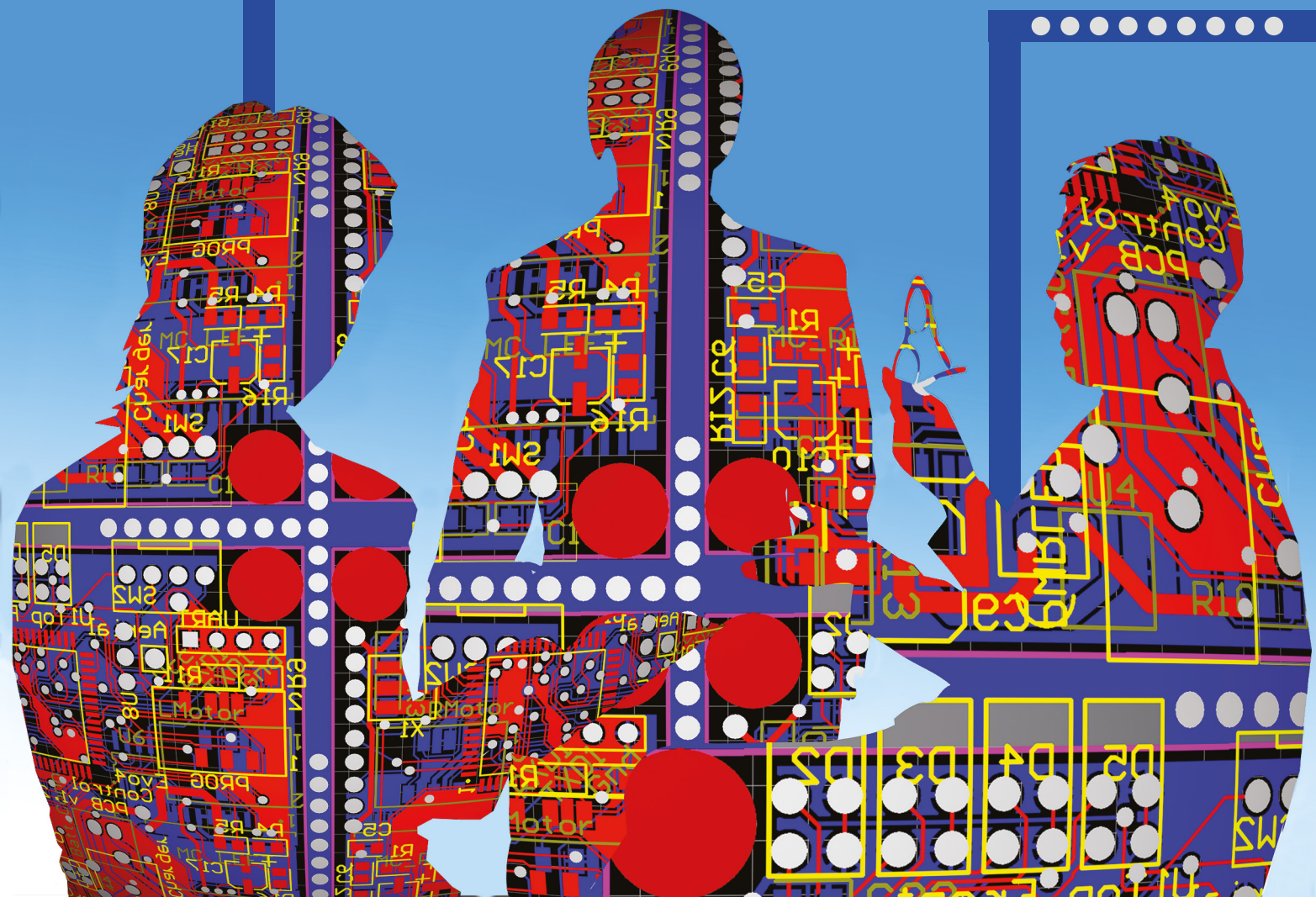


**Joint CIIE-WPIA-GROWINPRO Conference**

# Value Creation and Distribution in the Digital Era

**27-28 JANUARY 2021 (VIRTUAL EVENT)**



## AGENDA

### WEDNESDAY 27 JANUARY 2021

#### 14:30-14:45 OPENING

**Andrew Wyckoff** OECD Directorate for Science, Technology and Innovation (STI)

**Andrea Roventini** Scuola Superiore Sant'Anna (Coordinator GROWINPRO)

**Román Arjona** European Commission (DG Research and Innovation)

#### 14:45-15:45 KEYNOTE ADDRESS

### **“Bridging or Expanding Divides? Value Creation and Distribution in the Digital Era”**

**Joseph Stiglitz**, Columbia University, Nobel Prize Laureate

Chair: **Giovanni Dosi** Scuola Superiore Sant'Anna (SSSA)

