

## Europe and Central Asia Productivity Conference

The Europe and Central Asia (ECA) Productivity Conference (June 5th and 6th, 2024) took stock of frontier research on the drivers of productivity and identified lessons for the region through the global experience. The sessions fostered interaction with renowned researchers and debates on policies to support sustainable and inclusive growth in ECA.

### Productivity growth challenges

Like in most of the world, productivity growth has been declining in ECA, especially after the 2008 global financial crisis (GFC). The COVID-19 pandemic and Russia's invasion of Ukraine have exacerbated the slowdown. Ivailo Izvorski proposed that ECA's more pronounced decline could be explained by lower innovation and the slowing pace of reforms. Private R&D expenditure in ECA is considerably below that of more advanced economies like the US, and there has been limited reform impetus following the GFC. The Conference focused on three sources of new challenges and opportunities: (1) the pressing demands posed by the green transition, (2) the emergence and diffusion of disruptive technologies, and (3) changes to global value chain structures (GVCs) and trade patterns due to geopolitical tensions. A common thread throughout the Conference was the policymakers' turn to industrial policy.

### What is new for productivity growth?

#### The Challenges and Opportunities of Climate Change

Economies face a dual challenge: reversing the stagnation of productivity while reducing greenhouse gas emissions. While in the past it was thought that policy could either foster growth or protect the environment, this view is shifting. Ralf Martin showed that there is no trade-off between green innovation and growth when it comes to R&D public investment, which should be driven by knowledge spillovers. The estimated returns from R&D in green innovations are high compared to other technology groups.

If the benefits of green innovation are so evident, why is innovation in clean technologies still limited in ECA? Sarah Armitage focused on the market failures associated with innovation. Innovation creates knowledge spillovers that can only partially be appropriated by inventors, making private returns lower than social returns. Also, innovations, especially in green technology, require coordinated investments and might thus not materialize under uncertainty about complementary investments. Furthermore, asymmetric information between borrowers and financiers may prevent the financing of profitable projects.

How can policymakers promote green innovation? Focusing on incentives, coordination, and de-risking capital-intensive projects is critical. Policy instruments, such as green banks, credit guarantees, demonstration projects, and technology hubs, can address some of the market failures mentioned earlier. Professor Armitage stressed the importance of understanding each instrument's channel of effect and the context where it is employed. Manuela Francisco focused on strengthening market-based incentives for green innovation. Capital markets are crucial and need to develop mechanisms to de-risk investments and non-traditional lending instruments for high-risk projects. What progress have ECA economies made in terms of reforms and policies to promote innovation, and what opportunities have not yet been seized? Green innovation's capacity to address growth stagnation, climate challenges, and rising inequality opens a new discussion on the role of industrial policy and its potential to increase welfare.

#### Innovation, Technology Adoption, and Diffusion

Sluggish growth calls for faster innovation and diffusion of technologies and managerial practices.

How could governments reverse the slowdown in productivity growth? John Van Reenen looked at policies through the lens of productivity fundamentals: innovation (i.e., expanding the production frontier), diffusion (i.e., spreading existing ideas), and reallocation (i.e., displacement of less productive firms by more productive ones). He emphasized that policies should target both the demand and supply side of innovation. For example, R&D tax credits and direct government grants can stimulate innovation but would eventually increase the costs of innovating unless there are investments on the supply of human capital (e.g. expanding STEM graduates, attracting high-skilled migrants). He also stressed that diffusion of technologies takes time as businesses undertake the required organizational restructuring and workers upgrade their skills. How to evaluate supply-side constraints to innovation and diffusion, such as skills scarcity? And how to define the appropriate mix of demand-side and supply-side policies to promote innovation? These are open questions for future research.

Is there a trade-off between promoting technological adoption by lagging firms vs innovation of frontier firms? While technological sophistication is fundamental for productivity, Diego Comin showed that firms mostly use older technologies, even when newer, more sophisticated, technologies are available within the firm. Future research should measure the gap between the most used and best available technologies within firms in ECA and evaluate policies that support the technological upgrading of firms.

Bill Maloney emphasized that managerial quality does not only drive technological adoption but also affects firms' innovation, product quality, and exports. Although the returns to management improvement are high, firms are often unaware of lacking capabilities and thus do not know how to improve them. To what extent managerial practices constrain productivity growth in ECA remains an area that demands further study.

Chiara Criscuolo highlighted the role of competition policy in driving innovation and diffusion. Pro-competition product market regulations can raise the returns to technological upgrading, encourage managerial improvement, and promote firm entry. Similarly, John Haltiwanger reflected on how market frictions that adversely impact entry, exit, and reallocation can reduce innovation. Innovation can lead to a surge in the entry of small producers who experiment, increasing productivity dispersion. Competition will force the unsuccessful ones to exit while the successful ones drive productivity growth. Environments that support experimentation and speed up creative destruction can enhance productivity growth in the medium- and long-term. Lack of competition is another constraint to productivity that demands further study.

