TIP@50 : What have we learnt? Where is innovation policy heading?

11 December 2017

Agenda

OECD
BETTER POLICIES FOR BETTER LIVES

TIP Conference:

"TIP@50: What have we learnt? Where is innovation policy heading?"

Paris, 11 December 2017

OECD Conference Centre, Room CC10

The conference marks the 50th meeting of the OECD Working Party on Innovation and Technology Policy (TIP) and its 25th Anniversary. It will be an exceptional occasion to take stock of achievements of the TIP since its creation in 1993 and to shape ideas on the future of innovation and technology policy. The conference sessions will specifically aim at answering: What have we learnt from past work? What are the current most pressing demands concerning innovation policy? In what areas is innovation policy advice more needed? What challenges can best be addressed from a cross-country perspective?

The event will gather past and present members of the TIP, government representatives, academics, and STI practitioners and leading experts from all OECD countries and other participating countries. The conference is open to external participants and will be webcast.

Structure of the document

OVERVIEW OF THE AGENDA

9h30 - 9h45	**Welcoming**
9h45 - 11h15	**Keynote interventions: What are the demands for innovation policy?**
11h15 - 11h45	**Coffee break**
11h45 - 13h00	**Methodologies to analyse innovation policy**
13h00 - 14h30	**Lunch reception** (Château de La Muette, George Marshall Room)
14h30 - 15h45	**Break-out sessions: What are the implications for the future?**
15h45 - 16h15	**Coffee break**
16h15 - 16h30	**Report back from the breakout groups**
16h30 - 17h50	**Roundtable of TIP and RIHR chairs**
17h50 - 18h00	**Closing remarks**

AGENDA

Welcoming

9h30-9h45

Gabriela Ramos, OECD Chief of Staff and Sherpa to the G20

Gabriela Ramos is the OECD Chief of Staff and Sherpa to the G20. Besides supporting the Strategic Agenda of the Secretary General, she is responsible for the contributions of the Organisation to the global agenda, including the G20 and the G7. She leads the Inclusive Growth Initiative and the New Approaches to Economic Challenges and also oversees the work on Education, Employment and Social Affairs (including gender). Previously, she served as Head of the OECD Office in Mexico and Latin America, co-ordinating several reports on Mexico to advance the health and education reform. She developed the OECD's Mexico Forum and edited and launched the "Getting it Right" flagship publication series. Prior to joining the OECD, Ms Ramos held several positions in the Mexican Government, including Director of Economic Affairs (and OECD issues) in the Ministry of Foreign Affairs and Technical Secretary at the Office of the Minister for the Budget. She has also held several positions as Professor of International Economy at the Universidad Iberoamericana and at the Instituto Tecnológico Autónomo de México. Ms Ramos holds an MA in Public Policy from Harvard University, and was a Fulbright and Ford MacArthur fellow. She was decorated with the Ordre du Merit by the President of France, François Hollande, in 2013.

Keynote interventions: What are the demands for innovation policy?

9h45 – 11h15

Innovation has become a buzzword in the worlds of business, education and policy. It is now a cross-cutting objective in practically all policy areas. But stimulating innovation for competitiveness and inclusive and sustainable growth is not a simple task. Keynote speakers will discuss the following questions:

- What are the most pressing demands relating to innovation policy over the next decade? What are the challenges concerning innovation policies?
- What questions regarding innovation policy can best be addressed from a cross-country perspective?
- What are the right approaches to innovation policy? How can innovative approaches to policy, such as policy experimentation and testing, be promoted while containing risks?

Chair: **Dirk Pilat**, Deputy Director, Directorate for Science, Technology and Innovation, OECD

Keynote speakers:

- **Manuel Heitor**, Minister of Science, Technology and Research, Portugal
- **Clara-Eugenia García**, Director General for Research, Development and Innovation Policy, Spain
- **Mu Rongping**, Director-General of the Center for Innovation and Development, Chinese Academy of Sciences, China: Future innovation development policy: uncertainty and challenges
- **Alain Beretz**, Director-General for Research and Innovation, Ministry for Higher Education and Research, France
- **Zakri Abdul Hamid**, Science Advisor to the Prime Minister of Malaysia: Transforming Malaysia into high-income economy, inclusive and sustainable
- **Mario Calderini**, Senior Advisor to the Minister and G7 Sherpa for Research and Innovation, Ministry of Education, University and Research, Italy: Inclusive, evidence-informed and mission-oriented: three challenges for a new generation of innovation policies

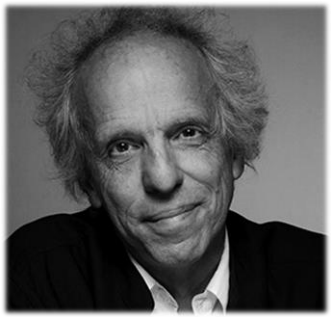
Dirk Pilat a Dutch national, is Deputy Director of the OECD's Directorate for Science, Technology and Innovation (DSTI). As Deputy Director, he supports the Director of DSTI in pursuing the Directorate's programme of work and contributing to the achievement of the strategic goals of the Organisation as defined by the OECD Secretary-General. He joined the OECD in February 1994 and has worked on many policy issues since then, including the OECD Innovation Strategy and OECD Green Growth Strategy, how to draw greater benefits from information technology for economic growth, how to strengthen growth performance in OECD economies (the OECD Growth Project), how to strengthen the performance of the services sector, as well as work on climate change, labour markets, product market regulation, productivity and entrepreneurship. He was Head of the Science and Technology Policy Division from 2006 to January 2009, with responsibility for the OECD's Committee for Scientific and Technological Policy, and Head of the Structural Policy Division, with responsibility for the OECD's Committee on Industry, Innovation and Entrepreneurship, from February 2009 to December 2012. Before joining the OECD, Mr. Pilat was a researcher at the University of Groningen, in the Netherlands, where he also earned his PhD in Economics. He has published extensively in a range of economics journals, with a strong focus on international comparisons of growth and productivity performance.