#### 15:45-16:00 COMFORT BREAK

#### 16:00-17:50 SESSION 1

### **Micro and Macroeconomic Analysis of Productivity: Data, Measurements, Patterns and Challenges**

Chair: **Angelo Secchi** Paris School of Economics

#### ■ *Mapping Organizational Capabilities and Corporate Performances*

**Stefano Costa\***, **Giovanni Dosi**, **Stefano De Santis**, **Roberto Monducci**,  
**Angelica Sbardella**, **Maria Enrica Virgillito**

\* Italian National Institute of Statistics (ISTAT)

#### ■ *New Evidence on Intangibles, Diffusion and Productivity*

**Carol Corrado**, **Chiara Criscuolo**, **Jonathan Haskel**, **Alexander Himbert\***,  
**Cecilia Jona-Lasinio**

\* OECD Directorate for Science, Technology and Innovation

#### ■ *The Human Side of Productivity*

**Peter Gal\***, **Timo Leidecker**

\* OECD Economics Department

#### ■ *Determinants of Productivity Gap in the European Union: A Multilevel Perspective*

**Randolph Luca Bruno\***, **Elodie Douarin**, **Julia Korosteleva**, **Slavo Radosevic**

\* University College London

#### 17.50-18.00 WRAP UP OF THE FIRST DAY

**Giovanni Dosi** Scuola Superiore Sant'Anna

**THURSDAY 28 JANUARY 2021**

**14:00-15:20 SESSION 2**

**Appropriation of the Gains: Industry Structure and Institutions**

Chair: **Antoine Dechezlepretre**, OECD Directorate for Science, Technology and Innovation

- *The Impact of Superstar Firms on the Labor Share: Evidence from a Small Open Economy: Belgium*

**Filip Abraham, Yannick Bormans\***

\* KU Leuven, Department of Economics, VIVES

- *The Role of (De-)Centralized Wage Setting for Industry Dynamics and Economic Growth: Agent-Based Analysis with the Eurace@Unibi Model*

**Herbert Dawid\*, Philipp Harting, Michael Neugart**

\* Bielefeld University

- *The Impact of Deunionization on the Growth and Dispersion of Productivity and Pay*

**Giovanni Dosi, Richard Freeman, Marcelo Pereira, Andrea Roventini, Maria Enrica Virgillito\***

\* Scuola Superiore Sant'Anna

**15.20-16.20 PANEL: A DIALOG BETWEEN ACADEMICS AND POLICY MAKERS**

**"Which Role for Innovation and Competition Policy in the Digital Transformation?"**

Chair and setting the scene: **Chiara Criscuolo**, OECD/STI

**Giovanni Dosi** Scuola Superiore Sant'Anna

**Fiona Scott Morton** Yale School of Management

**Pierre Régibeau** European Commission (DG Competition)

**16:30-16:40 COMFORT BREAK**

**16:40-18:00 SESSION 3**

**Digitalisation, Skills and Global Value Chains: Value Creation and Appropriation**

Chair: **Tania Treibich**, Maastricht University

- *Benefits of Investing into the Development of 4IR Technologies*

**Bettina Peters\* and Markus Trunschke**

\* ZEW – Leibniz Centre for European Economic Research

- *Patterns of Production, Trade and Employment: Regional and Global Perspectives*

**Ali Alsamawi, Agnès Cimper, Joaquim Guilhoto, Peter Horvát, Colin Webb\*, Nori Yamano, Carmen Zürcher**

\* OECD Directorate for Science, Technology and Innovation

- *The Human Capital behind AI: Evidence about Jobs and Skills Demand from Online Job Postings*