Denis Mevdelev reflected on the challenges that policymakers face to make informed decisions on innovation and industrial policy. Most fundamentally, firms' productivity is not directly observable, complicating the design of business support programs.

### Changing Trade and the Restructuring of Global Value Chains

Mona Haddad noted the recent geopolitical tensions, the rise in protectionism, and the push for reshoring of upstream stages of value chains. These developments and the associated heightened economic and political uncertainty might be raising the cost of investment and hindering trade. Trade is increasing within politically aligned blocks and decreasing between such blocks. GVC intensity seems to have remained constant, but international trade patterns are reconfigured as firms circumvent trade barriers by establishing indirect trade links. This reconfiguration presents opportunities for countries to increase their participation in GVCs. Work is needed in identifying the positions of ECA countries in GVCs, the constraints to further participation, and opportunities to join emerging value chains.

Kalina Manova focused on the improvements in productivity that can result from integrating into global value chains. First, she shared preliminary evidence that participation in GVCs changes the task complexity and employment structure inside firms, enabling reorganization and efficiency gains. Establishing the firm-level and institutional prerequisites for successful reorganization is a promising area for future research.

Second, she noted that multinational corporations (MNCs) are central to both innovation (they conduct the majority of the world's R&D) and diffusion of technologies (they serve as vehicles for technology transfer across borders). Of particular interest is the increasing tendency of MNCs to offshore R&D. Basic R&D is offshored to advanced economies, which have the required skilled labor, while applied R&D is offshored to developing economies, where labor is cheaper. Understanding the absolute and relative importance of basic and applied R&D for ECA countries is necessary for the design of effective policies. Part of the answer lies in the size of local knowledge spillovers from different types of R&D. Importantly, R&D offshoring is often targeted toward locations where MNCs have already established production centers. This complementarity between FDI and R&D investment demands further study: how policymakers can create institutions and markets more conducive to both FDI and R&D? Third, Professor Manova noted how weak protection of intellectual property rights might deter innovation. At the same time, innovators in emerging economies increasingly rely on foreign patenting institutions to signal their quality. This raises the question of what domestic institutions could be strengthened to protect property rights and play the role of foreign patenting offices in mitigating informational frictions in international trade.

Nina Pavcnik provided new insights into the distributional effects of trade across workers and space. First, the wide heterogeneity in firm performance within industries translates to earnings differences across workers. The import competition that results from trade openness can balance out the lack of domestic competition and drive unproductive (and worse-performing) firms out of the market. While this process can promote the reallocation of workers out of unproductive, and often informal, microenterprises towards formal firms, it can also exacerbate the earnings inequality across workers. Labor and reskilling policies might be useful in minimizing the adverse effects of such productivity-enhancing reallocation. Which mix policies is most effective remains an open question. Second, given the heterogeneity in industrial composition across regions of a country, policies that promote trade will have spatially heterogeneous effects on earnings and employment. Imperfect inter-regional mobility of labor and capital sustains or even amplifies the adverse effects of import competition. Studying the frictions that limit geographical mobility is an important avenue for future research and can shed light on the policy interventions that can alleviate them.

Industrial policy responses: what are the challenges and opportunities for policymakers to implement well-designed industrial policy?

Policymakers are responding to these new challenges and opportunities through industrial policy. In contrast to horizontal, sector-neutral policies, industrial policies aim at specific industries, technologies, or businesses. How can policymakers implement well-designed industrial policy? Does industrial policy always require fiscal space and institutional capacities, and how can governments overcome existing fiscal and institutional constraints? Kori Udovički, Román Arjona, and Vache Gabrielyan reflected on the opportunities and challenges industrial policy faces.

Based on Jean Tirole's (2022) framework, John Van Reenen defined a set of principles for effective industrial policy. First, it should focus on sectors where market failures are more likely, markets that require a high degree of coordination or uncertainty is higher (e.g., climate change). Good design relies on the identification of market failure. Second, industrial policy must preserve market contestability, should not discriminate against potential entrants, encourage experimentation, and facilitate the exit of inefficient businesses. Third, policymakers should pay attention to both the supply and the demand side (for example, if infrastructure and skills are appropriate for starting a cluster or innovation hub). Fourth, a good practice is to involve the private sector in risk-taking to prevent big failures of targeted interventions. Fifth, it is important to strengthen universities and their collaboration with entrepreneurs. Sixth, informed and independent policy formulation and evaluation is necessary for effective industrial policy. Defining policy objectives, using experts to select projects and beneficiaries of public funds, looking at evidence to improve

design (e.g., toolkits), and rigorously evaluating impact are key principles that improve industrial policy. In conclusion, industrial policy must be implemented with caution. First, it may end up favoring already innovating firms. Second, because it usually takes the form of tax incentives or subsidies, industrial policy may start a subsidy race between regions and countries, inducing lobbying, corruption, and resource misallocation. Third, even though institutional capacity is crucial, governments must accept that, no matter how benevolent they are, they do not have enough information or capacity to effectively target sectors and firms, which can result in costly and ineffective interventions. Are ECA countries following these principles? What institutions ECA countries need to embed these principles and avoid the potential pitfalls of industrial policy is a crucial area for future research.

