Update on New Approaches to Economic Challenges (NAEC) Initiative

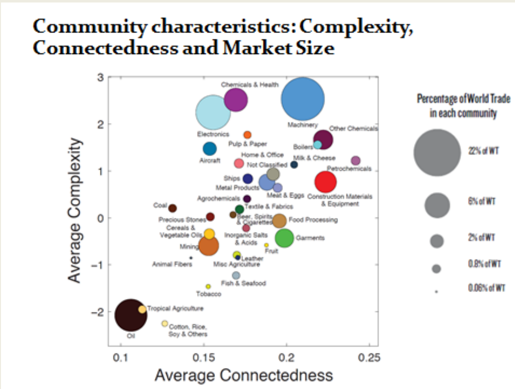
Autumn 2017

The NAEC initiative invites some of the world's leading authorities to challenge existing thinking at the OECD on the questions we face and the ways we answer them. The seminar debates feed into NAEC's reports, strategic partnerships, and the NAEC Innovation Lab, as well as NAEC's work with OECD Directorates and Committees. Our Autumn 2017 programme focused on complexity, resilience, financial markets, digitalisation, social media and neuroeconomics and I present below some of the main findings. Key issues from the seminars and the policy thinking discussed in NAEC are being synthesised in a draft report *New Approaches to Economic Challenges: Towards a New Narrative*. You can contribute to the debate and final report by sending us your comments, criticisms and suggestions to naec@oecd.org, along with your proposals for future seminar themes and participants.

Gabriela Ramos, Chief of Staff, Sherpa and Special Counsellor to the Secretary General.

Ricardo Hausmann launches NAEC report on Complexity and Policymaking

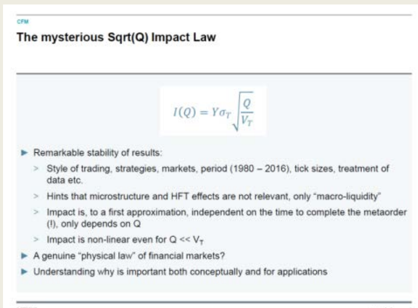
Ricardo Hausmann from Harvard's Kennedy School launched the NAEC *Insights book on Complexity and Policymaking* (edited by Patrick and Julia Stockdale-Otarola) on October 19th.

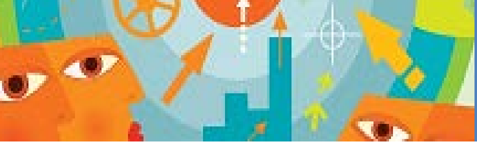


His remarks at his NAEC seminar providing the ideal backdrop for the book relating concepts from network theory and complexity to the critical question of how countries develop. Hausmann spoke about the puzzle of development, technological diffusion, the implications of economic complexity, and the Scrabble theory of economic development in an important presentation.

NAEC looks at new models and approaches for understanding Financial Markets…

The NAEC Innovation Lab hosted a **masterclass on agent-based models applied to understanding financial markets** (background paper on ABM here). This was led by Rick Bookstaber, Chief Risk Officer at the University of California and Jean-Phillipe Bouchaud, owner of Capital Fund Management hedge fund and was provided for OECD economists. There is growing interest in these type of approaches and this augers well for the NAEC Innovation Lab which hosted this technical-level meeting. Webcast here.





...bringing the discussion to the Committee Level

NAEC provoked discussions on new thinking on financial markets at the Committee on Financial Markets (CMF) on October 20th. A background paper prepared for the discussion can be found here and a recording of the discussions here.

Financial regulation has not gone far enough…

John Vickers opened the CMF discussion arguing that **financial regulation since the Global Financial Crisis (GFC) has not gone far enough**. He suggested regulators should be going a lot further to make banks safer. Big banks are still leveraged 25-30 times when some consider 10 times as being too high. He suggested that the benefits of a safer system are being balanced against the costs to banks. There is an **opportunity now to build on progress to date to go further and build up buffers, safeguards and improve the resilience of the system**. A **new financial crisis could be worse than last time** because monetary policy is at the limit (we have used up all the ammunition) and the political consequences and populist backlash could be calamitous.