Prof. Manuel Heitor is Minister of Science, Technology and Higher Education of Portugal. From March 2005 to June 2011 he served as Secretary of State for Science, Technology and Higher Education in the Government of Portugal. Most recently, in the 2011-12 academic year, he was a Visiting Scholar at Harvard.

Prof. Heitor holds a PhD from Imperial College of London in Mechanical Engineering and did post-doctoral training at the University of California - San Diego. He is Professor in Instituto Superior Técnico, in Lisbon, where he is the former Director of the Center for Innovation, Technology and Development Policies Studies, IN+ and coordinates PhD's programs concerning Engineering and Public Policies and Engineering of Conception and Advanced Manufacturing Systems. During the 1990s, he studied politics of science, technology and innovation. In 1998, he founded Center of Innovation, Technology and Development Policies Studies, IN+, at Instituto Superior Técnico, in Lisbon. In 2005, this center was ranked on the Top 50 global centers of research on Management of Technology, by the International Association for the Management of Technology. He is Research Fellow of Texas University, in Austin, at the Institute of Innovation, Creativity and Capital. He founded and coordinated several international conferences related to Technology Policy and Innovation and is co-editor of the Purdue University Press book collection on Science and Technology Policy. In 2002, he was also co-founder of the international network Globelics – the global network for the economics of learning, innovation, and competence building systems. Recently, he was one of the promotors of the European network step4EU, science, technology, education and policy for Europe, and the International Observatory of Global Politics for the Exploitation of Atlantic Ocean.

Clara-Eugenia García is, since 2016, the Director General for Research, Development and Innovation Policy, at the Ministry of Economic Affairs, Industry and Competitiveness (Spain) and the Chair of ERAC Standing Group on Open Science and Innovation. Between 2012 and 2016 she was the Deputy Director of Planning and Monitoring of the State Secretariat for Research, Development and Innovation. Between 2011 and 2015, she managed the Spanish Research Programmes "Severo Ochoa" and "María de Maeztu", which are initiatives to promote research excellence. Dr. García had a leading coordination role is R&I Policy Design and Planning such as: the National ERA Roadmap, the State Agency for Research (Agencia Estatal de Investigación), the Spanish Strategy for Science, Technology and Innovation 2013-2020, the National Plan for Science, Technology and Innovation 2013-2016, the Annual Action Programs (2013, 2014 and 2015) of the National Plan for Scientific and Technological Research and Innovation (2013-2016) and the R&I chapter of the Partnership Agreement Spain-EU. Between 2012 and 2016, she coordinated the National policies for Open Access.

Prof. Mu Rongping is Professor and the Director-General of the Center for Innovation and Development of the Chinese Academy of Sciences (CAS). He is also a member of the Expert Committee on National Development Plan of NDRC, editor-in-Chief of the Journal of Science Research Management, and president of the China High-tech Industry Promotion Society and the Chinese Association for Science of Science and S&T Policy Research. Dr. Mu is a member of the Governing Board of International Science, Technology and Innovation Centre for South-South Cooperation under the Auspices of UNESCO (ISTIC), and a member of Advisory Board of Technology and Management Centre for Development (TMCD) at the University of Oxford. He was director-general of Institute of Policy and Management of CAS (2004-2014), a member of the Economic & Scientific Advisory Board of European Patent Office (2012-2015). Dr. Mu holds a B.S. and M.S. degree from University of Science and Technology of China, and a PhD degree in History of Technology from Technische Universität Berlin.



Prof. Alain Beretz is a graduate in Pharmacology. He spent one year as a Post-doctorate at the Weizman Institute of Science (Rehovot, Israel). Since 1990, he is a member of the Pharmacology faculty of the University of Strasbourg. As a professor of pharmacology, he participated in teaching of molecular pharmacology and therapeutics in pharmacy for master degrees. His research deals with thrombotic disorders, vascular pharmacology and chronic vascular diseases.

He was Vice-President in charge of technology transfer (2001-2006), and then President of the Louis Pasteur University in Strasbourg (2007-2008). He was elected in January 2009 as the first president of the University of Strasbourg, resulting from the innovative merger of the three previous universities; he has been reelected in December 2012 for a second 4-year term. During his term, the University of Strasbourg was one of the first three winners of "Excellence Initiative" competition. He was since May 2014 the Chair of the League of European Research Universities (LERU) after being a member for 3 years of its Board of Directors. In September 2016, he was appointed as Director General, Research and Innovation, at the French Ministry of Education and Research.

Prof. Zakri Abdul Hamid is currently the Science Advisor to the Prime Minister of Malaysia. His other concurrent roles include: Joint Chairman, Malaysian Industry-Government Group for High Technology (MIGHT); Chairman, Malaysian Bioeconomy Development Corp (Bioeconomy Corp); Chairman, National Professors Council; Chairman, Board of Advisors, UNU-International Institute on Global Health, Pro-Chancellor, Universiti Pendidikan Sultan Idris (UPSI) and Chairman of the Board of Directors, University of Malaya.

From 2001 to 2005, Professor Zakri co-chaired the UN's mega-study,

"Millennium Ecosystem Assessment". He is the founding Chair of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and a member of the UN Secretary-General's Scientific Advisory Board. He sits on the Global Leadership Council of the Sustainable Development Solutions Network (SDSN). He has been appointed by the United Nations (UN) as the Co-Chairman of STI Advisory Board of the UN Economic and Social Commission for Asia and the Pacific (ESCAP).

Zakri's professional interests include crop science, biodiversity and science diplomacy. He has received numerous awards: Fulbright-Hays Fellowship (1981); Rotary Research Foundation Gold Medal Award (1999); ISSAAS Matsuda Award (2013); ASEAN Meritorious Service Award (2014); Zayed International Prize for the Environment (2014), the Academy of Science of South Africa Distinguished Visiting Scholar Award (2015) and Merdeka Award for the environment category (2015).