**Lea Samek\*, Mariagrazia Squicciarini, Emile Cammeraat**

\* OECD Directorate for Science, Technology and Innovation

**18:00-18:10 CLOSING OF CONFERENCE**

**Mariagrazia Squicciarini** (OECD/STI) and **Giovanni Dosi, Andrea Roventini** (SSSA)

## ABSTRACTS

### Mapping Organizational Capabilities and Corporate Performances

**Stefano Costa\*, Giovanni Dosi, Stefano De Santis, Roberto Monducci, Angelica Sbardella, Maria Enrica Virgillito**

Is it possible to identify the behavioural “genotype” of the firm? Which characteristics of the organizational structure determine winners and losers in the market arena? Integrating the business registers data with the information on firms’ strategies included in the Istat permanent business census, this paper analyzes the microeconomic determinants of stagnation of the Italian economy. First, we empirically identify the “genotype” of the firm: collective organizational capabilities, managerial practices and network structures are the pillars of the firms’ behaviour and the ensuing heterogeneity. Organizational skills and complex learning processes override managerial practices in affecting firm performances, wherein productivity increases with complexity in behavioural traits. The complexity of organizational capabilities is also able to compensate for small size and maps into higher growth patterns. However, the fraction of complex firms is very tiny, while the majority of the firms is characterised by bare-bone organizational capabilities which reflect into a stagnant productivity. Our evidence confirms the strengthening of a neo-dualistic tendency.

### New Evidence on Intangibles, Diffusion and Productivity

**Carol Corrado, Chiara Criscuolo, Jonathan Haskel, Alexander Himbert\*, Cecilia Jona-Lasinio**

This paper presents new evidence on the impact of intangible capital on productivity dispersion within industries. We first show that rise in productivity dispersion after 2000 is more pronounced in intangible-intensive industries. We then analyse the link between intangible capital intensity and productivity dispersion both at the top and at the bottom of the productivity distribution, and in different industries. The results suggest that industries that have experienced a stronger increase in intangible investment have also seen a steeper increase in productivity dispersion both at the top and at the bottom of the productivity distribution. While the results at the top seem to be associated with the scalability of intangible capital, which is likely to disproportionately benefit high productivity firms and incumbents, dispersion at the bottom is rather linked to complementarities between intangible investment and factors like digital intensity, trade openness and venture capital.

### The Human Side of Productivity

**Peter Gal\*, Timo Leidecker**

Large and persistent productivity differences across firms indicate that there are substantial gains to be made from improving the productivity of firms lagging behind and reduce the gap with top performing firms. This paper uses administrative linked employer-employee data from across several countries via a distributed microdata approach to explore in detail the role of skill composition for top versus typical firms, distinguishing between low, medium and high skilled workers based on their occupational task content. Results confirm that skills vary systematically along the productivity distribution of firms in all countries analysed, with interesting differences by sectors: while high skills are more prevalent among top performing firms everywhere, the relative use of medium versus low skills varies. In particular, among less knowledge intensive services – the largest segment of the private sector including retail, transport, hotels and restaurants – top firms use medium skills more widely than the typical firm. This is in contrast to more innovative sectors – knowledge intensive services and manufacturing – where top firms stand out by using fewer medium skilled workers and instead combine high and low skills.



Countries differ substantially along these dimensions, pointing to the role of structural characteristics and public policies in shaping the skills-productivity relationship.

## **Determinants of Productivity Gap in the European Union: A Multilevel Perspective**

**Randolph Luca Bruno\*, Elodie Douarin, Julia Korosteleva, Slavo Radosevic**

This paper explores the determinants of productivity gaps within the European Union in computers, chemicals, basic metals and food manufacturing sectors which vary in terms of research and development (R&D) intensity. Our analysis reveals that the most important factors determining productivity gaps are the intensity of R&D activity, R&D embedded in purchased equipment and machinery and their interplay. While both own R&D and embedded R&D are independently positively associated with closing productivity gaps, this is not the case for the interaction between these two variables. There is no complementarity between these two modes of acquiring technology (R&D and embedded R&D), despite each being crucial for catching up in productivity. In policy terms, this suggests a lack of coordination between R&D policy and technology transfer (i.e., foreign direct investment, trade and industrial policy). We also show a widening productivity gap between ‘peripheral’ (southern and eastern) and north EU countries.

## **The Impact of Superstar Firms on the Labor Share: Evidence from a Small Open Economy: Belgium**

**Filip Abraham, Yannick Bormans\***

The Belgian labor share, measured as the part of GDP going to labor, is declining. This fits into the global secular trend of decreasing labor shares. A novel strand in the literature focusses on its granular drivers. Recent research in the United States suggests that superstar firms, defined as large firms with a dominant market share, are increasing their market share and relate this to the fall of the labor share (Autor et al., 2020). Using a long time series of Belgian firm-level data from 1985 to 2014, we provide evidence for the link between the rise of market concentration and the decrease of the labor share in its two largest sectors: Manufacturing and Wholesale & Retail. These two sectors represent approximately half of the Belgian economy. We do not find evidence in other Belgian sectors.

