

New Approaches to Economic Challenges (NAEC)

Update - May 2019

The New Approaches to Economic Challenges (NAEC) initiative develops a systemic perspective on interconnected challenges with strategic partners, identifies the analytical and policy tools needed to understand them, and crafts the narratives best able to convey them to policymakers and citizens.

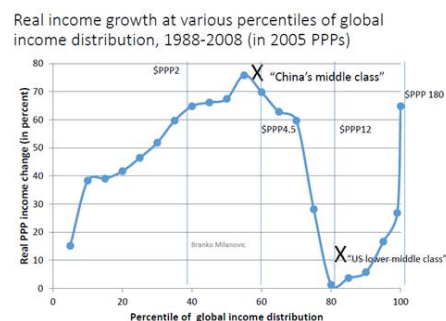
Systems Thinking, Anticipation and Resilience

A second meeting of the [IIASA-OECD Task Force](#) took place on 29 January at the International Institute for Applied Systems Analysis (IIASA), focusing on Systems Thinking, Anticipation, and Resilience. The Task Force is helping to tighten the links of science and analysis with policy and action. Useful ties are being established between the nine OECD directorates involved in the Task Force and IIASA colleagues (particularly for work on the environment).

The forthcoming joint publication, *Systemic Thinking for Policy Making: The potential of systems analysis for addressing global policy challenges in the 21st century*, presents substantive proposals for strategies to contain critical global issues within a systems framework, drawing on innovative methodologies, models and tools for research and policy analysis. OECD and IIASA authors are working together to apply systems thinking to challenges that include developing pathways to sustainability; a concerted approach to biodiversity, water, food and trade; integrated policies for climate air, eco-systems, energy and transport; sustainable cities; long-term strategies for employment and well-being in the digital age; managing innovation and new technologies for economic and social progress; and new methodologies, data and tools for modelling.

NAEC Seminar Series

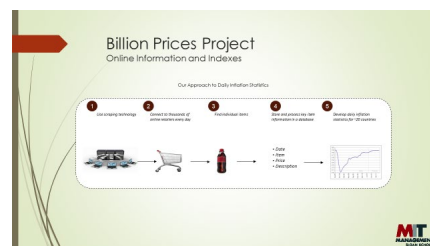
Branko Milanovic, one of the world's most prominent economists of inequality shared his views on globalisation and inequality ([webcast](#) / [presentation](#)). He placed current global inequalities trends in the context of the historical distribution of economic activity. He argued that the current period was marked by the emergence of the global middle class and shrinkage of national middle classes in OECD countries. These were connected through capitalism and the re-emergence of Asia. He presented his famous "elephant curve" which highlights the relative shares of income growth across the global income distribution. It illustrates that while China's middle class has seen large increases in income, the lower middle class in OECD countries has had stagnating income between 1988 and 2008. The global top 1% has also experienced large gains.



Branko Milanovic's "elephant" curve

Roberto Rigobon, Professor of economics at MIT Sloan School visited NAEC on 12 February to discuss the MIT/Harvard Billion Prices Project ([webcast](#) / [presentation](#)). The Project combines big data on prices harvested online with computer science to complement traditional measurement of inflation and other price-related phenomena, and supply information when traditional data are not reliable. Online prices can be used to construct quarterly purchasing power parities (PPPs) with a closely-matched set of goods and identical methodologies in a variety of developed and developing countries. Results are close to those reported by the International Comparisons Program (ICP) and the OECD. They can be used to obtain more up-to-date estimates of real consumption across countries without the need for consumer price index extrapolations.

Rigobon argues that big data technologies provide macro and international economists with opportunities to stop treating the data as “given” and get personally involved with data collection. We can now build datasets customized to fit specific measurement and research needs. This will help mitigate issues in empirical research such as sample selection, endogeneity, omitted variables, and error-in-variables, frequent in traditional datasets. He encourages economists to experiment with various types of “scraped” data, such as labour and real estate information available on the web, along with data from mobile phones, satellite images, GPS signals, and many other sensors people use daily.