In Malaysia, he has been conferred rank of Senior Fellow by the Academy of Sciences Malaysia with the title of "Academician" (2015); Honorary Doctorate in Science, Universiti Malaysia Terengganu (2013), Honorary Doctorate in Biotechnology, Universiti Sultan Zainal Abidin (2013) Honorary Doctorate in Science, Universiti Putra Malaysia (2015); Honorary Doctorate in Science, University of Nottingham (2015). Also, conferred with a Datukship (1991); Dato' Sri (2012) and a 'Tan Sri' (2014).

In January 2017, the US-based "Biofuel Digest", an influential industry magazine has hailed him as one of the "Top 100 Influential Persons in the Advanced Bioeconomy 2017". August, he was awarded as one of the ASEAN Biodiversity Heroes and recently being awarded the Global Competitiveness Award by Global Federation of Competitiveness Councils (GFCC).Three species have been named after Zakri: a beetle (Paleosepharia zakrii), a cicada (Pomponia zakrii) and a pitcher plant (Nepenthes zakriana).

Prof. Mario Calderini, a Ph.D. in Economics from the University of Manchester, is full Professor at Politecnico di Milano, School of Management, where he teaches Strategy and Social Innovation and chairs the Alta Scuola Politecnica, the honour program jointly managed by Politecnico di Milano and Torino. He is Senior Advisor to the Minister of University Research and Innovation and Government's Sherpa for the G7 Italian Presidency 2017. His numerous publications in highly ranked international journals cover several topics in the field of management of innovation and innovation policy. Under the Monti presidency, he has been a consultant to the Prime Minister's Cabinet for financial instruments for innovation and he has been sitting in the Italian Government's Strategic Committee for Digital Agenda. He has been a consultant to the Ministry of Economic Development for structural funds in research and development. He sat in the Board of Directors of the Agency for Innovation and Technology at Presidenza del Consiglio dei Ministri and has been a member of the Experts Commission for of the Ten-Years Strategy Report of Consiglio Nazionale delle Ricerche.

11h15-11h45 Coffee break

Methodologies to analyse innovation policy

11h45-13h00

The TIP has developed and used several methodologies over time to analyse technology and innovation policy. This session will take stock of new methods and tools, critically explore their strengths and weaknesses, and propose new avenues for methodological development. Prior to the panel discussion, results of text-mining analyses of the TIP Corpus will be presented.

Chair: **Dominique Guellec**, Head of Division, Directorate for Science, Technology and Innovation, OECD

Presentation of the results of the TIP text-mining analysis:

- **Margherita Russo** (Professor, University of Modena and Reggio Emilia, Italy)
- **Dirk Meissner** (Professor, National Research University - Higher School of Economics, Russian Federation)
- **Antoine Schoen** (Professor, ESIEE Paris, France)
- **Michael Keenan** (Senior Policy Analyst, OECD)

Panel Interventions:

- **Philippe Laredo**, Research Director at Université Paris-Est and Professor at Manchester University: The potential of semantics and qualitative methods
- **Reinhilde Veugelers**, Full Professor at K.U. Leuven, Senior Fellow at Bruegel and Research Fellow at CEPR: The potential of econometrics and quantitative methods
- **Alan Kirman,** Professor emeritus of Economics at the University of Aix-Marseille III and at the Ecole des Hautes Etudes en Sciences Sociales: Complexity and systems approaches to economics and innovation analysis

Open discussion

Dominique Guellec is Head of the Science and Technology Policy (STP) Division, within the OECD's Directorate for Science, Technology and Innovation (DSTI). This division covers notably: innovation policies, science policies, biotechnology and nanotechnology issues, national innovation studies, innovation for development, the STI Outlook, the Innovation Policy Platform, and the Space Forum. Mr. Guellec joined the OECD in 1995 and has worked in the DSTI on statistics and quantitative economic analysis of science, innovation and growth. From 2004-2005, Mr. Guellec was Chief Economist of the European Patent Office (Munich). Mr. Guellec has authored several books and many articles on patents, innovation and economic growth. His (co-) publications in English include *The Economics of the European Patent System* (Oxford University Press, 2007); and *From R&D to Productivity Growth: the Sources of Knowledge Spillovers and their Interaction* (Oxford Review of Economics and Statistics, 2004). Of French nationality, Mr. Guellec is a graduate from the École nationale de la statistique et de l'administration économique (ENSAE, Paris).

Margherita Russo is Full Professor of Economic Policy at the University of Modena and Reggio Emilia. After her MA in Economics at University of Cambridge (UK) she began her academic activity at the University of Pescara (Italy) in 1985 and then at the University of Modena (since 1989). Her main research interests include: analysis of processes of innovation and competence networks, effects of innovation on the organisation of labour, structure and change in local productive systems, evaluation of innovation policies. In the last decade she has been member of international research projects on innovation, and has directed research projects on the mechanical industry in Italy, on the assessment of policy innovation networks and on the socio-economic effects of the 2012 earthquake in Emilia (Italy).

Since 2000, Prof. Russo is scientific director of Officina Emilia, a project of the University of Modena and Reggio Emilia, aiming at the regeneration of competences needed for re-industrialization (to foster innovation in the local industry) and at increasing the quality of the education system. In the last decade, she was responsible for work packages in international research projects on innovation (Innovation Study Phoenix, Arizona State University) and European research projects on theory, models and analysis of innovation processes (Iscom, Insite, MD, coordinated by David A. Lane). She has been appointed Representative of Italy in the OECD Working Party on Innovation and Technology Policy (TIP), a sub-group of the OECD Committee for Scientific and Technological Policy (CSTP) (2016-), and Representative of the Italian Ministry of Education, University and Research in the European Union Strategy for Alpin Regions (EUSALP), Action 1-"To develop an effective research and innovation ecosystem" (2016-).

Dirk Meissner is Deputy Head and Professor of the Institute for Statistical Studies and Economics of Knowledge, at the National Research University - Higher School of Economics (Moscow). He has over 10 years of experience in top level consulting to key decision makers in industry and public policy. He has strong background in technology and innovation management, science, technology and innovation policy consulting. Dirk has worked with and led elite teams on a body of case work that include regional innovation strategies, intellectual property management, R&D portfolio management, R&D in- and outsourcing, science, technology and innovation policy evaluation and design. His responsibilities included building and management of teams as well as project management and client interaction. Dirk occasionally represented Switzerland in the OECD Working Party on Technology and Innovation Policy on behalf of the Swiss delegate and currently represents the Russian Federation in the same Working Party.

