

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

**Moldova - week 53**

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## **Branching stochastic processes as models of Covid-19 epidemic development : Moldova - week 53**

### **Abstract**

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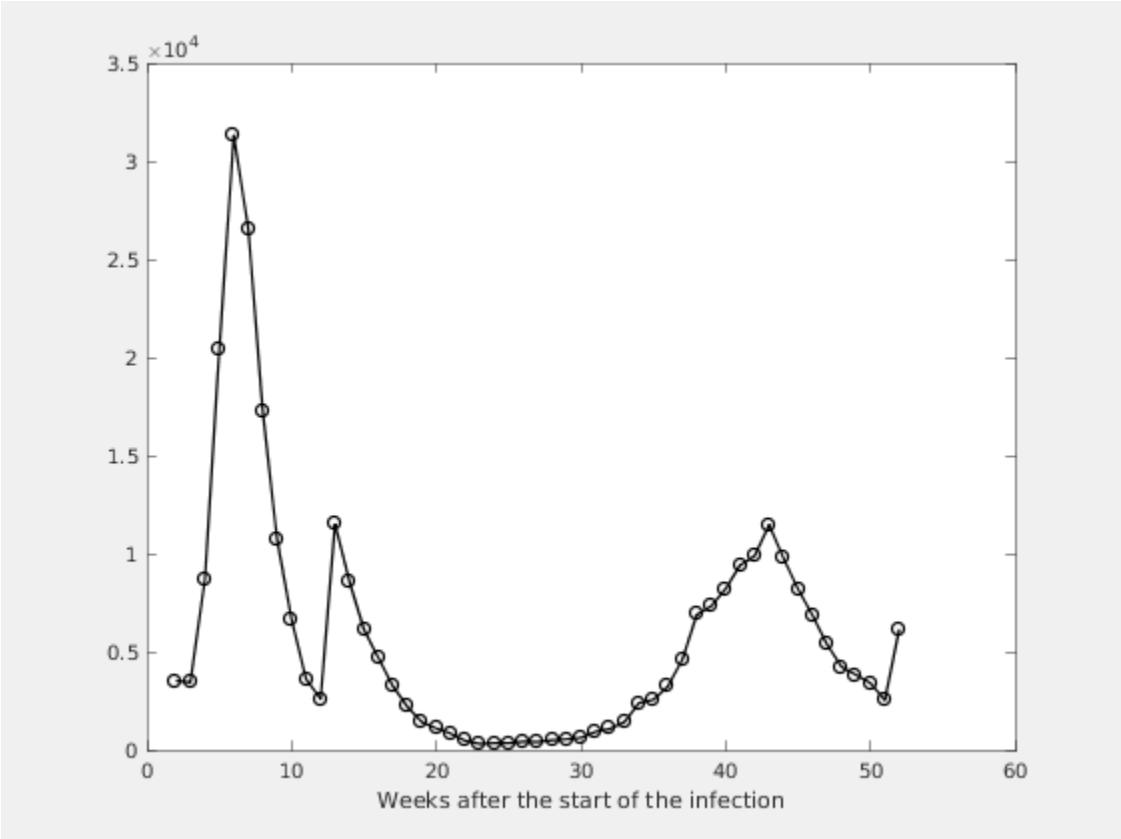
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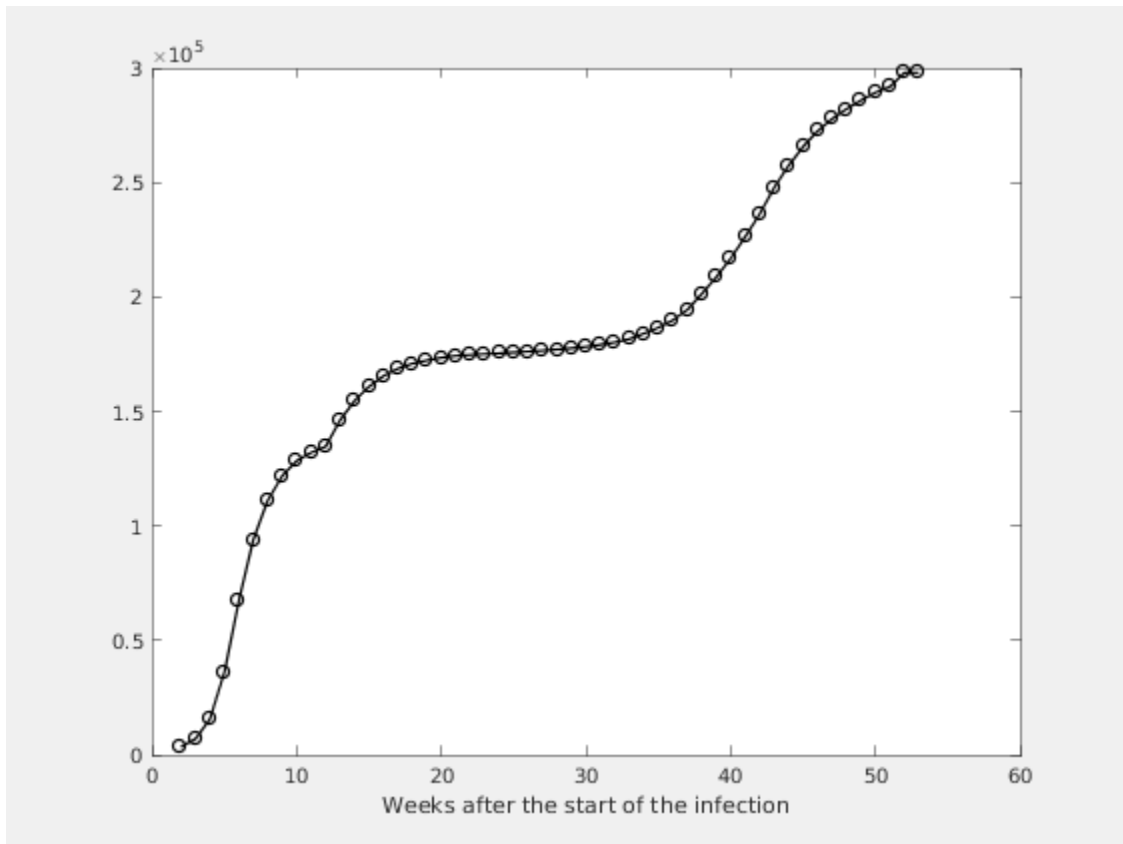
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# Chapter 1. Observed Infection data

