University of Nottingham
UK | CHINA | MALAYSIA

Research impact summary

Macroeconomics, forecasting and real-time policy analysis

Macroeconomic models have an important role to play in helping decision-makers understand business cycles and recessions. Research by the Centre for Finance, Credit and Macroeconomics (CFCM) has helped demonstrate how such models can help with forecasting and real-time policy analysis by presenting the likelihood of the entire range of possible outcomes.

Paul Samuelson, winner of the 1970 Nobel Prize for Economic Sciences, famously joked that "economists have correctly predicted nine of the last five recessions". The quip has earned plenty of airings in recent years – not least since the global financial crisis, which was widely unanticipated. So are forecasts derived from macroeconomic models really little better than intelligent guesswork, as some critics claim?

"Despite media scepticism, economic models can provide extremely valuable insights," says Kevin Lee, a Professor of Economics. "Strictly speaking, it's right to say policymakers don't necessarily require them to discuss the direction an economy might be taking. They could simply theorise, for example. But economic models are essential if such discussions are to be raised to a level that's in any way evidence-based, scientific and systematic."

A key aspect of CFCM's work in this field has been the fundamental recognition that policymakers want to know the likely outcome of their decisions. For this to happen they need models that can forecast the whole range of potential outcomes and the likelihood of specified events occurring. But decision-makers do not only need forecasts to be presented in a way in which they can be used: they also need forecasts to be based on reliable models that use all the relevant data available.

The macroeconomic data that policymakers need in order to make decisions is often available only with a lag. Alternatively, it might be made available reasonably contemporaneously but then later undergo considerable revision. CFCM's VAR modelling acknowledges that the analysis of real-time datasets – ie those that show data both as it was first released and as it was subsequently revised – is central to understanding the lessons of the past and, by extension, to informing the decisions of today.

Professor Lee uses simple global vector-autoregressive (VAR) models that capture linear interdependencies between multiple time-series in different countries. The models draw on real-time datasets that include data both as it is first released and its subsequent revision alongside direct measures of expectations from surveys. This means forecasts can take into account global and national trends, any systematic patterns in data revisions and the effects of confidence and pessimism.

"Never let anyone tell you economics is boring," says Professor Lee, who has been Head of the School of Economics since 2012. "The drama of recent events has shown economics can be fascinating – even exciting. The stakes can be incredibly high, and what we discover and achieve in this field affects everyone."

Kevin Lee

Professor of Economics

"As an applied econometrician, I use empirical evidence to inform policy and other key areas of decision-making. I've worked in fields such as labour economics, industrial organisation and macroeconomics, looking at issues including the male-female pay gap, why some mergers work and some don't and whether poor countries are catching up with rich countries. It all makes for interesting, important and extremely varied work – and that's what economics is really about."

kevin.lee@nottingham.ac.uk

"Economic models are essential if policy discussions are to be raised to a level that's in any way scientific and systematic."

World-leading research

The research carried out at the School of Economics is regularly acknowledged as among the most significant of its kind in the world. It is also among the most influential.

Research can help boost economic competitiveness, improve the effectiveness of public services and policy and enhance quality of life. We have made important contributions in all of these areas through the work of our research centres.

- Centre for Decision Research and Experimental Economics
- Centre for Finance, Credit and Macroeconomics
- Centre for Research in Economic Development and International Trade
- Nottingham Centre for Research on Globalisation and Economic Policy
- Granger Centre for Time Series Econometrics
- Network for Integrated Behavioural Science
- Nottingham Interdisciplinary Centre for Economic and Political Research