Antoine Schoen is a professor of École Supérieure d'Ingénieurs en Électrotechnique et Électronique (ESIEE) Paris - University Paris Est. He is an engineer in technology management and a Doctor of economics at Paris-Sud University. He teaches at ESIEE Paris and carries out his research activities at Laboratoire Interdisciplinaire Sciences Innovations Sociétés (LSIS). As part of his recent research activities, he has been involved, since 2013, in the European Research Infrastructure Project for Research and Innovation Policy Studies (RISIS), whose aim is to build original databases to address new issues for public research and innovation policies. Since 2015, he also participates in the European EMBRC project by coordinating the socio-economic analysis of the construction of the network of marine biotechnology research infrastructures.

Michael Keenan is a Senior Policy Analyst in the OECD's Directorate for Science, Technology and Innovation. He has worked in the innovation policy field for around two decades, most of which was spent at the Manchester Institute of Innovation Research, where he remains an Honorary Research Fellow. Over the past years, has worked on the OECD's country reviews of innovation policy and has lead the OECD's work on the development of its Innovation Policy Platform. During 2015-16, he led a forward looking exercise that explored some of the main megatrends and technology trends that are set to influence science and innovation over the next 10-15 years. The results of this exercise constitute a major part of the 2016 OECD STI Outlook. He is currently involved in three OECD digital projects: (i) the Innovation Policy Platform, a project with the World Bank that provides a web-based knowledge management tool in support of innovation policy-making; (ii) REITER, a project with the European Commission to develop a new semantic science and innovation policy database, which will be powered by a new science and innovation policy taxonomy/ontology; and (iii) Digital Science and Innovation Policy (DSIP), a project that reviews contemporary developments in national digital research information management infrastructures and their potential to transform science and innovation policy and governance.

Prof. Philippe Laredo is Research Director at Université de Paris-Est (Ecole des Ponts, IFRIS) and professor at the University of Manchester (MBS, Manchester Institute of Innovation Research). His research interests are on new emerging sciences and breakthrough innovation and on research and innovation policies. Recent work on the latter focuses on the development of new evaluation approaches for assessing societal impacts of public research, and on the development of 'positioning indicators'. On the latter, he presently coordinates a distributed European research infrastructure supported by the EC, RISIS (2014-2017).

Prof. Reinhilde Veugelers is professor of Managerial Economics, Strategy and Innovation at the Katholieke Universiteit Leuven. She was a visiting scholar at Northwestern University's Kellogg Graduate School of Management, at Sloan School of Management (MIT), Stern Business School (NYU), ECARES/Université Libre de Bruxelles, Université de Paris I (Panthéon-Sorbonne), Universitat Pompeu Fabra & Universitat Autonoma de Barcelona, and Universiteit Maastricht. With her research concentrated in the fields of industrial organisation, international economics and strategy and innovation, she has authored numerous publications on multinationals, R&D cooperation and alliances, industry-science links and market integration in leading international journals. She obtained research grants from the Belgian Science Policy Office, the European Commission (DG Research and DG ECFIN) and the Flemish Government (VRWB-IWT). From 2004-2008, she was on academic leave, as advisor at the European Commission (BEPA). She is currently a Senior Fellow at Bruegel, a CEPR Research Fellow and a member of Commissioner Potocnik's Knowledge for Growth expert group. She is also co-promotor for the Flemish Government "Steunpunt" on R&D Statistics.

Prof. Alan Kirman is professor emeritus of economics at Aix Marseille Université and at the École des Hautes Études en Sciences Sociales (EHESS) and is a member of the Institut Universitaire de France. His PhD is from Princeton and he has been professor of economics at Johns Hopkins University, the Université Libre de Bruxelles, Warwick University and the European University Institute in Florence. He was elected a fellow of the Econometric Society and of the European Economic Association and was awarded the Humboldt Prize in Germany. He is a member of the Institute for Advanced Study in Princeton. Prof. Kirman's recent research has focused on the relationship between individual and collective economic behaviour and the role of direct interactions between economic agents in determining aggregate outcomes. He has also worked on general equilibrium theory, international trade, game theory, information, social choice, networks and economic justice. He has had 150 articles published in international scientific journals, and authored and edited a number of books, including *Complex Economics: Individual and Collective Rationality (2010),*

Lunch reception

13h00 – 14h30

Château de La Muette, George Marshall Room

The lunch reception will provide testimonies by current and past delegates of their memories of the TIP and wishes for the TIP's future. A **video** that was specially prepared for the event will also be shown.

Break-out sessions: What are the implications for the future?

14h30-15h45

The breakout sessions will discuss what are core thematic priorities on which innovation policy advice is needed over the next decade, ways how evidence to produce such advice can best be obtained and how the TIP can leverage on its experience to support innovation policy making.

The four breakout groups to which participants will be assigned will focus on the following two topics:

- **Knowledge sharing between industry and science** (groups 1 and 4)
- **Business innovation** (groups 2 and 3)

Breakout group 1 (room MB2122)

Topic: Knowledge sharing between industry and science

Chair: **Mario Cervantes**, Senior Policy Analyst, OECD

Ice-breaker interventions:

- **Tiago Pereira**, Head, Studies and Strategy Office, Foundation for Science and Technology, Portugal
- **Kai Husso**, Enterprise and Innovation Department, Ministry of Economic Affairs and Employment, Finland

Group discussion

Support: **Martin Borowiecki**, Junior Economist/ Policy Analyst, OECD

Rapporteur: **Tiago Pereira**

Breakout group 2 (room MB4122)

Topic: Business innovation

Chair: **Ana Nieto,** DG RTD-OECD Co-ordinator, Directorate-General for Research and Innovation, European Commission

Ice-breaker interventions:

