

National Institute of Economic and Social Research

**NIESR publication finds that the number of UK
Coronavirus infections could have been almost halved by an
earlier lockdown**

FOR IMMEDIATE RELEASE

Today (19 October 2020), the National Institute of Economic and Social Research has published a paper by Professor Andrew Harvey that discusses how new time series models can be used to track the progress of an epidemic, forecast key variables and evaluate the effects of policies: “[Time series models for epidemics: leading indicators, control groups and policy assessment](#)”.

The paper found that the number of coronavirus infections in the UK, as measured by data on daily coronavirus hospital admissions, could have been almost halved by an earlier lockdown (by a week) in March.

The paper suggests that the growth rate of confirmed new coronavirus cases may still be a good indicator of the path of new infections. An alternative would be to use the growth rate of the proportion testing positive, but if the growth in new cases is constant the message is much the same as that in new cases.

The paper concludes that for reasons unconnected with lockdown policy, the death rate per head in Sweden was about three and a half times that in Denmark. The less stringent lockdown then raised this ratio to nearly five and a half.

Professor Jagjit Chadha, Director of NIESR said: “*Professor Andrew Harvey develops new statistical time series techniques for tracking and forecasting the path of an epidemic. These models provide a means of assessing the effects of past policies and hence, informing future ones.*”

“He estimates the number of deaths that could have been avoided by an earlier UK lockdown in March and suggests that the increase in the number of deaths resulting from Sweden's softer lockdown policy was of the order of forty to forty-five per cent. Statistical approaches of this kind are often used in economics but not in epidemiology where the emphasis is on computer simulations. As such they offer a potentially valuable way of complementing the methods currently used to assess measures to combat Covid-19.”

Professor Andrew Harvey is an Emeritus Professor of Econometrics in the Faculty of Economics, University of Cambridge, and a Fellow of Corpus Christi College. He is also a Fellow of the Econometric Society, the British Academy (FBA) and of NIESR. His research focuses on time series, financial econometrics, state space models, signal extraction and volatility.

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Notes for editors:

[The full discussion paper can be read here.](#)

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