...because financial markets are inherently unstable…

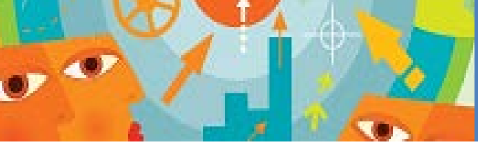
They suggested that **financial markets are inherently unstable** and this is clearly demonstrated using agent-based models as discussed by Rick Bookstaber. He stressed the importance of understanding how markets really move before designing regulation. Andy Lo, from MIT, drawing on his recent book on *Adaptive Markets*, suggested that the efficient market hypothesis is not wrong but it is incomplete. **Financial market dynamics are driven by our interactions as we behave, learn, and adapt to each other**, and to the social, cultural, political, economic, and natural environments in which we live.

...and optimising complex systems makes them unstable

Jean-Philippe Bouchaud stated that there are a few general results from the study of complex systems which are useful to bring into OECD policy discussion. One is that **if you try to optimise a complex system, it becomes unstable**. This implies there is a fundamental tension between market efficiency and economic stability.

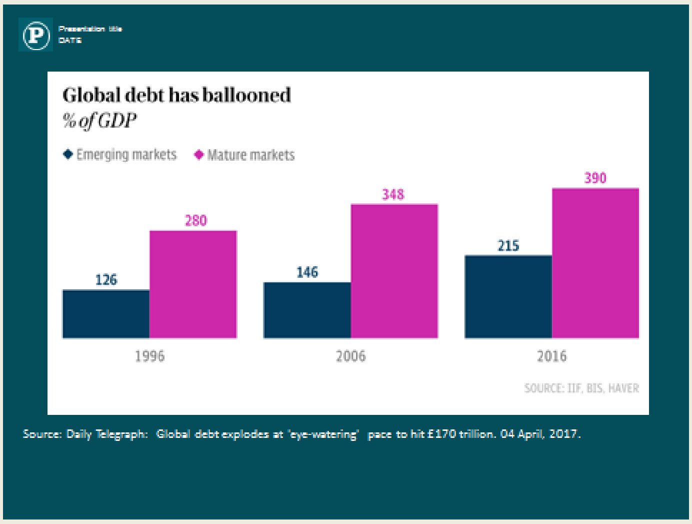
Conventional ideas are struggling to solve a number of puzzles facing the world economy…

Ann Pettifor provided a keynote address on “Subordinating Finance to Role of Servant, Not Master” strongly criticising the conclusions of the Blanchard and Summers article *Rethinking Stabilization Policy* for its rather unsatisfactory conclusion that “**Financial crises will probably happen again**”. She probed a **number of puzzles facing the world economy** – low levels of inflation, persistently low interest rates, slow recovery from the global financial crisis and low growth despite USD 11 trillion in asset purchases by Central Banks.



...and new approaches are needed...

She provided a strong critique of "old" approaches to finance while **advocating some new approaches including**: A sound understanding of credit/money and finance and managed flows of capital and credit. I discussed her presentation after and she felt she tried to cover too much and moved over the question of money too quickly - and it is clear that some were confused - and even angered - by it. Having said that she was impressed with the degree of engagement by the audience, and by the serious questions that were posed. She was particularly pleased to hear Ambassador Basci argue that we needed "to **re-write economic textbooks to include money**."



...with insights from behavioural finance and an agent-based economic paradigm...

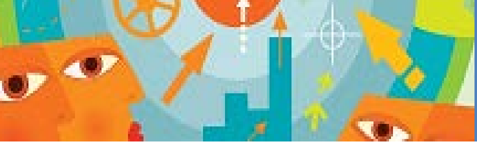
Andy Lo, Rick Bookstaber and Jean-Philippe Bouchaud provided **excellent overviews of new thinking in behavioural finance, complexity and agent-based paradigms**. The speakers indicated that global finance is a perfect example of a complex system, consisting as it does of a highly interconnected system of sub-systems featuring tipping points, emergence, asymmetries, unintended consequences, and all the other defining characteristics of complexity. Mathilde in particular made a strong statement on the importance of new approaches to deal with this complexity and suggested the **problem for policymakers was not "Too Big to Fail" but "Too Complex to Manage"**.

...more collaboration between Committees and Directorates...