- **David Legg**, Lead Specialist, Economics, performance and strategy department, Innovate UK
- **Byeongwon Park**, Research Fellow, Center for Strategic Foresight, Science and Technology Policy Institute, Korea

Group discussion

Support: **Diogo Machado**, Junior Economist/ Policy Analyst, OECD; **Blandine Serve**, Statistician, OECD

Rapporteur: **Byeongwon Park**

Breakout group 3 (room CC10)

Topic: Business innovation

Chair: **Caroline Paunov**, Senior Economist, OECD

Ice-breaker interventions:

- **Aldo Aldama**: Mexico's Delegate for Innovation, Science and Technology to the OECD
- **Sander Kes**, Senior Policy Advisor, Directorate for Innovation and Knowledge, Ministry of Economic Affairs, Netherlands

Group discussion

Support: **Andrés Barreneche**, Policy Analyst, OECD

Rapporteur: **Aldo Aldama**

Breakout group 4 (room MB6122)

Topic: Knowledge sharing between industry and science

Chair: **András Hlács**, Counsellor, Permanent Delegation of Hungary to the OECD

Ice-breaker interventions:

- **Ian Hughes**, Senior Policy Advisor, Department of Jobs, Enterprise and Innovation, Ireland
- **Agni Spilioti**, Director, Policy Planning Directorate, Ministry of Education, Research and Religious Affairs, Greece

Group discussion

Support: **Sandra Planes,** Junior Policy Analyst, OECD; **Teru Koide**, Economist, OECD

Rapporteur: **Agni Spilioti**

* Please find the biographies at: https://innovationpolicyplatform.org/TIP50speakers

15h45–16h15 Coffee break

Report back from the breakout groups

16h15-16h30

Chair: **Jerry Sheehan**, Deputy Director, National Library of Medicine, National Institutes of Health, USA, and Chair of the OECD TIP Working Party.

Roundtable of TIP and RIHR chairs

16h30-17h50

TIP and RIHR former and current chairs will engage in an interactive, interview-style discussion to look back at the most memorable and impactful TIP and RIHR projects and events and reflect on how they see the future of the TIP.

Chair: **Göran Marklund**, Deputy Director General for External Matters, VINNOVA (Swedish Governmental Agency for Innovation Systems), Sweden

Panellists:

- **Theo Roelandt**, Chief Analyst for Enterprise and Innovation, Ministry of Economic Affairs, the Netherlands
- **Jana Weidemann**, Deputy Director General, Ministry of Education and Research, Norway
- **Jerry Sheehan**, Deputy Director, National Library of Medicine, National Institutes of Health, USA, and Chair of the OECD TIP Working Party.
- **Erkki Ormala**, Professor of Practice, Aalto University

Göran Marklund is Deputy Director General and Head of Operational Development at VINNOVA, the Swedish Government Agency for Innovation Systems. He was previously Science and Technology Attaché at the Swedish Embassy in Washington DC, guest researcher at the Center for International Technology Policy at George Washington University and Associate Professor in Economic History at Uppsala University. Mr. Marklund often gives advice to the Government on research, innovation and growth policy issues. As a researcher, he has primarily specialized in globalization, innovation and national competitiveness, with a particular focus on innovation, R&D and indicators on innovation and growth. In this function he has closely followed OECD's and Eurostat's indicator work and often assisted at the meetings of OECD's groups of national experts on science and technology. Mr. Marklund is chairman of the Advisory Board for R&D and Innovation Statistics at Statistics Sweden.

Theo Roelandt is the Chief Analyst at the Directorate General for Business and Innovation at the Ministry of Economic Affairs (the Netherlands). He previously held various positions at the Erasmus University Rotterdam, TNO, the OECD and various departments of the Ministry of Economic Affairs (general economic policy, industrial policy, innovation policy, international cooperation and strategy and policy analysis). In his work he links science and economic analysis with policy development. He graduated as an economist at Erasmus University Rotterdam (cum laude) where he also obtained his doctorate degree (cum laude).

Jana Weidemann holds a master degree in Norwegian language and literature, and is Deputy director general in the Norwegian Ministry of Education and Research, Department of Research. She has previously worked in the Department of Higher Education in the Ministry, and has also worked for many years as Head of Section at the University of Oslo, Department of Research Administration. She was a delegate to the RIHR working party in OECD, and Chair of RIHR in the years 2011-2013. Currently she is the Norwegian delegate to the High Level Group of Joint Programming (GPC), under the European Research Area Committee.

Jerry Sheehan, as Deputy Director of the National Library of Medicine (NLM), shares responsibility with the Director for overall program development, program evaluation, policy formulation, direction and coordination of all Library activities. Sheehan joined the NLM as Assistant Director for Policy Development in September 2006. In this position, he was responsible for monitoring, evaluating and advising NLM officials on a broad range of science, technology, information and health policy issues that affect the Library. He also managed the trans-NIH BioMedical Informatics Coordinating Committee and served as a key link to a variety of communities in the public and private sectors that develop and implement such policies. From September 2015 to January 2017, Mr. Sheehan served as Assistant Director for Scientific Data and Information at the White House Office of Science and Technology Policy and helped advance open science policies across the Federal Government.

Prior to joining the NLM, Mr. Sheehan worked at the OECD, where he served as Principal Administrator and Senior Economist in the Science & Technology Policy Division from 2000 to 2006. Prior to joining the OECD, Mr. Sheehan held positions as a Senior Program Officer with the Computer Science and Telecommunications Board of the National Research Council and as an Analyst in the Congressional

Office of Technology Assessment. Mr. Sheehan He serves as Chairman of the OECD Working Party on Innovation and Technology Policy, Co-chair of the Interagency Working Group on Open Science, and Vice President of the International Council for Scientific and Technical Information. He holds BS (Electrical Engineering) and MS (Technology and Policy) degrees from the Massachusetts Institute of Technology.