While many governments have been active in searching for alternative data sources, hoping to increase the quality of statistics and to reduce cost, their use will require not only the will of policymakers and statisticians working on the field, but also the involvement of more economists and academics who can help identify the best ways to collect, treat, and use these new sources of information.

Paul Schreyer from SDD steered the discussion, with Hildegunn Nordas from TAD providing comments on how they are collaborating with Roberto Rigobon on prices and services trade.

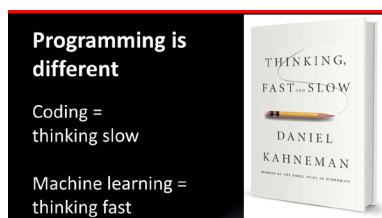


Roberto Unger returned to the OECD on 20 March to discuss The Knowledge Economy, based on the report *Imagination Unleashed – Democratizing the Knowledge Economy*. The report is the product of collaboration between the UK’s National Endowment for Science, Technology and the Arts (Nesta) and Professor Unger, and is supported by NAEC. It builds on previous NAEC discussions with Roberto Unger and Nesta. The report outlines strategies to widen participation in the knowledge economy as well as advance its frontiers. It aims to transform the institutions of the market economy so that more people, places and firms and take part in, and shape, the future knowledge economy. The argument is that an inclusive knowledge economy requires action to democratise the economy – widening access to capital and productive opportunity, transforming models of ownership, and democratising the directions of innovation; to establish a social inheritance by reforming education and social security; and to create a high-energy democracy, promoting experimental government, and an independent and empowered civil society.

Representatives of OECD Member countries and Directorates gave critical feedback on the report (agenda) in a lively debate based on their areas of expertise and their assessment of the feasibility and possible impediments to achieving the policy agenda proposed.

On 4 April, **Richard Baldwin**, Professor of International Economics at the Graduate Institute (Geneva) and founder and editor-in-chief of VoxEU, presented his new book on The Globotics Upheaval, the combination of globalisation and robotics that according to Baldwin threatens the very foundations of the liberal welfare-state. Globotics is helping to drive inequality, unemployment, and populism because digital technology is allowing talented foreigners to telecommute into international workplaces and compete for service and professional jobs. Instant machine translation is melting language barriers, so the ranks of these “tele-migrants” will soon include almost every educated person in the world. The advent of 5G networks will facilitate this, enabling remote workers to do tasks that slower network speeds make impractical or unsafe at present. Computing power is dissolving humans’ monopoly on thinking, enabling AI-trained computers to compete for many of the same white-collar jobs.

Baldwin argues that the inhuman speed of this transformation threatens to overwhelm our capacity to adapt. From computers in the office to automatic ordering systems in restaurants, we are familiar with the how digital technologies offer convenience while also eliminating jobs. Globotics will disrupt the lives of millions of white-collar workers much faster than automation, industrialization, and globalization disrupted the lives of factory workers in previous centuries. The result will be a backlash. Professional, white-collar, and service workers will agitate for a slowing of the unprecedented pace of disruption, as factory workers have done in



years past. Baldwin thinks that the globotics upheaval will be countered in the short run by "shelter-ism" - government policies that shelter some service jobs from tele-migrants and thinking computers. In the long run, people will work in more human jobs-activities that require real people to use the uniquely human ability of independent thought, and this could strengthen bonds in local communities.

TAD Director Ken Ash chaired the seminar and led the discussion. The presentation and webcast are available [here](#). The UK Prime Minister's office requested the presentation, and a number of Directorates are in touch with Baldwin.

6 May **Paul Collier**, [The Future of Capitalism](#). Published in late 2018, Paul Collier's *The Future of Capitalism* has been described by Nobel Laureate George Akerlof as 'The most revolutionary work in social science since Keynes'. It argues that as in the 1840s and the 1930s, capitalism has come off the rails. This time it has opened deep rifts within all major economies between a booming metropolis and broken provincial cities, and between a rising class of the college-educated with new skills, and a falling class of the less-educated with manual skills. It discusses why these divides have opened, why so little has been done about them, and what can now be done, placing the ethics of reciprocity in firms, families and states, at the centre of the analysis.

