

# **Branching stochastic processes as models of Covid-19 epidemic development**

**Var211 - week 53**

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### **Abstract**

The results presented here are obtained using the methodology proposed in the paper <https://arxiv.org/abs/2004.14838> for the country Var211. 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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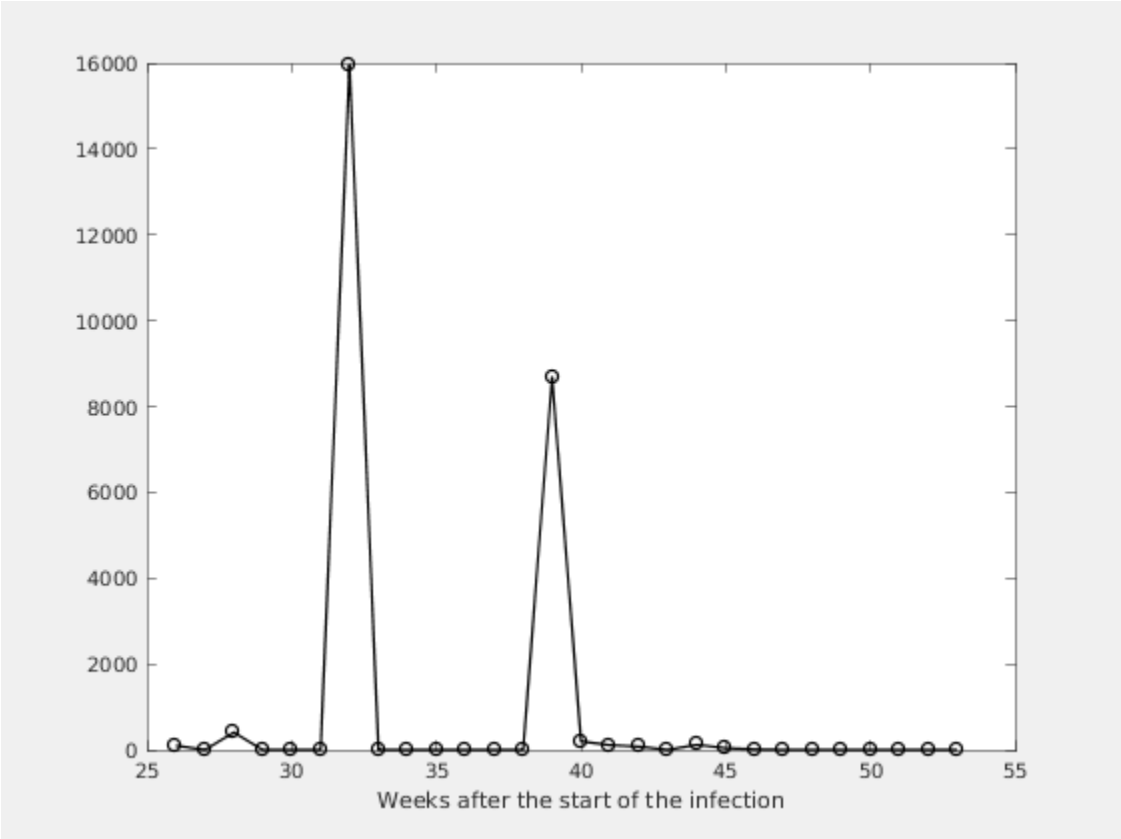
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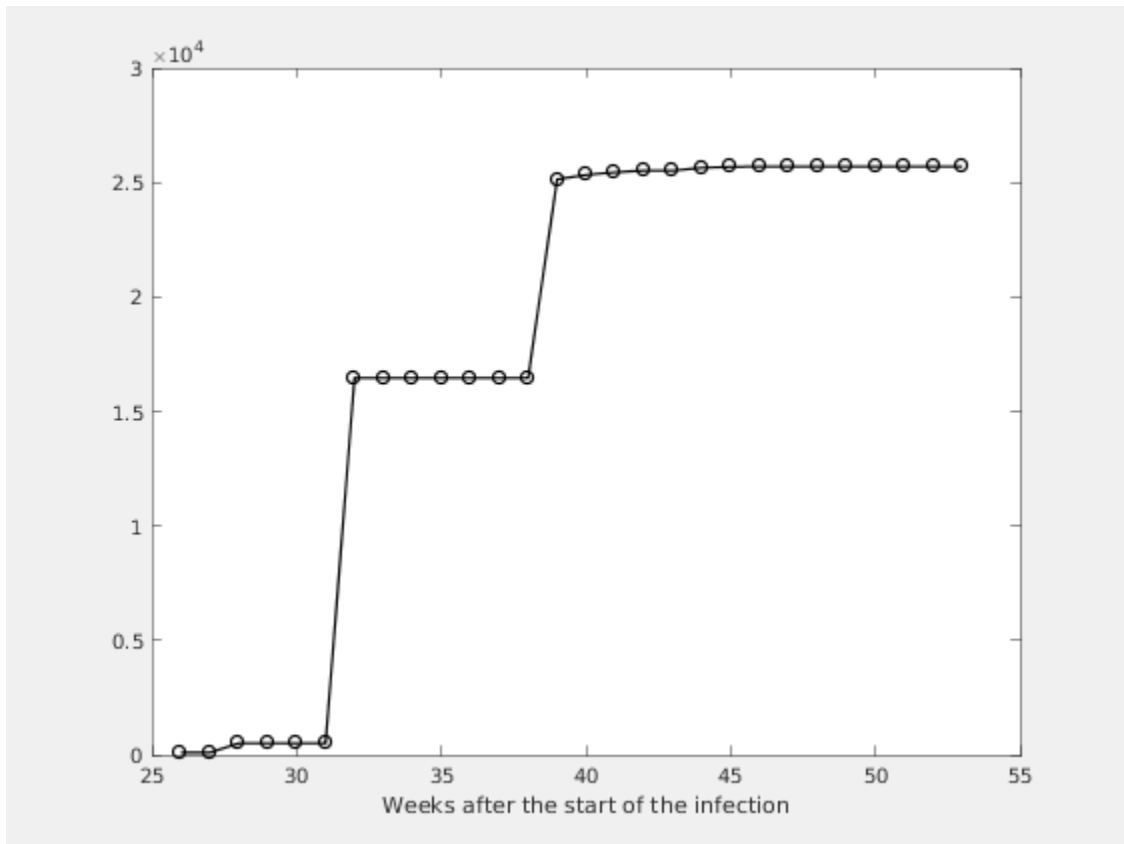
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# Chapter 1. Observed Infection data