## **The Role of (De-)Centralized Wage Setting for Industry Dynamics and Economic Growth: Agent-Based Analysis with the Eurace@Unibi Model**

**Herbert Dawid\*, Philipp Harting, Michael Neugart**

We employ the agent-based macroeconomic Eurace@Unibi model to study the economic implications of different degrees of de-centralization in the wage setting. Starting from a baseline scenario, corresponding to a high degree of unionization, in which wages are fully centralized and indexed on economy-wide productivity gains and inflation, we investigate how an increasing level of de-centralization affects the dynamics of output, employment, inequality, and market concentration. We think of de-centralization as wages being a weighted average of an economy-wide ‘union wage’ and a firm-specific component depending on the firm’s productivity and the experienced tightness of the labor market. Our findings show that de-centralization of the wage setting process induces higher wage inequality, where this effect is substantially more pronounced if workers have heterogeneous rather than homogeneous (general) skills. Furthermore, under heterogeneous skills wage de-centralization induces strong concentration of the consumption good market, whereas no such effect arises under homogeneous skills. The relationship between the degree of wage de-centralization and output is non-monotone and U-shaped.

## **The Impact of Deunionization on the Growth and Dispersion of Productivity and Pay**

**Giovanni Dosi, Richard Freeman, Marcelo Pereira, Andrea Roventini, Maria Enrica Virgillito\***

This paper presents an Agent-Based Model (ABM) that seeks to explain the concordance of sluggish growth of productivity and of real wages found in macro-economic statistics, and the increased dispersion of firm productivity and worker earnings found in micro level statistics in advanced economies at the turn of the 21st century. It shows that a single market process unleashed by the decline of unionization can account for both the macro and micro economic phenomena, and that deunionization can be modeled as an endogenous outcome of competition between high wage firms seeking to raise productive capacity and low productivity firms seeking to cut wages. The model highlights the antipodal competitive dynamics between a “winner-takes-all economy” in which corporate strategies focused on cost reductions lead to divergence in productivity and wages and a “social market economy” in which competition rewards the accumulation of firm-level capabilities and worker skills with a more egalitarian wage structure.

## **Benefits of Investing into the Development of 4IR Technologies**

**Bettina Peters\*, Markus Trunschke**

We develop a dynamic discrete choice model of firms’ decisions to engage in the development of Fourth Industrial Revolution (4IR) and other non-4IR technology. The model takes the endogenous nature of the decision into account and allows it to persistently affect the firm’s future productivity path. We estimate the benefits of either technology using a panel dataset of manufacturing firms in Germany between 1993 and 2016, combined with information on the type of technology using patent applications. Our results suggest that firms stronger benefit from developing 4IR technologies, with an average productivity increase of 8.2%, than from developing non-4IR technologies (6.8%). These short-run productivity gains are carried over to future periods through a highly persistent productivity evolution process. Finally, we find that productivity gains from digital technology have more than quintupled from 2.6% (1993-2000) to 13.3% (2009-2016), resulting in productivity benefits that are almost twice as large for 4IR than for non-4IR technology developments in the most recent period. The simple technology development decision rules that have derived can be used in further research to analyze firm behavior in simulated counterfactual firm environments.

## **Patterns of Production, Trade and Employment: Regional and Global Perspectives**

**Ali Alsamawi, Agnès Cimper, Joaquim Guilhoto, Peter Horvát, Colin Webb\*, Nori Yamano, Carmen Zürcher**

OECD maintains and updates a set of Inter-Country Input-Output (ICIO) tables that, for each year, provide a globally balanced view of flows of intermediate and final goods and services. The ICIO tables are used not only to generate Trade in Value Added (TiVA) indicators and to inform trade policy analyses, but also to build measures contributing to a range of other policy discussions related to global value chains (GVCs). This presentation briefly describes how ICIO tables, when combined with other sources of data, can provide new insights into the impact of GVCs on employment (e.g. share of domestic workforce used to meet foreign demand); contribute to discussions on the reduction of greenhouse gas emissions, by going beyond production-based measures to provide demand-based perspectives (i.e. who consumes emissions); address other topics related to meeting sustainable development goals (SDGs), such as child labour in global supply chains; and, reveal potential exposure to global economic shocks and contribute to recovery scenario analyses.

