Branching stochastic processes as models of Covid-19 epidemic development

Var202 - 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 Var202. 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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Chapter 1. Observed Infection data

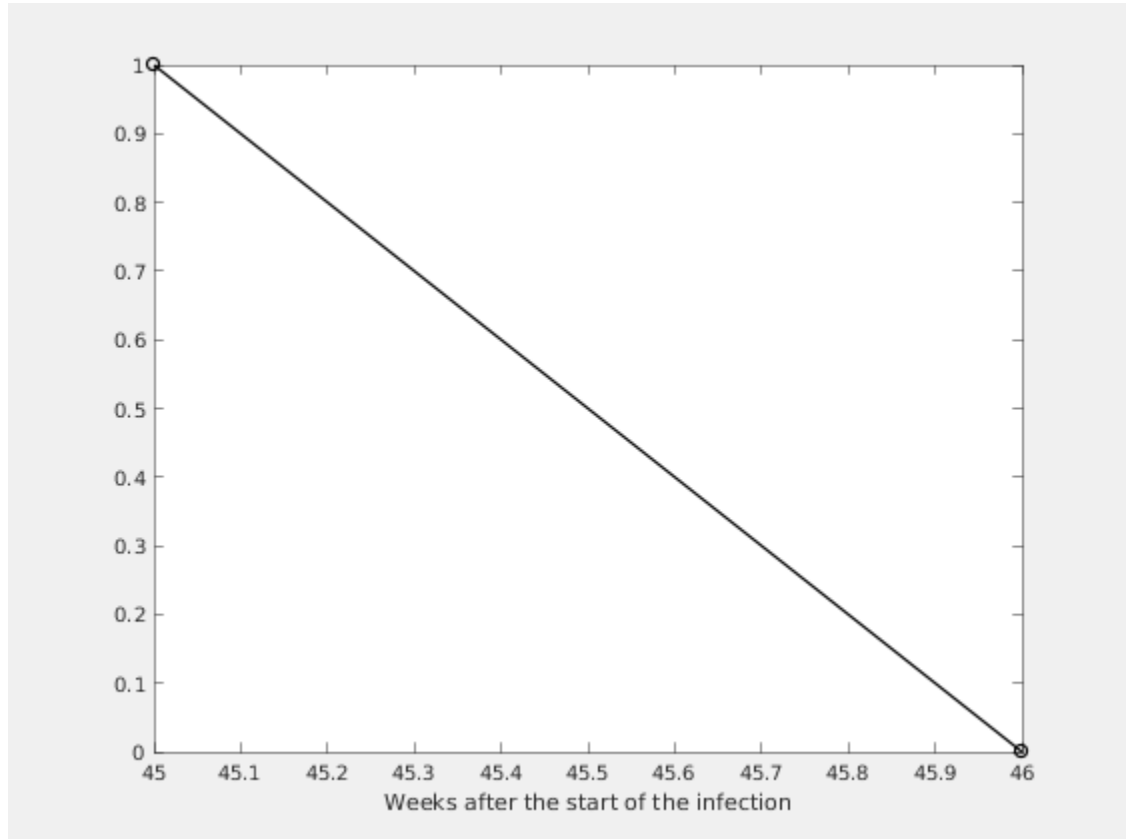**Figure 1.1. Number of the weekly reported laboratory-confirmed cases**
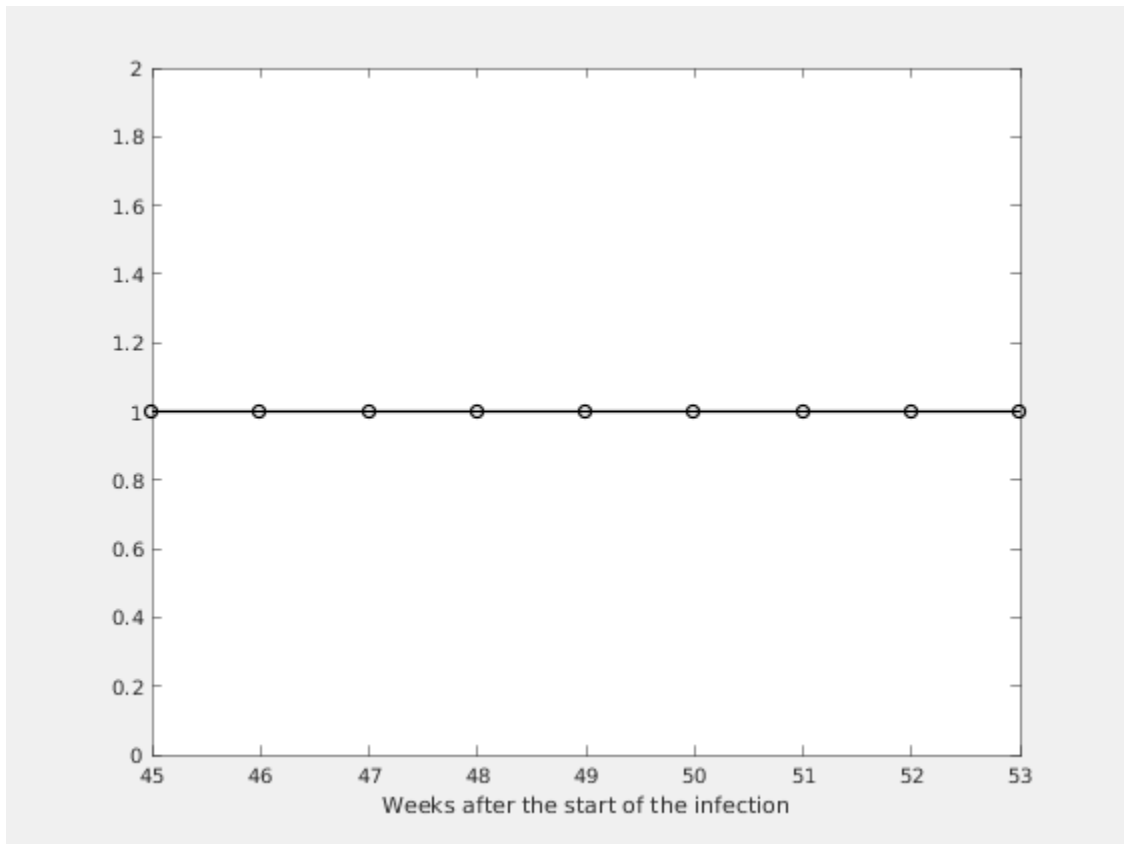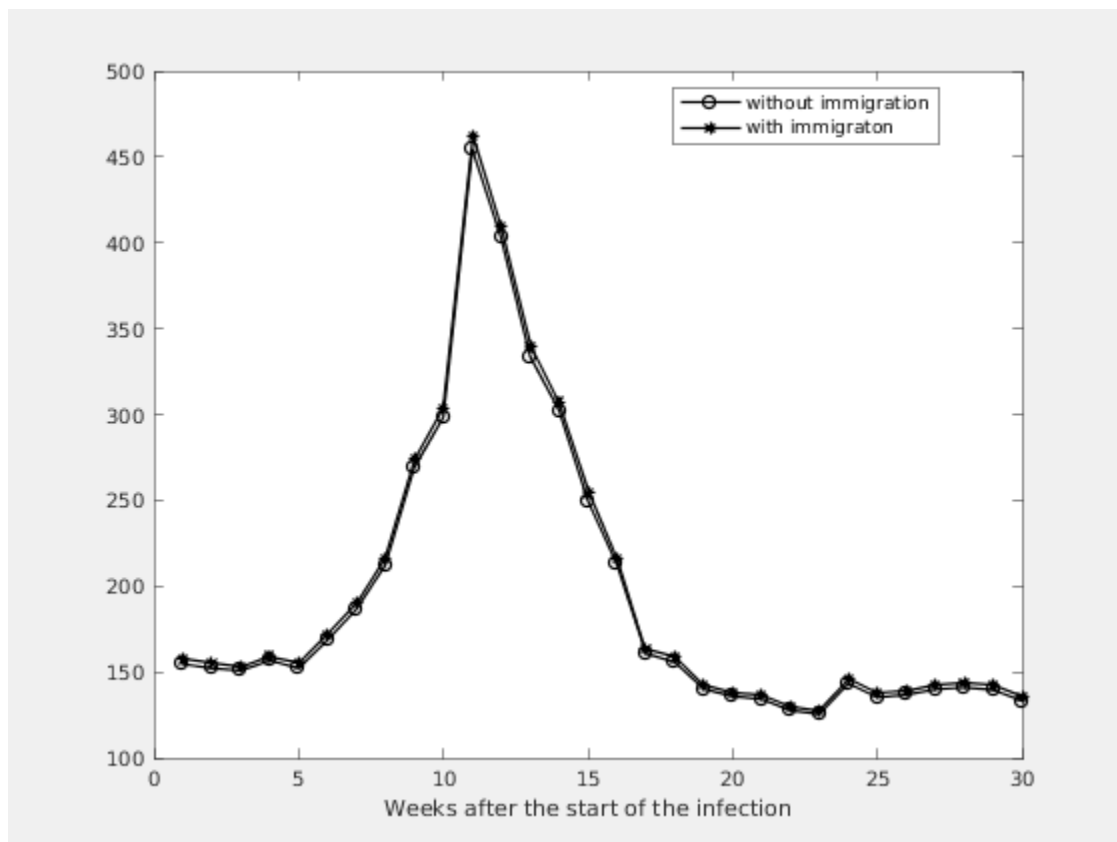
Figure 1.2. Number of the total registered cases

Chapter 2. Estimating of the main parameter and some predictions

Figure 2.1. Expected number of the nonregistered infected individuals with immigration

Estimation of the model parameters.

k	m	ci	alpha	A1	M1
4	0.9946	0.8695 - 1.1198	0.5354	146	143
3	0.9957	0.8721 - 1.1192	0.4637	138	135
2	0.9961	0.8742 - 1.1180	0.4888	139	137
1	0.9959	0.8755 - 1.1163	0.5229	142	140
0	0.9945	0.8757 - 1.1132	0.5350	143	141