Figure 1.1. Number of the weekly reported laboratory-confirmed cases

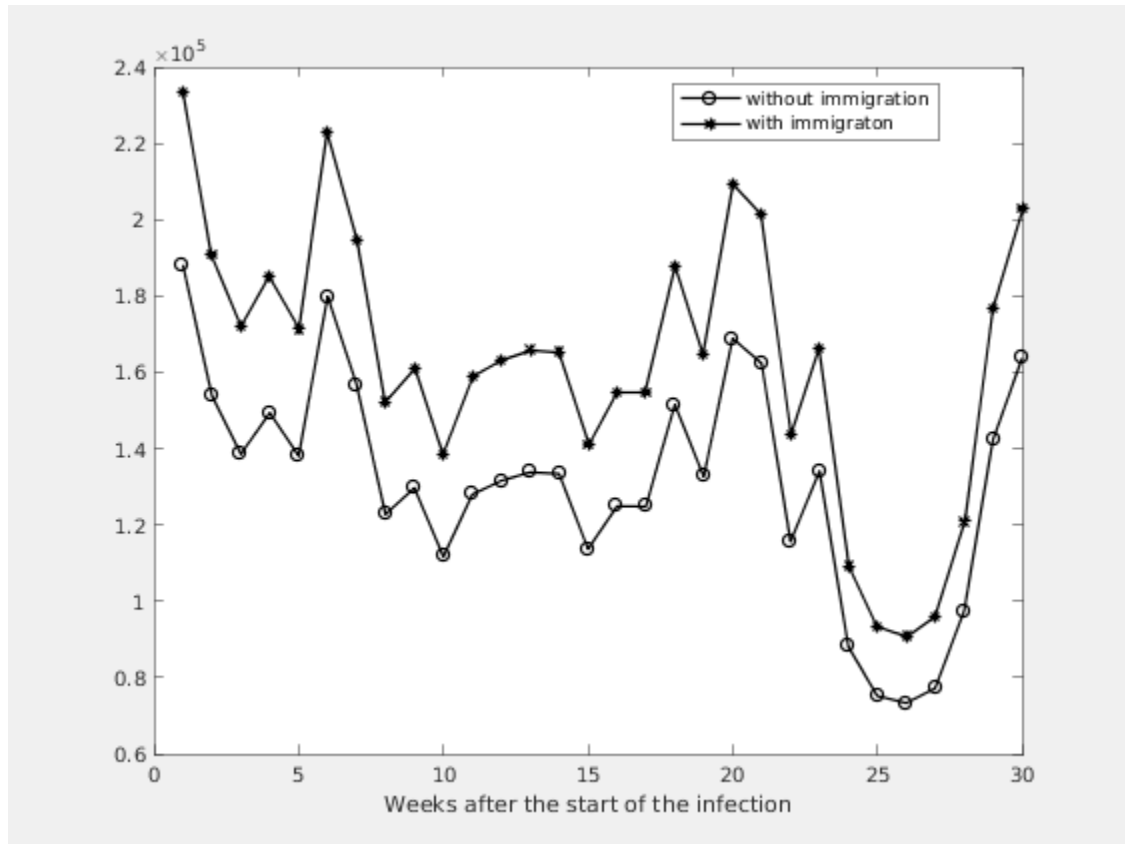


**Figure 1.2. Number of the total registered cases**



# 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	0.9961	-2.1737 - 4.1659	0.5664	109269	88083
3	0.9961	-2.1737 - 4.1659	0.5302	93280	75194
2	0.9961	-2.1737 - 4.1659	0.5380	90961	73324
1	0.9961	-2.1737 - 4.1659	0.5684	95811	77234
0	0.9961	-2.1737 - 4.1659	0.6120	120919	97474