

Jury Report
Jan Brouwer Thesis Award 2022 – Economics

Xu Lin MPhil, University of Amsterdam/Tinbergen Institute

Buying Time to Save Lives: Evaluating COVID-19 Lockdown policies Using a behavioral SEIR

The jury (consisting of Professor Sylvester Eijffinger, Professor Harry Garretsen and Professor Maarten Lindeboom) received 21 theses to assess. As in other years, the quality of the submitted theses was exceptionally high.

The jury looked at the following criteria:

- Social relevance
- Originality
- Scientific quality
- Clarity

The theses were ranked using these criteria and eventually three theses remained. As a special note, the jury would like to point out that these three exceptionally good theses were all written by female candidates.

After careful deliberations, the committee chose to award the prize to the thesis “Buying Time to Save Lives: Evaluating COVID-19 Lockdown Policies Using a Behavioral SEIR Model” written by Xu Lin, Mphil student at the Tinbergen Institute, and supervised by Professor Sweder van Wijnbergen.

Subject of the thesis is an economic/epidemiological evaluation of Lockdown Policies during the fight against the current COVID-19 epidemic. In this thesis, Xu Lin shows that even the most advanced models used in epidemiology (and also by RIVM!) fall short in their predictions, mainly because they do not take into account a number of things. The main innovation in this paper is to take into account behavioral responses of individuals when there is a threat of infection: the fear of contagion. This depends on people's beliefs on the mortality rate and people update their beliefs, which helps to better predict the pandemic path. Indeed, Xu Lin shows that her model accurately predicts the actual development of the pandemic quite well and outperforms the existing models.

The model leads to a different view on the economic costs of Lock Down strategies. Where economists to date complain about the high economic costs of a lock down strategy, Xu Lin shows that a “Laissez Faire” strategy will result in much higher costs in terms of lost years of life, sickness and reduced economic growth than a lock down strategy. The lockdown buys time as the disease spread is lower and saves lives until the vaccine arrives).

This is a very clear and exceptionally well written thesis.

All the above resulted in an unanimous decision of the committee that you should be awarded the Jan Brouwer prize for the best Master thesis of 2022.

On behalf of the other jury members, congratulations to you (and of course also to your supervisor).

Prof. dr. S.C.W. (Sylvester) Eijffinger, president Tilburg University Society, hoogleraar financiële economie Tilburg University

Prof. dr. J.H. (Harry) Garretsen, hoogleraar internationale economie en bedrijfskunde Rijksuniversiteit Groningen

Prof. dr. M. (Maarten) Lindeboom, hoogleraar algemene economie Vrije Universiteit Amsterdam

The meeting of the jury took place on December 16th, 2021, was chaired by KHMW-director Drs. G. (Garance) Reus-Deelder and was also attended by Prof. dr. R.B. (Rudy) Andeweg, Secretary of Humanities KHMW and Drs. S. (Saskia) van Manen, Secretary (minutes).