#### *Institutional capacities and fiscal constraints*

Well-designed industrial policy requires solid institutional capacities. Leveraging the expertise and independence of relevant institutions is essential to set objectives and approaches towards sectors and firms. Policy design should be informed by empirical evidence on what does and doesn't work, which ultimately requires analyzing evidence, understanding the internal and external validity of impact evaluations, and designing policies that enable learning. Evaluating the relative importance of institutional characteristics and understanding the order in which institutions should be developed are important for policy design.

Emerging and developing countries frequently face fiscal constraints in allocating resources to industrial policy, limiting its scope and scalability. Manuela Francisco noted how long-run trends, such as population aging, put additional pressure on state budgets. Sarah Armitage emphasized that it is when fiscal space is limited that well-designed policies become particularly important. While industrial policy can address market failures, government failures can also introduce distortions that hamper competition or distort incentives. Removing such distortions can enhance productivity with little fiscal impact. For example, some ECA countries are characterized by large state ownership, often for historical reasons. In such cases, it is important to identify the market failures, if any, that justify state intervention. When economic justification is lacking, reducing state ownership can boost competition and productivity. Importantly, to the extent that technological upgrading can happen through trade and FDI, the role of the government is not to finance the investments but rather to provide a stable and efficient institutional environment that attract FDI and promotes trade.

## Speakers and presentations

### Opening remarks

Asad Alam, Regional Director, ECA Prosperity Practice Group. *“Welcome remarks”*

Ivailo Izvorski, Chief Economist, ECA. *“Setting The Stage - ECA trends, productivity, and growth patterns”*

Antonella Bassani, Vice President, Europe and Central Asia Region. *“Welcome remarks”*

### Session 1. Productivity, Technology, and Management

#### *Speakers*

John Van Reenen, Ronald Coase Chair in Economics, LSE. *“Growth and Green Industrial Policy: European Perspective”*

Diego Comin, Professor of Economics, Dartmouth College. *“Going Deeper on Technology”*

#### *Discussant*

Bill Maloney, Chief Economist, LAC.

### Session 2. Productivity, Innovation, and Green Transition

#### *Speakers*

Ralf Martin, Professor of Economics and Principal Economist, Imperial College and IFC. *“Clean spillovers and the Trade-off between Growth and Climate”*

Sarah Armitage, Assistant Professor, Boston University's Questrom School of Business. *“Innovation Market Failures & Newly Scaled Policy Instruments”*

#### *Discussant*

Manuela Francisco, Global Director, MTI GP.

### Session 3. Productivity, GVC, and Trade

#### *Speakers*

Nina Pavcnik, Niehaus Family Professor in International Studies, Dartmouth College. *“International Trade, Global Value Chains, and Inclusive Growth: Lessons from Emerging Economies”*

Kalina Manova, Associate Professor of Economics, University College London. *“Global Innovation with Global Firms”*

#### *Discussant*

Mona Haddad, Global Director, FCI GP.

### Session 4. Productivity Drivers

#### *Speakers*

John Haltiwanger, Distinguished University Professor, University of Maryland. *“Whither Technological Innovation, Business Dynamism and Productivity”*

Chiara Criscuolo, Principal Economist, IFC. *“Productivity: Drivers and Levers”*

#### *Discussant*

Denis Medvedev, Senior Economic Advisor, IFC.

## Closing Panel. Challenges to Productivity Growth in ECA: Current Priorities and Lessons from the Past

### *Speakers*

Kori Udovički, Founder and Head of CEVES.

Román Arjona, Chief Economist, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, EC.

Mateusz Szczurek, Associate Director, EBRD.

Vache Gabrielyan, Dean of the Manoogian Simone College of Business and Economics, American University of Armenia

### Background papers

Armitage, Sarah, Noël Bakhtian and Adam Jaffe. "Innovation Market Failures and the Design of New Climate Policy Instruments." *Environmental and Energy Policy and the Economy*, 5. <https://doi.org/10.1086/727877>

Cirera, Xavier, Diego Comin and Marcio Cruz. 2024. "*Anatomy of Technology and Tasks in Establishment.*" NBER Working Papers 32281, National Bureau of Economic Research, Inc.

Martin, Ralf and Dennis Verhoeven. 2023. "Knowledge Spillovers from Clean Innovation. A tradeoff between growth and climate?" Discussion Paper, no. 1933, Centre for Economic Performance.