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



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



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# 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

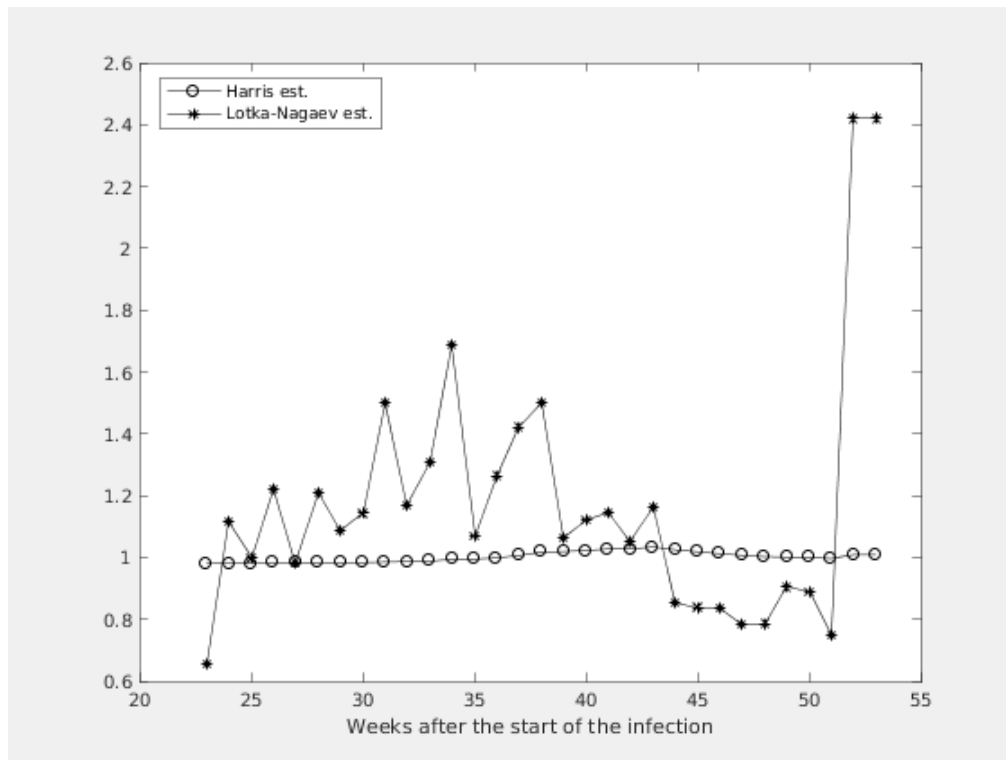
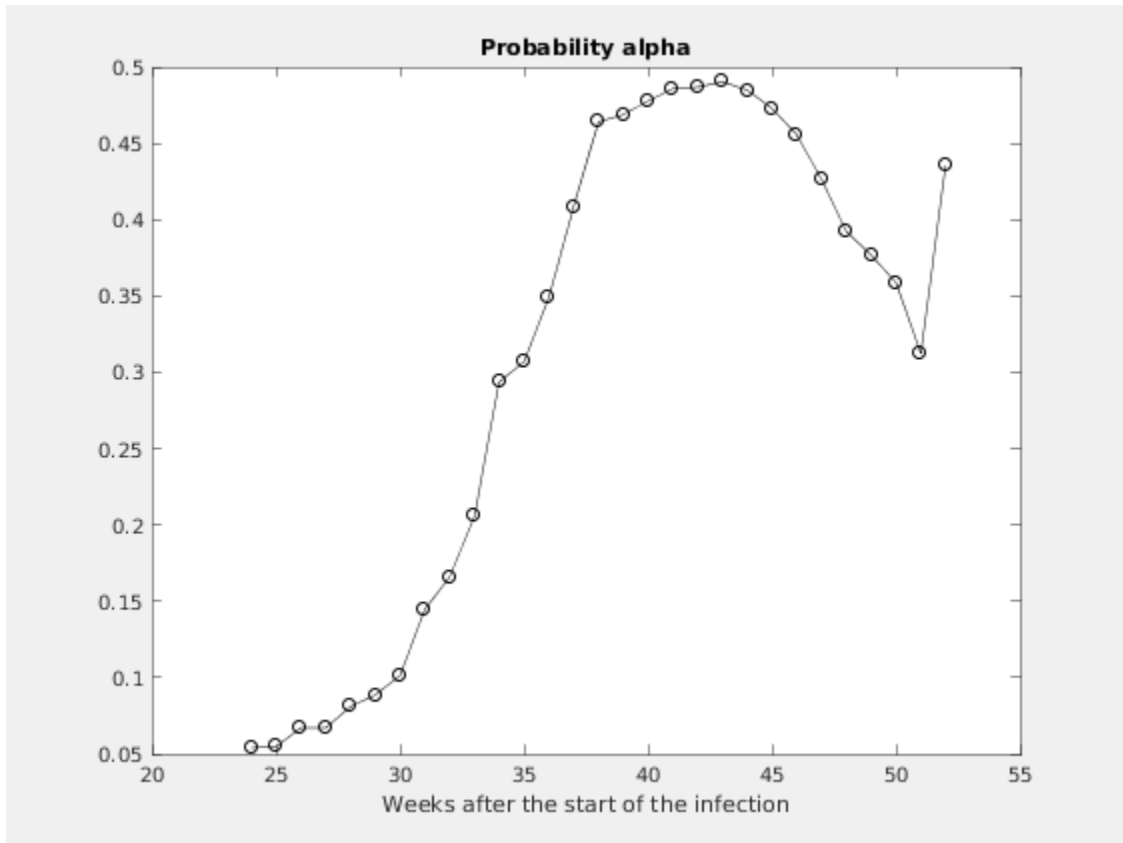
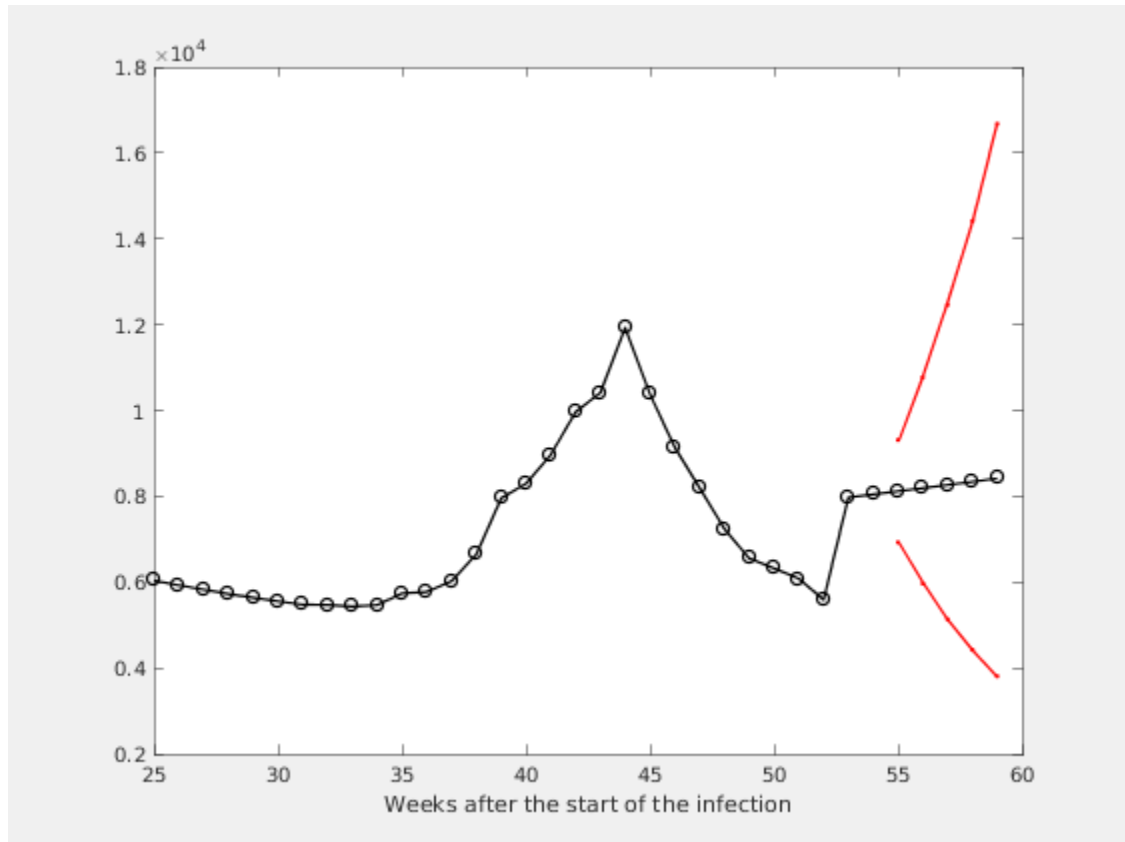


