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Research impact summary

Modelling, mistakes and the search for "truth"

Research by the Centre for Finance, Credit and Macroeconomics (CFCM) has helped show how macroeconomic models can help with forecasting and real-time policy analysis. In this Q&A Professor Kevin Lee explains how economic models have evolved in recent decades – and how the far-reaching value of "number-crunching" has earned greater appreciation in the wake of the global financial crisis.

Economic forecasting has come in for a lot of criticism in recent years. Has that criticism been justified?

I'm not sure all the criticism has been justified, but it's right to say that the widespread failure to predict the global financial crisis could hardly have gone unremarked. You might remember that even the Queen felt moved to ask a few awkward questions after listening to an academic briefing on market turmoil in 2008, so there was even an element of Royal disapproval to contend with.

I don't think it necessarily helps if economists allow themselves to be dragged into some sort of interdisciplinary squabble as a result. You often read retorts along the lines of "Meteorologists don't always predict hurricanes" or "Seismologists don't always predict earthquakes". It's true that nobody's perfect, but in the end the most useful thing you can do is see what lessons need to be learned and aim to improve.

And that's really how every discipline works. We learn by making mistakes, and the fact of the matter is that some mistakes are bigger than others. There's obviously been a fair amount of what you might call soul-searching among the economics community during the past few years, but it's vital to note that recognising what we do well has been just as important as recognising what we might do better.

So what might be done better in terms of macroeconomic modelling?

George Box, who was one of the greatest statisticians of the 20th century, once said: "All models are wrong, but some are useful." What he meant was that no model can represent the absolute "truth" – certainly not where economic forecasting is concerned – but some are able to get closer to it than others.

The history of macroeconomic models over the course of the past three quarters of a century or so illustrates that. There have been several junctures at which economists have been compelled to question longstanding assumptions and approaches.

The events of the 1930s, for example, when most "experts" failed to predict the Great Depression, led to the kind of reappraisal we've seen since the global financial crisis. Ditto the 1970s, when largely unforeseen inflation and macroeconomic turbulence badly dented the optimism that had surrounded the building of large-scale practical economic models for policy purposes.

Maybe the most important lesson we've learned through the decades, particularly bearing in mind Box's sentiment, is that in attempting to get as close possible to the "truth", you have to consider a variety of would-be "truths". And what I mean by that is that economists need methods that can accommodate the uncertainty over which world-view is right, over the details of the candidate models and over the sort of external shocks that might impact on the economy.

That's what we strive for with our VAR models, which aim to take into account factors such as international links and survey data around expectations. This approach reflects a number of common post-crisis criticisms, such as an alleged failure to appreciate the sheer interconnectedness of the globalised era and a lack of focus on the role that confidence and pessimism can play in propagating business-cycle dynamics.

Do policymakers appreciate the value of these enhancements?

Our work with various stakeholders, including central banks, very much suggests they do. There's always the argument that policymakers don't necessarily need economic models to discuss the direction an economy might be taking – they could just sit around and bounce around a few theories if they wanted – but the reality is that economic models are essential if such discussions are to be in any way evidence-based, scientific and systematic.

This all seems a long way removed from the old stereotype of economics as a rather dreary affair. Have things really changed?

For years, rightly or wrongly, the stereotypical economist was seen as a deadly-dull number-cruncher. As more and more people now appreciate, the reality is quite different. Of course, it's a discipline that demands precision and expertise – but it's also a disciple that demands passion and enthusiasm.

That's why I think it's very important that all the members of our school articulate what motivates them and how their work seeks to make a difference or perhaps even change people's lives. Recent events have shown economics can be fascinating – even exciting – and we should embrace that. Interesting, significant and extremely varied work that has a wider impact is what economics is really about.

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