## The Human Capital behind AI: Evidence about Jobs and Skills Demand from Online Job Postings

**Lea Samek\*, Mariagrazia Squicciarini, Emile Cammeraat**

This work presents first-time evidence about occupations requiring AI-related competences and the type of skills needed to work with AI. It aims to inform the discussion on skills demand and the role that human capital may play in relation to technology development and diffusion, in firms and industries. The study relies on online job posting data from Burning Glass Technologies (BGT) for Canada, the United Kingdom, the United States and Singapore and builds on work by Baruffaldi et al. (2020), identifying and measuring science and technological developments in AI.

In addition to characterising AI-related skills and jobs, this work sheds light on the bundles of cognitive and non-cognitive skills that are demanded in AI-related jobs, on changes in the demand for AI skills over time and on the type of skills that are demanded by different types of economic agents (e.g. firms versus universities). A network analysis further helps uncovering which skills represent central nodes in demand patterns, to inform industry and skill policies aimed at endowing individuals with the skills needed to work with AI, and help policy makers prioritise and identify key needs.

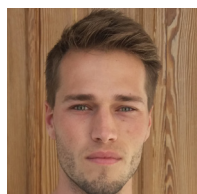
Results show that the number of AI-related jobs, the number of (technical) AI-related skills demanded in jobs, and the demand for communication, problem solving, creativity and teamwork skills increased over time. The network analysis uncovers that different skill bundles are seemingly required in the case of AI “core” approaches as compared to AI applications, although common nodes between the two sets of skills emerge.

## BIOGRAPHIES



**ROMÁN ARJONA** is Chief Economist and Head of Strategy and Foresight at the Directorate-General for Research & Innovation of the European Commission. He is Vice-Chair of the OECD's Committee for Science and Technology Policy (CSTP). He previously served in the Spanish government as Secretary-General for Science, Technology and Innovation, and before joining the Commission he was adviser to the Spanish State Secretary and the Spanish Minister for Science and Technology. Mr Arjona worked for the European Investment Bank and the International Monetary Fund as well as for the OECD as an economist. He is a former member of the World Economic Forum's High-Level Advisory Group of the Europe Inclusive Growth and Competitiveness Lab, and of its Global Agenda Council on New Growth Models. Román graduated in Economics at the University of Valencia with a special distinction, and holds a Masters' degree in European Economic Studies from the College of Europe in Bruges and a PhD in Economics from the European University Institute in Florence.

He is a former member of the World Economic Forum's High-Level Advisory Group of the Europe Inclusive Growth and Competitiveness Lab, and of its Global Agenda Council on New Growth Models. Román graduated in Economics at the University of Valencia with a special distinction, and holds a Masters' degree in European Economic Studies from the College of Europe in Bruges and a PhD in Economics from the European University Institute in Florence.



**YANNICK BORMANS** obtained his master degrees, one in business engineering and one in advanced studies of economics, at the Catholic University of Leuven, where he is also about to complete his PhD in Economics in the next months. His research focusses on product market power of (large) firms and its impact on labor market outcomes. In particular, he looks at price-cost margins and superstar firms, i.e. proxied by market concentration. He is currently involved in research projects with researchers from the European Commission, Oxford and the University of Liverpool. Finally, he is guiding and supervising the thesis project of approximately 20 master students per year.

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**RANDOLPH LUCA BRUNO** is Associate Professor of Economics at University College London, SSEES. He has held visiting positions at the London School of Economics and Political Science, Università della Svizzera Italiana, and University of Bari. He is

research fellow at IZA-Bonn, Institute of Labor and senior research fellow at Fondazione Rodolfo De-Benedetti-Milan. His main research interests revolve around Industrial Dynamics, Innovation, Institutional and Comparative economics, from both a macro and a micro perspective.



**STEFANO COSTA** is Senior Researcher at ISTAT (Italian National Institute of Statistics), Service for Economic and Social Analysis and Research, where he has been working since 2011 and is one of

the two coordinators of the Report on the Competitiveness of Business Sectors. PhD in Political Economy at the "Sapienza" University of Rome, where he graduated in Statistical and Economic Sciences. Previously he was Researcher at the ISAE - Institute of Economic Studies and Analysis. His current interests and publications concern the competitiveness of the Italian business system, the economy of firms and the internationalization of enterprises.



