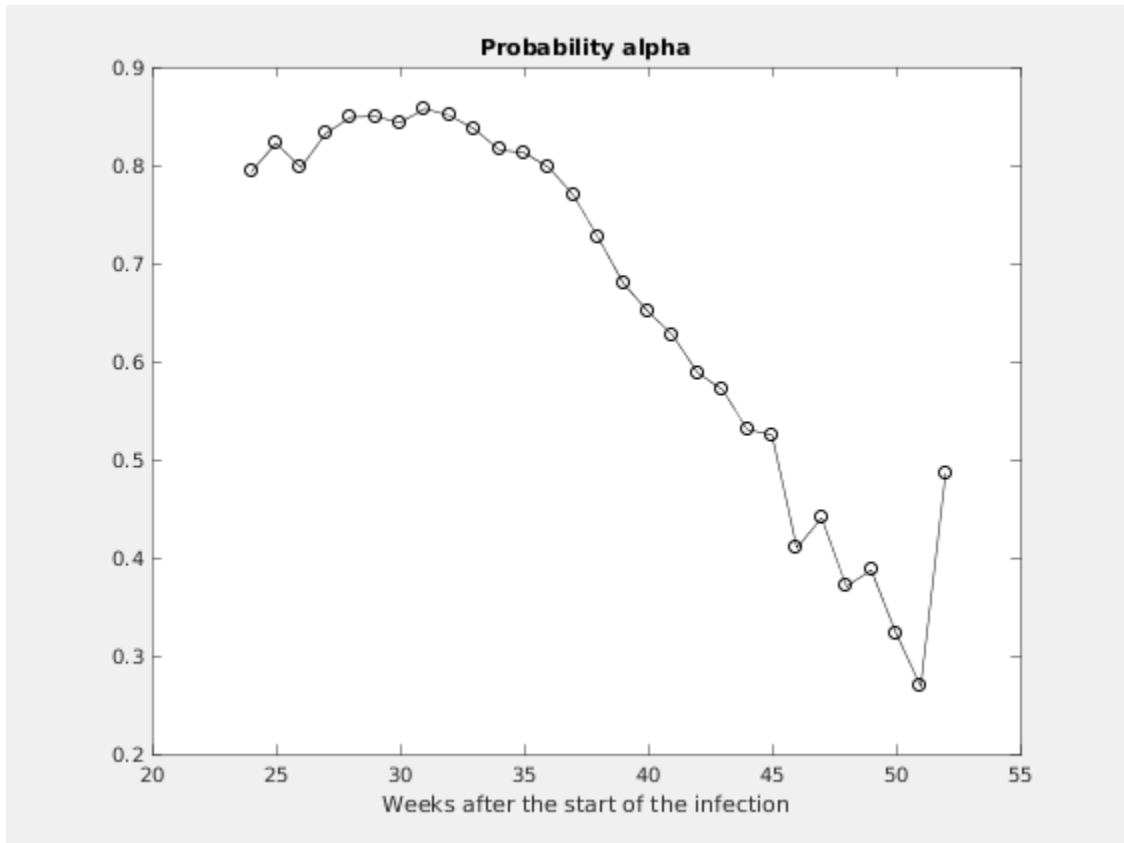
Figure 2.2. Figure

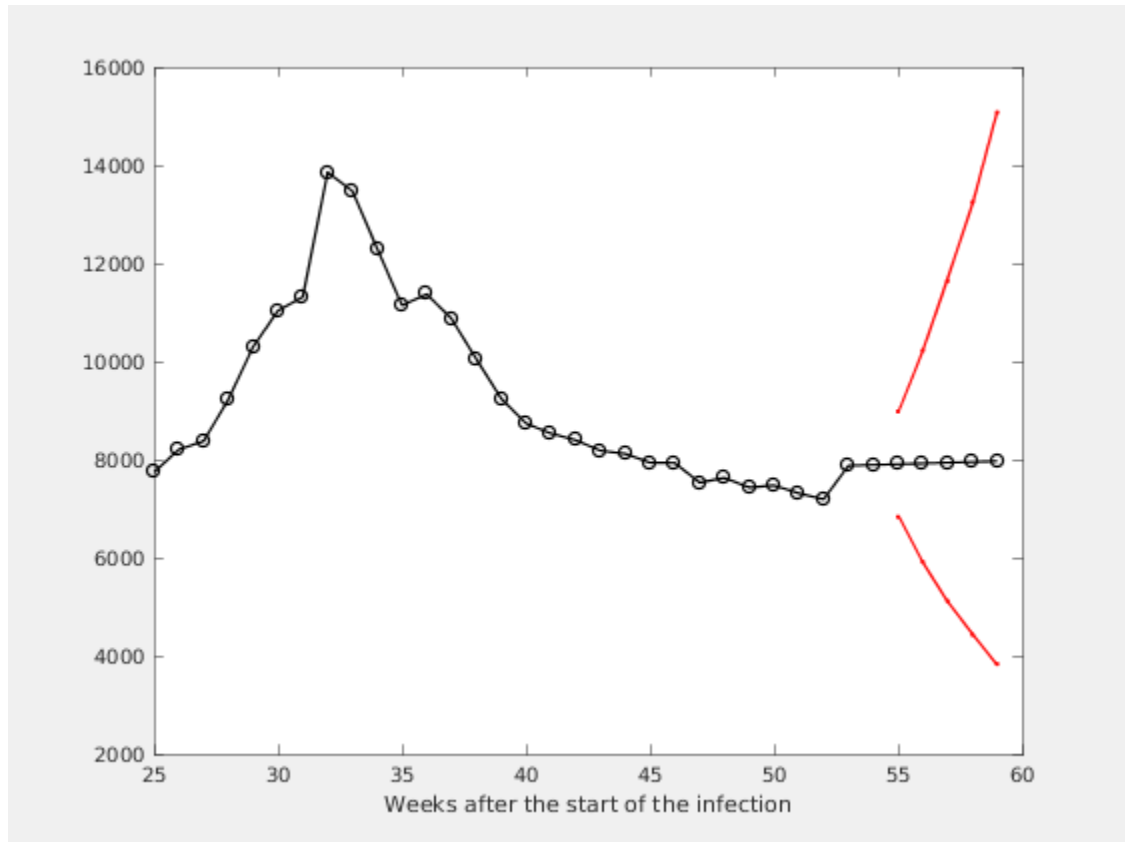**Figure 2.3. Expected number of the nonregistered infected individuals without immigration**
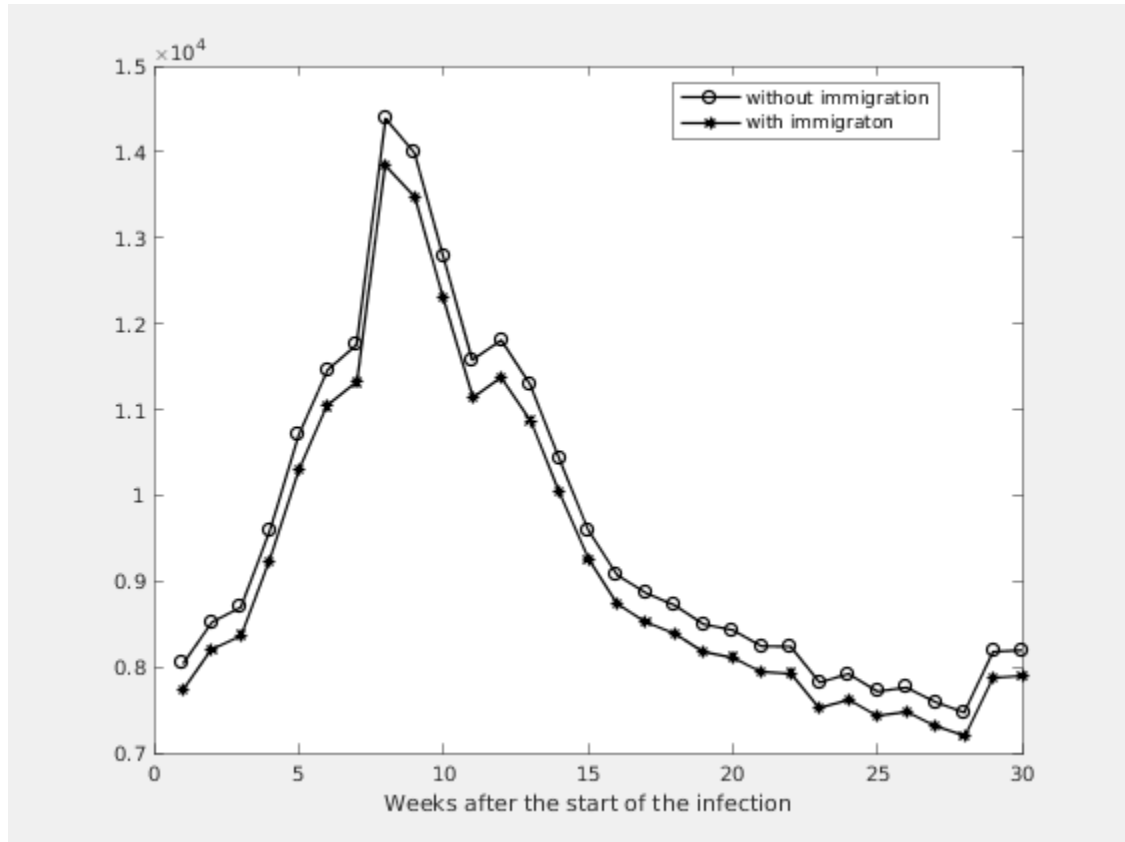
Figure 2.4. Expected number of the nonregistered infected individuals with immigration

Estimation of the model parameters.

k	m	ci	alpha	A1	M1
4	1.0001	0.8572 - 1.1431	0.4404	7627	7921
3	0.9993	0.8581 - 1.1405	0.3706	7429	7716
2	0.9987	0.8593 - 1.1382	0.3873	7473	7762
1	1.0019	0.8641 - 1.1397	0.3232	7311	7593
0	1.0019	0.8657 - 1.1381	0.2687	7192	7470