Some of the key lessons from NAEC seminars during 2018 will be compiled in a volume on *Understanding the New Economy* due for completion in late 2019.

NAEC joint work with Partners



On 14-16 January, NAEC organised a conference with the Fields Institute in Toronto, Canada on the theme "[10 Years After the Crisis - modelling meets policy making](#)". Fields is a leading mathematics research centre in Canada with strong ties to academia, business and government.

The conference was a follow-up to [10 Years After Lehman Brothers](#) held at the OECD in September 2018, and discussed how to model financial markets and their interactions with the real economy. Speakers included Andy Lo from MIT, John Geanakoplos from Yale, and Blake LeBaron from Brandeis. Sessions included the Complexity of the Financial System (ABM and networks), Cyber-security and the Financial System, Financialisation and Inequality, Climate Finance, Behavioural Finance, and a final roundtable discussion asking "Are we Ready for the Next Crisis?" A number of senior Canadian officials and policymakers from Finance Canada, the Bank of Canada, the Federal Reserve and the Canadian financial regulatory authority also participated, as did representatives of the banking and high-tech industries.

The conference offered different perspectives on the financial system, how it works, develops endogenous shocks and how it should be regulated. Collectively, mathematicians, physicists, computer programmers, economists and policymakers came to important conclusions about modelling and policymaking. [Full Summary of conclusions](#)

The conference highlighted the benefits and the necessity of collaboration, experimentation and inter-disciplinarity in promoting new economic thinking and acting. It highlighted the important role NAEC is playing in federating and focusing the energies of different clusters of researchers to develop a systemic perspective on some of our most pressing challenges and the tools, techniques and narratives needed to understand them. This can make a contribution to a number of workstreams at the OECD and improve analytical capacities. The conference contributions will inform the [NAEC book on the Financial System](#), which is nearing completion.



Understanding How the Economy Works and How to Make it Work Better for Everyone.

NAEC-Inclusive Growth [Ramón Areces Foundation \(Spain\) 28 March](#)

NAEC and IG brought together Spanish government ministers, business leaders, academics and representatives of civil society to develop a systemic perspective on interconnected challenges, examine the tools and techniques needed to understand them, and design policies that ensure economic growth is distributed fairly across society. The conference looked at how technological change, notably digitalisation, and organisational innovation and reform, are combining to radically alter many aspects of daily life, from employment to services provision. This contributes to changes in other

spheres, too, in particular social and political change. Participants debated how these challenges confronting society and the global economy demand a better understanding of how the economy works in order to put people at the centre of policymaking, and how analytical frameworks have to be updated.



Understanding of economic issues such as growth, financial crises, systemic risk, innovation and sustainability can benefit from the revolution taking place across a range of scientific disciplines and in the social sciences. This revolution is being driven by the interaction between technological progress in computing and communications and the new sources and greater quantities of data this makes available.

NAEC joined with several partner institutions to host a major conference on April 15-16 on [New Analytical Tools and Techniques for Economic Policymaking](#). The conference offered a timely opportunity for policymakers, academics and researchers in economics to discuss the state-of-the-art policy applications emerging from the new analytical tools and techniques. It looked at how methodological innovations and inter-disciplinary approaches such as agent-based modelling, nowcasting, machine learning, and network analysis could contribute to better understanding of the complexity and interaction of our economic, financial, social and environmental systems.

On 17 April NAEC and its partners held master classes with some of the world's leading practitioners on complexity, network analysis and agent-based modelling - [Agenda](#) (pdf)

The conference proceedings and masterclasses will be edited by NAEC for a joint publication with partners.

To find out more please visit the [NAEC](#) website

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