**CHIARA CRISCUOLO** is head of the Productivity, Innovation and Entrepreneurship Division in the Directorate for Science, Technology and Innovation at the OECD. Mainly, her work focuses on entrepreneurship, enterprise dynamics, productivity and policy evaluation. In this realm, she has coordinated large cross-country microdata projects on employment dynamics, productivity, as well as research and development. Chiara has played a lead role in advancing the use of firm level data and of microdata projects within the OECD. She has contributed to key horizontal and high level projects and publications, including the OECD volumes "Future of Productivity", "New sources of growth: Knowledge Based capital", and the "OECD Innovation Strategy". She co-manages the Global Forum on Productivity and is also a member of the French and Portuguese National Productivity Boards. Ahead of joining the OECD, Chiara received her doctoral degree in Economics from University College London and held academic appointments at the University of Siena, City University and the University of Cambridge, in addition to the London School of Economics.

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**HERBERT DAWID** is full professor at Bielefeld University holding the chair for Economic Theory and Computational Economics and Chairman of the Bielefeld Graduate School of Economics and Management (BiGSEM). He received a PhD in 1995 in applied mathematics from the Vienna University of Technology and held positions at the University of Vienna and the University of Southern California in Los Angeles before moving to Bielefeld University in 2003. Herbert Dawid has worked extensively on economic dynamics, dynamic games, agent-based models exploring issues of market interaction, macro- and industry dynamics and economics of innovation. A strong focus in recent work has been on economic policy analysis and the exploration of inequality generating mechanisms using agent-based models. He has published a book and numerous articles in highly ranked international journals in these areas and has been project- or WP-leader in numerous international research projects and is also the coordinator of the Marie-Sklodowska Curie Innovative Training Networks 'Expectations and Social Influence Dynamics in Economics (ExSIDE)' and 'Economic Policy in Complex Environments (EPOC)'. Herbert Dawid is currently president of the Society for Computational Economics, the co-editor of the Journal of Economic Dynamics and Control and on the editorial board of several other journals in this area.



**ANTOINE DECHEZLEPRÊTRE** is a Senior Economist – Head of Unit in the Productivity, Innovation and Entrepreneurship Division, Directorate for Science, Technology and Innovation (STI), OECD.

His work deals principally with the role of innovation and technology diffusion for the green transition; the impact of environmental policies on innovation, technology adoption, emissions, productivity and firm performance; the impact of Intellectual Property Rights (IPR) on international technology transfer; and the role of academic entrepreneurship for innovation and productivity growth.

Antoine's work has been published widely in international scientific journals in the fields of applied microeconomics, environmental economics and energy economics.

Antoine holds a PhD in economics from Ecole des Mines de Paris (France). Before joining the OECD, he was Associate Professorial Research Fellow at

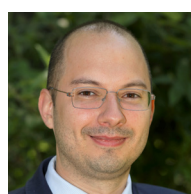
the Grantham Research Institute of Climate Change and the Environment, London School of Economics, and then headed the Green Growth work stream joint between the Economics Department and the Environment Directorate of the OECD. He is the winner of the 2020 European Award for Researchers in Environmental Economics under the Age of Forty.



**GIOVANNI DOSI** is professor of economics at the Scuola Superiore Sant'Anna in Pisa, Italy. He also serves as co-director of the 'Intellectual Property' task force at the Initiative for Policy Dialogue at Columbia University. Additionally, Professor Dosi is a continental Europe editor of the journal Industrial and Corporate Change. He is included in the ISI Highly Cited Research list, denoting those who made fundamental contributions to the advancement of science and technology, and is a corresponding member of the Accademia Nazionale dei Lincei, the first academy of sciences in Italy. In 2016, he received the Wiley TIM Distinguished Scholar Award by the Technology and Innovation Management Division of the American Academy of Management.

His major research areas – where he is author and editor of several works – include Economics of Innovation and Technological Change, Industrial Economics, Evolutionary Theory, Economic Growth and Development and Organizational Studies. He has been involved in a number of international research projects.

A selection of his works has been published in two volumes: Innovation, Organization and Economic Dynamics. Selected Essays, Cheltenham, Edward Elgar, 2000; and Economic Organization, Industrial Dynamics and Development: Selected Essays, Cheltenham, Edward Elgar, 2012.



**PETER GAL** is senior economist for the Global Forum on Productivity in the Organisation for Economic Co-Operation and Development (OECD). He has been working on micro- and macroeconomic aspects of productivity, in particular on the role of differences among firms for aggregate performance. He also worked on labour market issues, focusing on the role of startups in job creation as well as on the role of structural changes – especially digitalisation and globalisation – and of public

policies for potential growth. Throughout his career, he worked in various departments of the OECD as well as at the International Monetary Fund and initially at the Central Bank of Hungary. He holds a PhD and an MPhil degree in Economics from the Tinbergen Institute in Amsterdam and a university degree in Economics from the Corvinus University of Budapest.