Erkki Ormala is a professor of practice in Innovation Management at the Aalto Business School Department of Management and International Economy, at Aalto University. He graduated in 1974 and received his PhD in 1986 from the Helsinki University of Technology. He was a Senior Research Engineer at the Technical Research Centre of Finland (VTT) between 1974-1987. He was a visiting scholar at the Stanford University (1976) and further at the International Institute of Applied Systems Analysis (NASA)(1982). Between 1987-1999, he was the Secretary of the Science and Technology Policy Council of Finland. The Council is chaired by the Prime Minister with the task to give advice to the Government and administration in issues related to science, technology and innovation policies. In 1999 he joined the Nokia Group, where he was in charge of developing favourable business environment for Nokia globally. He was Nokia's representative in a number of industrial organizations such as ICC, GBDe, ERT, UN ICT Task Force, WSIS and DigitalEurope. Between 1996 and 1999 he was the Chairman of the Technology and Innovation Policy Working Group of the OECD. Since 1994, he has been a member of the evaluation and monitoring panels of a number of the EU RT&D programmes. In 2004 he chaired the Five-Year-Assessment of the EU Research Programmes covering 1999-2003. Between 2008 and 2012 he was the President and Chairman of the Executive Board of DigitalEurope. He is a member of the Board of University of Oulu.

Closing remarks

17h50-18h00

This session will revise the main takeaways from the discussions and will open the floor to concluding remarks regarding the future directions of innovation policy and the work of the TIP.

- **Jerry Sheehan**, Deputy Director, National Library of Medicine, National Institutes of Health, USA, and Chair of the OECD TIP Working Party

Overview of TIP work

National Innovation Systems and Inclusive and Sustainable Development

Managing National Innovation Systems (1999)

With the emergence of a knowledge-based society, innovation has become an increasingly important factor in the competitiveness of firms, the prosperity of nations and dynamic world growth. This book analyses the fundamental changes in the linkages between industry and the science system as well as in the nature of the competencies required for firms to innovate. It shows that innovation performance depends on the way in which the different components of the "innovation system" - businesses, universities and other research bodies - interact with one another at the local, national and international levels.

System innovation project (2013-2016)

System innovation is a horizontal policy approach to tackle problems that are systemic in nature; such as sustainable housing, e-mobility, health care; it involves many actors outside of government (as well as different levels of governments) and takes a longer term view. The first phase of the project (2013-14) focused on developing the conceptual framework and illustrating system innovation approaches in practice through a series of case studies. The second phase of the project (2015-16) examined how system innovation approaches can promote industry 4.0 and green innovation. It focused on the role of selected policy tools such as cluster policies, demonstrators, technology roadmapping, and smart regulation which can be used to promote emerging industries and green growth.

References

OECD (1999), *Managing National Innovation Systems*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264189416-en

OECD (2001), *Innovative People: Mobility of Skilled Personnel in National Innovation Systems*, OECD Publishing, Paris.http://dx.doi.org/10.1787/9789264195585-en

OECD (2001), *Innovative Networks: Co-operation in National Innovation Systems*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264195660-en

OECD (2002), *Dynamising National Innovation Systems*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264194465-en

OECD (2015), Innovation Policies for Inclusive Growth, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264229488-en

Planes-Satorra, S. and C. Paunov (2017), "Inclusive innovation policies: Lessons from international case studies", *OECD Science, Technology and Industry Working Papers*, No. 2017/02, OECD Publishing, Paris. http://dx.doi.org/10.1787/a09a3a5d-en

Knowledge Transfer between Industry and Science

Turning Science into Business (2003)
Patenting and Licensing at Public Research Organisations

This report presents the results of the first international survey on the patenting and licensing activities of public research organisations in OECD countries. It includes data on the stock and number of patents and licenses, the amount of licensing revenue, the size and activities of technology transfer offices, the types of licensing agreements concluded with firms, as well as information on the government and institutional policies for owning and exploiting intellectual property. In addition to the survey results, policy makers, business managers and university and research administrators will find several case studies on how OECD countries are moving to unlock the social and economic benefits of public research.

Commercialising Public Research ***New Trends and Strategies*** (2013)

Public research is the source of many of today's technologies from the GPS and MRI to MP3 technology. Public research institutions (PRIs) and universities are also an engine of entrepreneurial ventures from biotech start-ups to Internet giants like Google. Today, globalisation, open innovation and new forms of venture financing such as crowd funding are changing the way institutions promote the transfer and commercialisation of public researcher results. This report describes recent trends in government and university level policies to enhance the transfer and exploitation of public research and benchmarks the patenting and licensing activities of PRIs and universities in a number of OECD countries and regions. It also showcases, based on case studies of leading institutions in several countries, a number of good practices for increasing the number of university invention disclosures, accelerate licensing contracts and promote open innovation practices between universities and firms.

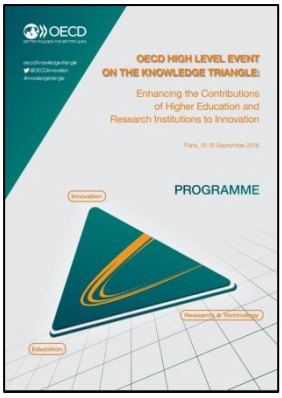
Making Open Science a Reality (2015)

Open science commonly refers to efforts to make the output of publicly funded research more widely accessible in digital format to the scientific community, the business sector, or society more generally. Open science is the encounter between the age-old tradition of openness in science and the tools of information and communications technologies (ICTs) that have reshaped the scientific enterprise and require a critical look from policy makers seeking to promote long-term research as well as innovation. The report i) reviews the policy rationale behind open science and open data; ii) discusses and presents evidence on the impacts of policies to promote open science and open data; iii) explores the legal barriers and solutions to greater access to research data; iv) provides a description of the key actors involved in open science and their roles; and v) assesses progress in OECD and selected non-member countries based on a survey of recent policy trends.