Juan Yermo chaired the final session drawing a link to the importance of a broad reflection on finance and its links to the real economy as we approach **the 10th anniversary of the GFC**. Flore-Anne Messy (DAF) suggested that the **OECD is no better at anticipating financial crises**. But the CMF is looking at finance and its contribution to productivity, growth and inequality (including through consumer protection and financial education). They felt that **NAEC was producing useful insights for their future work**. Sebastian Barnes (ECO) felt that NAEC was useful for breaking down silos between different areas and foresaw **closer cooperation between CMF and ECO Committees on a common agenda** that in the past OECD has not been good at exploiting.

...and openness to alternative ideas

Grant Spencer, the CMF Chair, said it was a pleasure to host NAEC and to open up their Committee discussions. He stressed the importance of the NAEC spirit - being o**pen to alternative approaches, recognise uncertainty and be prudent and humble** when offering policy prescriptions. The event



confirmed the importance of NAEC moving to the Committee level and engaging capital-based delegates to diffuse new economic thinking and novel analytical approaches.

Next year there will be similar NAEC workshops with the Corporate Governance Committee (involving Bill Lazonick, an ardent critic of shareholder value and Bill Janeway from Warburg Pincus) and the Economic Policy Committee (focusing on new tools and techniques emerging from the NAEC Innovation Lab). The workshop also offered a good basis to anchor the campaign next year on **distilling the lessons learned in finance and economics in the 10 years since the GFC**.

To manage complexity, NAEC is increasingly looking at the issue of resilience…

Governments worldwide increasingly realise that the systemic threats afflicting modern societies, such as natural hazards, ageing populations, global migration, and digitalisation are compounded by their potential to disrupt interconnected cyber, information, societal, and infrastructural systems with lasting consequences.

NAEC organised a technical level discussion on "New Approaches to International Resilience" on October 13th at the OECD. The meeting aimed to advance a collaborative project to **develop inter-governmental approaches to resilience** with the Joint Research Centre (JRC) and the National Institute for Standards and Techology (NIST). Juan Yermo highlighted the considerable amount of work on resilience across the OECD which calls for a more coordinated effort. Martin Lees and Igor Linkov (a world-leading expert on the science of resilience) illustrated the links between systems thinking and resilience and how the concepts, tools and ideas were related.

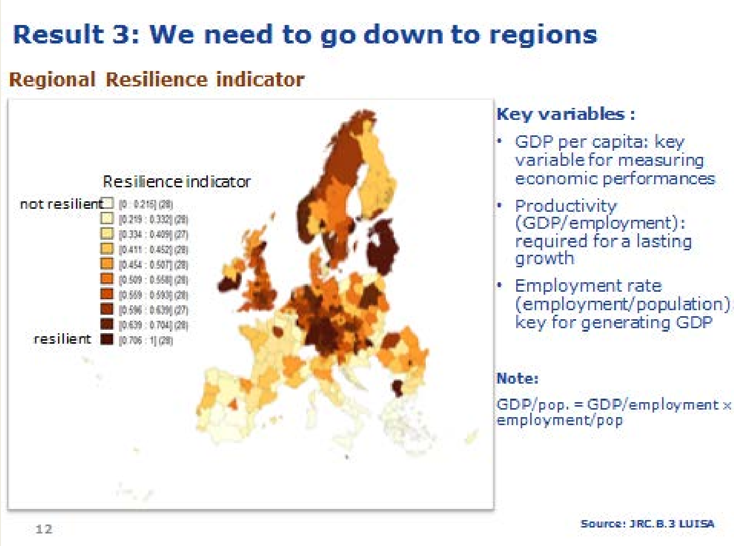
The meeting agreed that NAEC's complexity agenda and in particular **new tools and methods such as network analysis and agent-based approaches** should be integrated into the resilience project. In order to strengthen this dimension in the project, the InterIIASA will be called upon to become a partner.

…better coordinating resilience activities inside and outside the OECD…

Directorates were engaged in the discussion (7 Directorates and the ITF were represented) and provided ideas on how the project could be taken forward. The themes explored at the workshop were Physical Resilience (including a presentation by ITF who will hold their Ministerial in 2018 on Safety, Security and Resilience), Economic and Financial Resilience (with an outline on ECO's views on resilience which can be strengthened by implementing policies aimed at mitigating both the threats and consequences of severe crises) and Environmental and Social Resilience (including resilience to climate change - minimising consequences, design for safe failure, proactive management) and ideas around social resilience (education, labour markets and social protection systems).