**ALEXANDER HIMBERT** is a Junior Economist in the Directorate for Science, Technology and Innovation at the OECD, working on the microeconomic drivers of firm productivity. He participates in

the development and data collection of the Multi-Prod project. Current topics of his analytical work include the impact of intangible capital on productivity dispersion and determinants of firm level labour shares. Previously he worked as a Consultant on topics of firm productivity and regional development for international institutions and think tanks such as the World Bank, the Overseas Development Institute (ODI) and the International Growth Center (IGC). He holds a Ph.D. in Economics from the University of Lausanne. During his Ph.D., he has been Visiting Researcher at Sciences Po Paris, hosted by Professor Thierry Mayer.



**BETTINA PETERS** is Deputy Head of the Research Department “Economics of Innovation and Industrial Dynamics” at ZEW-Leibniz Centre for European Economic Research in Mannheim and Honorary Professor in Innovation at the Faculty of Law,

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Ministry of Education and Research. She gained her doctoral degree at the University of Würzburg and holds a degree in quantitative economics from the University of Kiel.



**PIERRE RÉGIBEAU** is the Chief Competition Economist. Dr. Régibeau received a BSc in Economics from the University of Liège (Belgium) and a Ph.D. in Economics from the University of California at Berkeley.

After graduation, he embarked on an academic career at institutions such as the Massachusetts Institute of Technology, Kellogg School of management (Northwestern University), the Institute for Economic Analysis (Barcelona) and the University of Essex, where he currently is Honorary Visiting Professor. He has published academic and policy papers in leading reviews. His areas of specialty include industrial organisation, with a special emphasis on technology-intensive industry and intellectual property rights and International Trade. He was on the Board of Editors of the Journal of Industrial Economics for more than ten years. He has also been teaching about the interface between IPRs and Competition Policy for the last 14 years in the well-established CRESSE summer school attended by lawyers and personnel from competition and regulatory authorities. Dr. Régibeau has also been a member of the EAGCP (Economic Advising Group on Competition Policy) at the EU Commission.



**ANDREA ROVENTINI** is full professor of economics at the Institute of Economics of Scuola Superiore Sant’Anna, and research fellow at OFCE, Sciences Po (France). He holds a PhD in Economics and Management from Scuola Superiore Sant’Anna.

His main research interests include complex system analysis, agent-based computational economics, business cycles, economic growth and the study of the effects of monetary, fiscal, technology, innovation and climate-change policies. He is currently the principal investigator and consortium coordinator of the Horizon 2020 GROWINPRO project financed by the European Commission. He has been involved in the projects IMPRESSIONS, DOLFINS, and ISIGrowth financed by the European Commission. His works have been published in PNAS, Nature Climate Change, Industrial and Corporate Change, Journal of Economic Behavior and Organization, Economic Modeling,

Ecological Economics, Journal of Evolutionary Economics, Journal of Applied Econometrics, Journal of Economic Dynamics and Control, Economic Inquiry, Socio-Economic Review, Environmental Modeling and Software, Technological Forecasting & Social Change and Macroeconomic Dynamics. He is editor of Industrial and Corporate Change – Macro Economics and Development and advisory editor of the Journal of Evolutionary Economics.



**LEA SAMEK** is a Young Professional at the Organisation for Economic Co-operation and Development (OECD) in the Science, Technology and Innovation (STI) Directorate. Her work encompasses a wide array of innovation and industry-policy related topics including knowledge-based capital (aka intangible assets), the link between innovation and productivity, jobs and skills in the digital transformation and Artificial Intelligence. She is also a Research Associate at the UK Economic Statistics Centre of Excellence (ESCoE).

Prior to joining the OECD, Lea worked as an Economist at the National Institute of Economic and Social Research (NIESR) in London and as a Visiting Lecturer at King's College London, researching human capital, labour productivity and their measurement in the context of the modern economy.

She obtained her PhD from King's College London, where she examined the role of health in human capital formation. She also contributed to the Smart Public Intangibles (SPINTAN) project funded by the Seventh Framework Programme of the European Union, measuring education services as intangible assets.

