Insights into research: Macroeconomics in the light of the crisis
Wendy Carlin – UCL & CEPR
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Summary of talk:

On the 25th of February, the Economist's Society welcomed Professor Wendy Carlin, Research Fellow of the Centre for Economic Policy Research (CEPR), London, and Fellow of the European Economic Association, to give the second talk as part of the "Insights into Research" series. Her talk, titled "Macroeconomics in the light of the crisis" pointed out gaps in the current macroeconomics model that led to the financial crisis and addressed what needs to be done. She says that three factors namely inequality, financial sector and relationship between key global economic players, were neglected and hence need to be incorporated in the current core 3-equation model. She believes that oneway to address this is through publishing research-related textbooks. She has been actively writing research-based textbooks that teach the new model and shared with the students how current macroeconomics model we are familiar with can be rethought to incorporate the financial sector. Professor Carlin also highlights that after each economic crisis, economists identify gaps in economic model and a new policy regime sets in. She concluded the talk by warning that in the future, economic crises will be more complex due to global interdependence. This means that we should learn to be more apprehensive of future economic crises even when a semblance of stability has been restored.

Full-length review

On the 25th of February, the Economist's Society welcomed Professor Wendy Carlin, Research Fellow of the Centre for Economic Policy Research (CEPR), London, and Fellow of the European Economic Association, to give the second talk as part of the "Insights into Research" series. As a Economics Professor at UCL, Professor Carlin is a global visionary in teaching contemporary macroeconomics and is involved in writing 'the book' on the three-equation model and the financial system. Her research focuses on macroeconomics, institutions and economic performance, and the economics of transition. She has also acted as a consultant for international organizations such as the European Bank for Reconstruction and Development (EBRD), London, and the World Bank.

Professor Carlin began her talk with a picture of her and RobertSolow at a conference in 2010 at the Cournot Centre Paris on the future of macroeconomics. She said that after the Solow's model was devised, there have been modifications to the model after economic crises occur and there have been much discussion over the future changes and direction of macroeconomics.

The core macro modeling and policy-making have swung around two ideas of business cycle and long run growth. However, Professor Carlin points out that economists have ignored financial crises (greater definition needed) and long run

shifts in income distribution (macro significance of this aspect). She points out that researchers were ill prepared for the macro financial crisis. One reason was that global economic crises are rare events e.g. Great Depression (1930s), Great Stagflation (1970s) and Global Financial Crisis (2009).

She then goes on to point out that there has been a pattern that followed each economic crisis, leading to the next economic event: After each economic crisis, policy-makers are prompted to rethink new policy regimes that produce change and satisfactory performance in the economy later on. However, inattention given to certain aspect of macroeconomics leads to another economic crisis.

For example, after Great Depression, Keynes' economics emerged with demand management strategies that were related to the thesubsequent two decades of Golden Age. However, there was insufficient attention given to supply shocks and expectations, causing inflation to build up. Too much attention to the demand side neglecting the supply side led to the Great Stagflation. Similarly, this situation created the conditions that promoted research on rational expectations. It became clearer to economists that they needed to study the supply side, producing the 3-equation macroeconomics on inflation targeting, later on causing the Great Moderation. However, insufficient attention was given to financial markets and imbalances, leading to the Global Financial Crisis.

She says that the primary question now is whether the improved macroeconomic performance on the back of each new policy regime contain the seeds of a new source of instability that had the potential to incubate the next global crisis. The prevailing macro paradigm and policy regime is focused on the business cycle frequency performance indicators i.e the output gap. However, it has ignored 3 inter-related lower frequency structural changes that are namely inequality, financial sector, and relationship between major countries in the global economy.

Following this, Professor Carlin presents a series of data that showed the significance of inequality, financial sector and relationship between major global players in macroeconomics.

- Inequality:
    - The growth theory (Solow model) usually assumes a constant factor distribution of income. This means the share of wages in GDP stays roughly constant. However, empirical evidence disagrees with his assumption. In reality, the share of wages in GDP rises (profitsqueeze) in the years before the Great Stagflation and subsequently falls (wage squeeze) during the years before the Global Financial Crisis.
    - Professor Carlin shows evidence from the World Top Incomes Database which plots top income shares in UK and US from 1909-2007. During the Great Depression, there was a peak in share of income that goes to the top 1%. This falls to a minimum at the time of Great Stagflation and then rises till original level during the Great Moderationuntil the GlobalFinancial Crisis occurred.