Promoting Research Excellence (2014)

New Approaches to Funding

National research systems face an increasingly competitive environment for ideas, talent and funds, and governments have shifted funds from institutional core funding to project funding, often on a competitive basis, or reward success in raising third-party funds in performance-based funding schemes. It is in this context that "research excellence initiatives" (REIs) have emerged. This report presents new evidence on how governments steer and fund public research in higher education and public research institutions through REIs. The report can help inform discussions on future government policy directions by providing information on how REIs work and on the functioning and characteristics of institutions that host centres of excellence. The findings show some of the benefits to be gained through REIs and note some pitfalls to be avoided.



High level event on the Knowledge Triangle (2016)

Enhancing the contributions of Higher Education and Research Institutions to Innovation

On 15-16 September 2016 the OECD organised a High Level Event on the Knowledge Triangle in Paris. The High Level Event on the Knowledge Triangle offered an opportunity for senior government officials and a wide range of stakeholders to meet and share experiences on how to better leverage and integrate the various missions – education, research and engagement in order to increase the contribution of higher education and public research institutions to innovation and economic growth. The event provided input into the OECD project on the knowledge triangle (2015-16) that aimed to provide practical insights on the role that education and research funding policies; governance structures; institutional leadership and stakeholder involvement can play in helping higher education and research institutions to improve their education, research and third-mission activities.

References

OECD (2002), *Benchmarking Industry-Science Relationships*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264175105-en

OECD (2003), *Turning Science into Business: Patenting and Licensing at Public Research Organisations*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264100244-en

OECD (2003), *Governance of Public Research: Toward Better Practices*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264103764-en

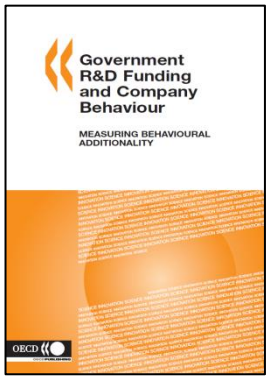
OECD (2013), *Commercialising Public Research: New Trends and Strategies*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264193321-en

OECD (2015), "Making Open Science a Reality", *OECD Science, Technology and Industry Policy Papers*, No. 25, OECD Publishing, Paris. http://dx.doi.org/10.1787/5jrs2f963zs1-en

OECD (2014), *Promoting Research Excellence: New Approaches to Funding*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264207462-en

Paunov, C., S. Planes-Satorra and T. Moriguchi (2017), "What role for social sciences in innovation?: Re-assessing how scientific disciplines contribute to different industries", *OECD Science, Technology and Industry Policy Papers*, No. 45, OECD Publishing, Paris. http://dx.doi.org/10.1787/8a306011-en

Business Innovation and Policies

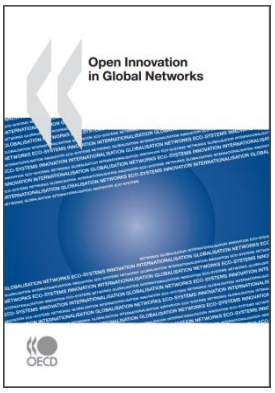


Government R&D Funding and Company Behaviour (2006)

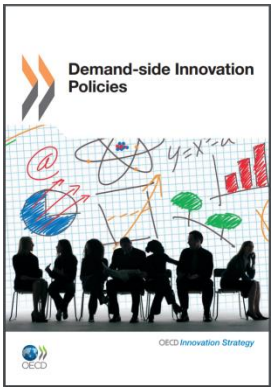
Measuring Behavioural Additionality

Ongoing efforts to boost business investment in R&D demand better methods of evaluating the effectiveness of government policy instruments. Efforts to explicitly measure changes in the ways firms conduct R&D as a result of government policy – so-called "behavioural additionality" effects – have remained relatively underdeveloped. This publication explores the emerging concept of behavioural additionality and summarises results of a multinational effort to develop better ways of measuring it. Evaluations should investigate not only how much additional business R&D spending is stimulated by government support or how much additional output is generated as a result, but also how government funding influences the conduct and direction of business R&D.

Open Innovation in Global Networks (2008)



To match the global demand and supply of innovation, businesses increasingly internationalise their innovation activities while opening their innovation process by collaborating with external partners (e.g., suppliers, customers, universities). This book examines what drives these global innovation networks across different industries, how they are related to companies' overall strategies, whether they are accessible for small and medium-sized enterprises (SMEs) and what the consequences are.



Demand-side Innovation Policies (2011)

Demand-side innovation policies have been receiving increasing interest from a number of OECD countries in recent years in the context of slow growth and lagging productivity performance. This book examines dynamics between demand and innovation and provides insights into the rationale and scope for public policies to foster demand for innovation. It shows the potential - but also the limits - of using public procurement, regulations or standards to stimulate public and private demand for innovation, including among SMEs. Drawing on country experience and case studies, this report illustrates good practices for designing, implementing and evaluating demand-side innovation policies.

References

OECD (2006), *Government R&D Funding and Company Behaviour: Measuring Behavioural Additionality*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264025851-en

OECD (2006), *Innovation and Knowledge-Intensive Service Activities*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264022744-en

OECD (2008), *Open Innovation in Global Networks*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264047693-en

OECD (2011), *Demand-side Innovation Policies*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264098886-en

OECD (2001), *Innovative Clusters: Drivers of National Innovation Systems*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264193383-en

OECD (2006), *Innovation in Pharmaceutical Biotechnology: Comparing National Innovation Systems at the Sectoral Level*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264014046-en

OECD (2006), *Innovation in Energy Technology: Comparing National Innovation Systems at the Sectoral Level*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264014084-en

OECD (2017), *Making Innovation Benefit All: Policies for Inclusive Growth*, OECD Publishing, Paris.

Ongoing activities

Digital and Open Innovation Project

The digital transformation has changed the way economies work and how innovation is organised. **The OECD project 'Digital and Open Innovation' investigates whether and, if so, how digital transformation changes the rationales for innovation policy and identifies the most appropriate instruments to foster innovation and inclusive and sustainable growth** in the new context. To identify practical policy implications, the project reviews changing business models and new forms of innovation across sectors and different actors, including SMEs, start-ups and research institutions. It also analyses new forms of collaboration in innovation at local, national and global levels.