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**FIONA M. SCOTT MORTON** is the Theodore Nierenberg Professor of Economics at the Yale University School of Management, where she has been on the faculty since 1999. Fiona holds courtesy appointments at the rank of Professor from the Institution for Social and Policy Studies, Law (Adjunct), Public Health (Health Policy), and Economics (FAS). Her area of academic research is empirical industrial organization, with a focus on empirical studies of competition in areas such as pricing, entry, and product differentiation. Her published articles range widely across industries, from magazines, to shipping, to pharmaceuticals, to internet retailing, and are published in leading economics

journal. From 2011-12, Professor Scott Morton served as the Deputy Assistant Attorney General for Economics at the Antitrust Division of the U.S. Department of Justice, where she helped enforce the nation's antitrust laws. At Yale SOM she teaches courses in the area of competitive strategy. She served as Associate Dean from 2007-10 and she won the School's teaching award twice. She has served in an editing role on various academic economics journals, has won several research grants from the National Science Foundation, and is a Research Associate at NBER. Professor Scott Morton has a BA from Yale and a PhD from MIT. She is a frequent speaker at seminars and conferences across the United States and Europe.

**ANGELO SECCHI** is Full Professor of Economics at University Paris 1 Panthéon-Sorbonne and Associate member of the Paris School of Economics. His research covers industrial dynamics, international trade, economic geography and applied econometrics and it has been published in several peer-reviewed international journals.



**MARIAGRAZIA SQUICCIARINI** is Senior Economist – Head of Unit at the OECD Directorate for Science Technology and Innovation (STI). Mariagrazia's work encompasses the changing determinants of growth and productivity; the economics of Intellectual Property Rights (IPR); knowledge-based capital; global value chains; the digital transformation and Artificial Intelligence; job and skill dynamics; and the digital gender divide.



She is responsible for the OECD Working Party on Industry Analysis (WPIA), which develops indicators and quantitative analysis in the area of industry dynamics, innovation and economic performance. Mariagrazia oversees the STI Microdata Lab initiative, combining a wide array of micro-level data for indicator and econometric analysis work in support of evidence-based policy making. She is responsible for the IPR-related data and analysis work carried out in STI and chairs the OECD-led IP Statistics Taskforce, which fosters coordination related to methodological, data and analysis work of IPR Offices worldwide. Mariagrazia holds a Ph.D. in Economics from the University of Essex (UK). Among others, she had previous

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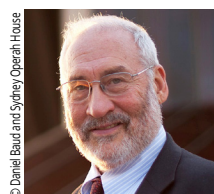
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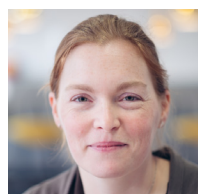
appointments at VTT Technical Research Centre of Finland (FI), the University of Essex (UK) and the European Commission-Joint Research Centre (JRC, ES). She has published extensively and acts as a reviewer/expert for international peer-review journals and governments.



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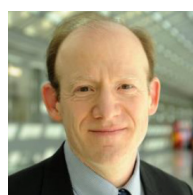
sor at the Department of Economic Policy, Università Cattolica del Sacro Cuore, where she is currently research fellow. She was fellow at the Labor and Worklife Program at Harvard University and she is currently GLO fellow. She is actively engaged in EU H2020 projects as task coordinator (GROWINPRO and ISIGROWTH) and JRC tenders. She undertook research collaborations with the ILO and was invited as expert by EU-OSHA. Her research interests range from technological change, industrial dynamics, labour market organization and institutions, macroeconomic dynamics, agent-based modelling, technology and labour relations to evolutionary economics.



**COLIN WEBB** is a Senior Statistician in OECD's Directorate for Science, Technology and Innovation where he is head of a Unit that maintains and updates a suite of databases to support analyses of

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After a brief spell in UK's Department of Trade and Industry, he joined the OECD in 1986 as a statistician in the Balance of Payments Division of the Economics and Statistics Department. Mr Webb holds a BSc in Mathematics and Statistics from University of York, UK and a Postgraduate Diploma in Statistics from University of Kent, UK.



**ANDREW W. WYCKOFF** is the Director of the OECD's Directorate for Science, Technology and Innovation (STI) where he oversees OECD's work on innovation, business dynamics, science and technology, information and communication technology policy as well as the statistical work associated

with each of these areas. His experience prior to the OECD includes positions at the US Congressional Office of Technology Assessment (OTA), the US National Science Foundation (NSF) and The Brookings Institution.

He has served as an expert on various advisory groups and panels which include joining the Global Board of Trustees of Digital Future Society (DFS), being a Commissioner on the Lancet/FT Governing Health Futures 2030 Commission, the International Advisory Board of the Research Council of Norway and Head of OECD's Delegation at the G20 and G7 meetings on ICT and Digital Economy.