- Financial sector:
    - More data presented showed that the largest proportion of debt in the Great Depression was in the corporate sector, compared to bigger proportion of debt going towards the Household and Financial sector during the Financial Crisis. This factor was ignored by macroeconomics.
    - Further, relative wage in finance was high in the 1930s but fell till nearly 1 during the Great Stagflation and then rises to a high level post 2000. The trend of financial deregulation followed the relative wage in finance. With higher relative wage in finance, there was also higher financial deregulation.
- Relationships between major economic players in the world
    - According to data, there is also massive imbalances that is growing today among the international countries, between the surplus countries such as Japan and Germany and the deficit countries such as US, UK and Spain.

Knowing that these gaps in understanding are present, Professor Carlin then goes on to explain what should be done to resolve these gaps. She believes that these aspects of macroeconomics should be included in macro teaching. For example, in partnership with other economists, she is publishing research-related textbooks that incorporate financial models. She believes that students are discerning critics who want a way of understanding the world. She also believes that completely new models do not need to be introduced, instead the factors that are ignored should be embedded in existing models. The general case in the model is that the economy is not self-stabilizing and a policy maker is required. When it is stable as defined by constant inflation equilibrium, there is involuntary unemployment and financial instability can arise.

She goes on to explain how shewould introduce financial sector into the core 3-equation model. She presents a graph that detailed the trend of financial and business cycles in the United States. It was only from mid 1980s that there were large deviations in the financial cycles. Credit (used to finance property purchase), credit to GDP and measure of property prices indicators of financial cycles. Equity price fluctuations are not closely related to the financial cycle. Through this modeling, she concluded that financial crises appeared to be related to the Financialcycle, which is related to build-up of financial debt and of house price bubbles. Also, they have much lower frequency than business cycles

To integrate the financial sector into the core equation model, one firstly needs to understand how to model the financial asset loop and analyse its Interactions with IS-PC-MRmodel. In existing model, there are the private sector and central bank. In the new model, the private sector needs to be divided into borrowers and savers, the money market and retail banks also needs to be brought into the picture. Two rates also need to be considered, namely policy rate by the central bank and lending rate by the retail banks. Following that, macroeconomics cannot be studied only in

terms of flows, but also through balance sheets and understanding leverage of the financial sector.

Next, she explains how one can model the housing feedback loop. The retail-banking sector and investment banking system needs to be brought into the discussion. Retail banks offer loans to consumers for consumption with housing collateral and for investment in the housing stock. Both consumption and investment feeds into the aggregate demand. Also, the investment banking system is involved through securitization and leverage cycles.

Using this, one can analyse the financial crisis in 2009. Securitization of assets pre-financial crisis, availability of loans for consumption and investment in housing, as well as low unemployment rate led to the perception of low risk in the housing market. Thus the demand for and supply of securitized assets rise. In the investment bank sector, there is an upward sloping demand curve, leading to instability in the financial sector. This contrasts to retail banking system with downward sloping demand curve, as it is risk averse. The risk neutral investment bank sector is a key driver of high leverage ratios. Higher leverage means that buyers are will lose much more in the event of a fall in price of financial assets and houses. In the financial crisis, when house prices started falling, buyers started selling houses and due to high leverage ratios, lost much of their equities. The crash in the financial market led to a fall in aggregate demand and thus rapid decline in output levels.

In response to this, the central bank tried to cut policy rate but it was soonat zero lower bound. Thus, it turns to quantitative easing instead. As private savings soared, government allowed public savings to fall to attempt to stabilize aggregate demand. As a result, debt goes up and a balance sheet recession occurs.

Professor Carlin concluded her talk with an explanation of reasons why economists did not predict these factors. As mentioned earlier, these crises are rare occurrences. She then points out that gradual changes in the economy are often overlooked and illustrated this with a simple analogy using the Air France Flight 447 event. The plane stall occurred as the pilots could not understand the situation that their plane was in. The autopilot created false assumptions about what might be wrong. When the stall happened, the alarm sounded many times but the pilots did not believe in the signal. There were too much that was ongoing that led to total confusion. This case illustrated that human behavior of intuitive thinking tends to take over deep thought in moments of confusion and humans tend to be passive when things are going well.

Linking this back to why economists did not predict the crisis, Professor Carlin believed that our sensors for gradual change were disabled by the incomplete models that focused on performance success at business cycle frequency. Secondly, there was the paradox in credibility prior to the economic crisis that led to large speculation in securitized assets. Also, economists relied on rules “autopilot”, which are our confidence in inflation targeting central banks.

Thinking in a broader framework,Professor Carlin says that there are gaps in understanding of governance and political authority that have to be filled in. These problems appeared to be solved with each post-crisis new policy regime. In the future, the economic crises will be more complex with global interdependence. She believes that the lesson learnt is that we should be more apprehensive now and vigilant when a semblance of stability is restored.