Figure 2.2. Figure

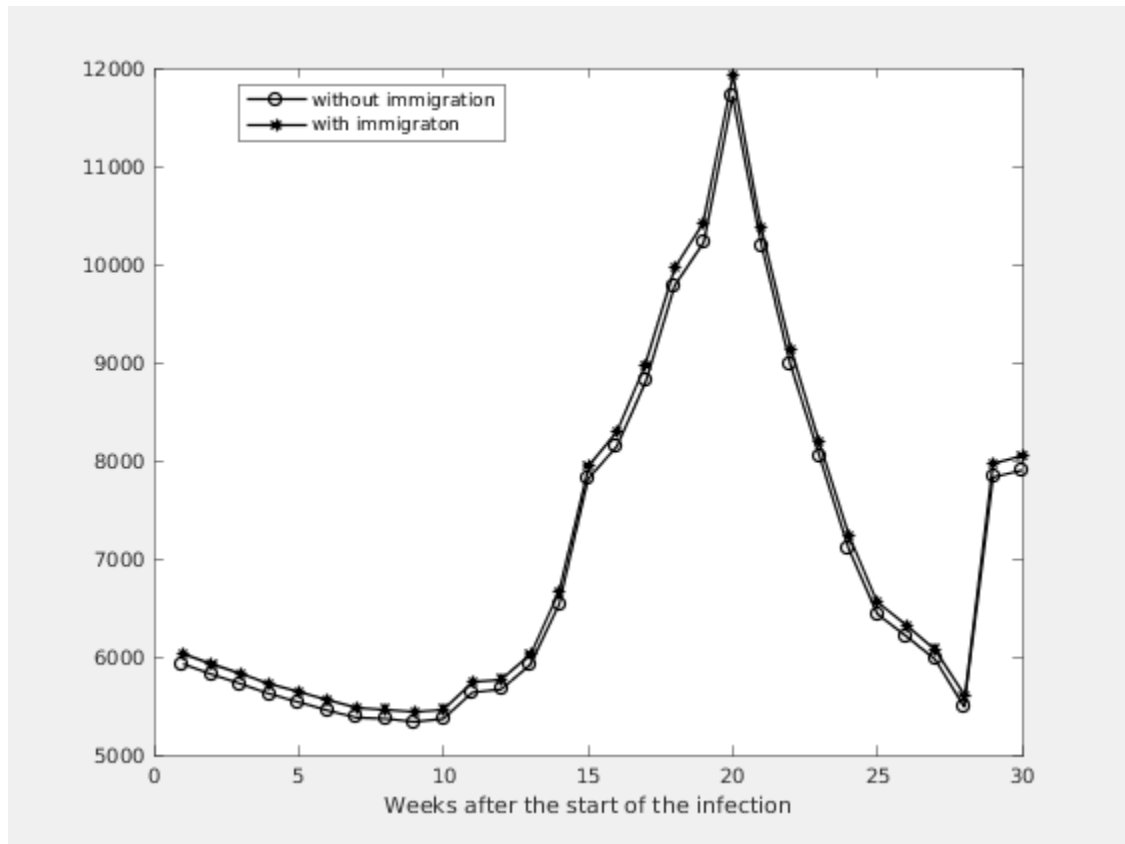




**Figure 2.3. Expected number of the nonregistered infected individuals without immigration**



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



**Estimation of the model parameters.**

k	m	ci	alpha	A1	M1
4	1.0011	0.8453 - 1.1569	0.4263	7240	7109
3	0.9996	0.8468 - 1.1524	0.3923	6555	6436
2	0.9966	0.8465 - 1.1467	0.3768	6323	6209
1	1.0090	0.8614 - 1.1566	0.3588	6082	5971
0	1.0090	0.8636 - 1.1544	0.3124	5592	5491