…and looking to develop good practices…

It was concluded that principles of good practices to guide an understanding and implementation of resilience in various contexts worldwide would help governments better address threats that are international in scope, from ecological disasters to cyber-threats and disease epidemics. Igor Linkov concluded that he had never attended a meeting on resilience **covering such a wide range of themes and topics, which is a particular strength of the OECD and the proposed project.**



Following up on the meeting, on 25 October in the context of JRC Director-General Vladimir Sucha's visit, further collaboration between JRC and OECD in the area of **data exchange on resilience** was discussed. JRC also presented their resilience framework at the NAEC seminar which is a key input into the OECD-JRC-NIST project.

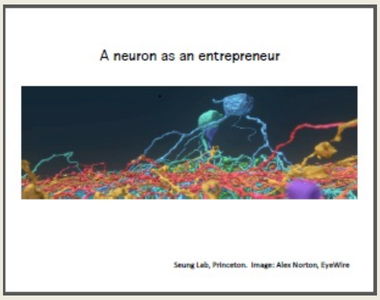
...and has established a Task Force on Systems Thinking, Anticipation and Resilience

A Strategic Partnership is being pursued between OECD and IIASA which opens up many opportunities for innovation in the formulation and implementation of policy and in the institutional arrangements which can meet the intensifying systemic challenges we face.

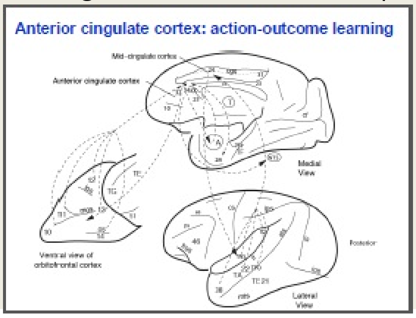
A Joint Task Force has been established with the aim of **transforming our understanding of the economy and its interaction with other complex systems and enhance its resilience**. Martin Lees, Former Assistant Secretary General of the United Nations and Secretary General of the Club of Rome has been invited by the Secretary General to chair this Task Force.

NAEC is advancing the behavioural agenda…

NAEC is continuing to advance the behavioural agenda at the OECD in new ways. This includes drawing on insights from neurology and the behavioural sciences to better understand the neural activity that underlies decision making and opinion forming. On 30-31 October, the NAEC team organised a conference on "The State of Mind in Economics". Experts from the fields of economics, behavioural and cognitive sciences, psychology and philosophy joined leading neuroscientists to discuss state of the art research on neuroeconomics.



Psychological forces and their deeper neuroscientific foundations influence economic decisions involving individuals and markets and looking inside the brain can help us understand some of the most vexing problems in postmodern society - from irrational market bubbles to intractable poverty.



Gabriela Ramos opened the conference critiquing traditional approaches to economics on how societies and people make decisions. More precisely, how an average, representative person makes decisions if we accept a whole series of more or less realistic assumptions about how rational they are, how much information they have, how they use that information, and so on.

Alan Kirman referred to the ideas of Robert Schiller on the links between the brain, the computer, and the economy. “All three are devices whose purpose is to solve fundamental information problems in coordinating the activities of individual units (neurons, transistors, or people). As we improve our understanding of the problems that any one of these devices solves—and how it overcomes obstacles in doing so—we learn something valuable about all three”. The conference suggests that dynamic interaction between disciplines can help us better understand all of these complex systems.

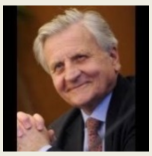
One of the key messages they put forward is that human behaviour is adaptive, context dependent and influenced by experience as well as individual neuro-physiological traits. In this respect, analysis and policy making can benefit from more realistic models that may help improve the design of policies and develop more targeted tools for implementing them and assessing their impact. Neuro-behavioural approaches can deliver other significant benefits for policy-making, including a better understanding of how individuals adapt to a fast-changing environment (notably in the context of digitalisation), and opportunities to test policy in experimental or simulated environments.

Participants addressed the role of stress, optimism, risk-taking behaviour, empathy and mental workload on consumer behaviour (Drazen Prelec, Colin Camerer); nutritional choices, health and mental well-being (Hilke Plassmann, Edmund Rolls, Mike Koenigs); and trust, giving and cooperation (Ernst Fehr, Giorgio Coricelli, Fabio Babiloni, Tobias Kalenscher).