The 2017-18 project is conducted by the Working Party on Innovation and Technology Policy (TIP) under the auspices of the OECD Committee for Scientific and Technological Policy (CSTP).

Innovation policy responses to the challenges of digital transformation

This project puts innovation policies at the core of the analysis in order to:

- Find appropriate policy **responses** to new challenges faced by different sectors of the economy and diverse actors within them;
- Explore what **innovation policy strategies and instruments**, such as research and innovation centres to connect business with academia and ICT innovation vouchers to help SMEs adopt digital technologies, are most effective in view of the demands of the digital transformation;
- Ensure the digital transformation allows for and contributes to **sustainable and inclusive growth**, offering opportunities for widespread participation in innovation processes.

Project scope

Assessing the impacts of knowledge transfer and policy

The OECD project **'Assessing the impacts of the policy mix for knowledge transfer between industry and science'** analyses the impacts of public research institutions on innovation performance, and explores the range of policy instruments implemented across countries to support the creation of spin-offs – a specific channel of science-industry knowledge transfer.

This project is a follow-up of work conducted in 2015-16 on impact assessment of public research. The 2017-18 project is conducted by the **Working Party on Innovation and Technology Policy** (TIP) under the auspices of the OECD Committee for Scientific and Technological Policy (CSTP).

Overview

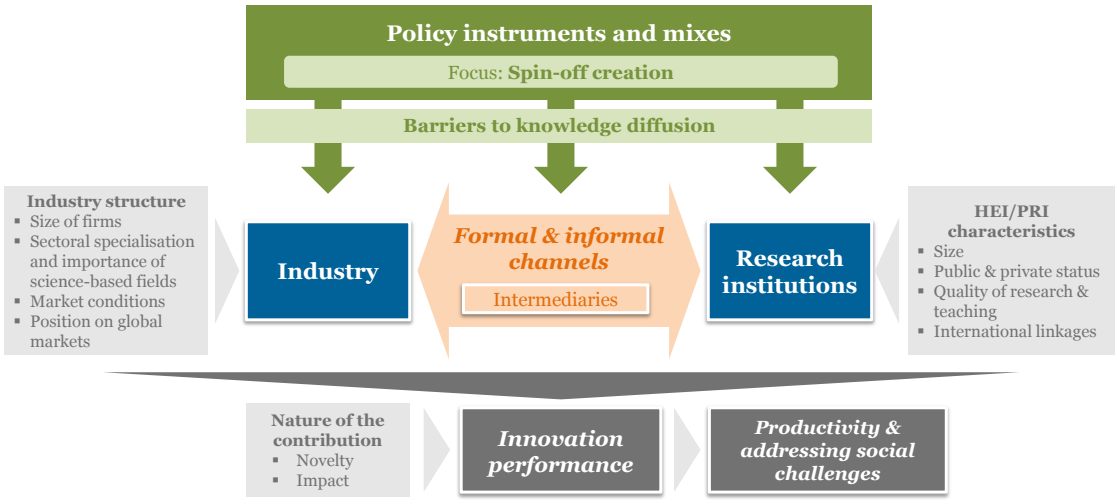
The increasing **importance of knowledge-based capital** for competitiveness, and the high growth potential of many science-based activities reward those countries where **firms** have access to a strong research base and have the **ability to effectively use research findings to innovate**.

In an era of tight public budgets, understanding how public research generates the largest impacts on innovation to support growth and address socio-economic challenges becomes ever more important. While a variety of policy instruments are applied to strengthen knowledge transfer between universities and the private sector, evidence on their impacts and interactions is scarce.

In this context, important **policy questions** are:

- How does public research contribute to innovation?
- What policy instruments and combinations (or policy mixes) are most appropriate to enhance knowledge transfer?

Project scope



Innovation for Inclusive Growth

The OECD Project **"Innovation for Inclusive Growth"** has analysed the impacts of innovation and related policies on inclusive growth. It has also developed concrete policy solutions to support countries in reconciling their innovation and inclusive development agendas. Follow-up work started in 2017 looks at the impacts of the digital transformation on inclusive growth.

The Inclusive Innovation Policy Toolkit on the OECD-World Bank Innovation Policy Platform helps policy makers design and implement effective innovation policies for inclusive growth.

Overview

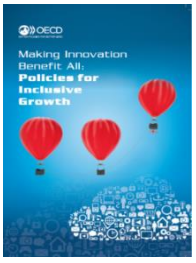
Income inequalities have grown in most countries over the past three decades. The median household's income has declined relative to the average, pointing to an **increasingly "vanishing middle"** income group. By contrast, the income share of the top 1% has increased precipitously. Moreover, in many of the world's economies poverty, exclusion and lack of development continue to be a major challenge.

Changes in the way modern economies operate and the growing role of innovation and, in particular, of innovation enabled by digital technologies may affect inclusive growth. These drivers of growth may result in structural changes in the way economies operate and, consequently, how the rewards of growth benefit different groups in society.

In this context, the **major questions** the project has investigated to and to which the project reports and toolkit respond are:

1. What is the impact of innovation on income inequalities?
2. What roles can innovation policies play in tackling inclusiveness challenges?

Latest report



Making Innovation Benefit All: Policies for Inclusive Growth (2017)

This report analyses the impacts of **digital innovation** on market structures and **income distribution**, and the mechanisms through which such innovations may foster social inclusion. It also assesses the distribution of **innovation capacities across regions** within countries, and explores the role specific **innovation policies** can play in fostering inclusive growth. Policy recommendations are also provided to ensure their effective implementation.

Inclusive Innovation Policy Toolkit

This **practical and interactive toolkit**, available at the Innovation Policy Platform, aims to help policy makers design and implement effective innovation policies for inclusive growth.

www.innovationpolicyplatform.org/inclusivetoolkit

The toolkit builds on the paper "Inclusive Innovation Policies: Lessons from International Case Studies", which analyses how such policies can foster social, industrial and territorial inclusiveness, drawing on 33 detailed policy examples.


http://innovationpolicyplatform.org/TIP50