

New Analytical Tools and Techniques for Economic Policymaking

15-17 April 2019




On 15-17 April, OECD organised a conference and series of masterclasses on [New Analytical Tools and Techniques for Economic Policymaking](#) in the context of the New Approaches to Economic Challenges (NAEC) initiative. Following an introduction by the Secretary-General (by video), the Chief of Staff, the Chief Economist and the Chief Statistician outlined the importance of providing a better understanding of challenges which are complex, dynamic and interconnected such as the productivity slowdown, rising inequality and climate change.

The conference discussed the tools policymakers need to understand a world economy where heterogeneous, global production networks (50 million firms with billions of physical links) interact with household networks (2 billion households, 3.3 billion workers and trillions of links to consumed products), a web of contracts (trillions), and ownership patterns where a few firms and individuals own almost everything.

New models, tools and techniques are essential to explain this complexity, guide data collection, illuminate core dynamics, identify emerging issues, challenge the robustness of prevailing theories, confront prevailing wisdom with the data, and discipline a policy dialogue. Techniques drawn from disciplines such as mathematics, physics, and the natural sciences, including agent-based models, and network and big data analysis have the potential to offer a better way of thinking about the interactions of the various networks and systems, and how behaviours and properties emerge from these interactions, including shocks to the financial, economic, social, and environmental systems.

A number of important policy implications emerged from the Conference on the use of new analytical techniques on ecologies of innovation and the future of work, obesity and healthcare, and macroeconomic policy. Doyne Farmer and his Complexity Group at Oxford highlighted many applications of ABM to examine stress testing of banks, understand insurance and reinsurance markets, and the green transition. Economists from the Central Banks of France and Chile examined the potential of Nowcasting to improve economic forecasting. Big data from sources like Google Trends can be useful when no other official data are available. While VAT data connected to other data sources provides an amazing ability to track transactions (with goods and the counterparts) in real time at the firm-level. Ross Hammond (Brookings) adopted a systems/network approach to think about the complex drivers of obesity.

The NAEC agenda is essential in helping Members to better understand the world economy, and the underlying dynamics. Economic science can provide the foundations for better tools, but NAEC has an important role to play in linking scientific research (often done outside academia, in Central Banks and Government Departments, for example) to the needs of the “policy engineers” looking for new tools. The engagement of OECD Directorates with this



agenda is helping to keep them ahead of the game and, in the end, helping to develop policy recommendations which are both scientifically sound and practically implementable.

The event highlighted the strong partnerships between NAEC and a number of other institutions including the Institute for New Economic Thinking, the Santa Fe Institute, the Fields Institute, the Joint Research Centre of the European Commission, Rebuilding Macroeconomics and others. There is now a strong movement pushing for the adoption of new approaches and for the field of economics to go further, faster.

The NAEC initiative is strongly placed to focus and federate the energies of this movement and to connect new thinking with the networks and structures of policymaking. Funding from Member governments, P4NE and the investment firm Baillie Gifford (with whom OECD signed a co-operation agreement to confirm this partnership) is helping to facilitate this. The event also attracted a broad audience online with a live cast of the introductory session “*Why we need New Approaches*” and the “*Roundtable on New Approaches to Macroeconomics*”, led by the OECD Chief Economist received over 830,000 viewers on Twitter.

The young researchers showed what the future of the field might look like, applying their creativity and energies to examine how small changes in regulation could slow the market enough to avoid “flash crashes”, how machine learning could be used to evaluate public policies, and how ABM can simulate policies that can induce a faster transition to green technologies. [NAEC Masterclasses](#) on April 17th presented overviews with leading experts on complexity economics, agent-based modelling, network analysis and stock-flow consistent modelling.

Agenda and presentations available at: www.oecd.org/naec/new-economic-policymaking/

For further information: William.hynes@oecd.org or naec@oecd.org