At a “Friends of NAEC” breakfast, Ambassadors discussed the policy implications of neuroeconomics (on criminal justice policy, social policy, healthcare, communicating policy to the public etc.) and how it should influence OECD work. Professor Colin Camerer from Caltech – a pioneer in behavioural economics, Professor Edmund Rolls from Oxford – a leading psychologist and neuroscientist and Professor Drazen Prelec from MIT – a pioneer in the field of neuroeconomics provided remarks and responded to the questions raised by the Ambassadors.

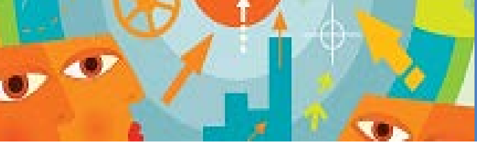
The papers discussed at the Conference will be published in a book by Cambridge University Press in 2018 and OECD will prepare the preface for this volume. The OECD and NAEC offers a key interface between science and policy and opportunities for taking approaches and tools from a Laboratory setting to the field by applying them to key issues of public policy.

...and is learning lessons from the crisis...



Jean-Claude Trichet, former President of the European Central Bank, gave a NAEC seminar, chaired by Ambassador Erdem Basci on 27 November, on “Lessons from the economic and financial crisis: Is global finance still vulnerable?"

As we approach the 10th anniversary of the Global Financial Crisis, his remarks on the causes of the crisis were timely. He noted that some of the reasons for the crisis were related to a lack of understanding of the effects of globalisation, technological change and interconnections between finance and the real economy – these were forgivable mistakes. However, the neglect of excess leverage and the



accumulation of debt as well as faulty assumptions about the efficiency of financial markets are not forgivable.

Trichet was supportive of the idea of NAEC and the search for new tools and methods through the NAEC Innovation Lab. He also praised the NAEC publications on narratives and complexity. Trichet outlined an agenda which strongly resonated with NAEC - thinking about how to characterise the homo economicus at the heart of any model. The atomistic, optimising agents underlying existing models do not capture behaviour during a crisis period. We need to deal better with heterogeneity across agents and the interaction among those heterogeneous agents. We need to entertain alternative motivations for economic choices. Behavioural economics draws on psychology to explain decisions made in crisis circumstances. Agent-based modelling dispenses with the optimisation assumption and allows for more complex interactions between agents. Trichet argued that such approaches are worthy of our attention.

He outlined conceptual convergence between Central Banks since the crisis, and urged policymakers to consider the multi-dimensional consequences of Quantitative Easing. He also suggested economists had a lot to learn from disciplines such as physics on issues such as sudden stops and phase shifts – this is a point NAEC has argued for strongly over the last year.

...appreciating the Limits of the Market...

Professor Paul de Grauwe from the London School of Economics, one of Europe's leading economists, presented his new book on The Limits of the Market at a very popular NAEC seminar (Webcast and Presentation) on 30 November.

De Grauwe reviewed the **cyclical movements in the power of markets versus governments** over the last two hundred years. He suggested that the recent expansion of the market is temporary and will lead to a return of the state as the leading force in the economy. This is because it will be very difficult to control the environmental effects of economic growth and negative environmental effects threaten to become so overwhelming that they will destabilise societies.

Authoritarian political systems are likely to take command of the economy. Similarly the pressure to deal with inequality may be too weak to avoid political upheaval. **He concluded that the future looks sombre.** But evoking Albert Camus's interpretation of Sisyphus, he suggested we should rebel against the absurdity of life by throwing ourselves into it, living intensely and being creative.

Similarly Noam Chomsky dimly assessed the "Prospects for Survival" (A text of his essay on Globalisation and Inequality prepared for NAEC can be found here) unless there was a fundamental reform of our economic and politicial systems.

...and developing the concept of an Empowering State

Dennis Snower, President of the Kiel Institute for the World Economy, then provided a positive sense of what that enhanced role of the State might look like; the Empowering State. He argued that we plunder the planet to produce goods and services; the consumption of which we expect to provide great pleasures but in fact these fail to materialise. People are constantly in competition chasing a myth that we can have more and more consumption. **Social co-operation, so often ignored in conventional economics, is the key to empowering people** which in turn makes them happy (through active personal achievement, accepting and respecting tolerance, belonging, co-operation and trust). Gabriela Ramos has advanced the thinking on an Empowering State agenda through the Think 20 (T20) and the theme will feature prominently in the Inclusive Growth Report for MCM 2018.