

Pathways to Future Regional Development Workshop

11–12 June 2026 | Bolzano/Bozen, Italy

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Introduction

The *Pathways to Future Regional Development* workshop was held on 11–12 June 2026 in Bolzano/Bozen, Italy. Bringing together academics, policymakers, and innovation practitioners, the workshop explored emerging challenges and opportunities for regional development in an era shaped by technological transformation, labour market change, sustainability transitions, and evolving innovation ecosystems.

The event provided a platform for interdisciplinary exchange, combining cutting-edge academic research with policy perspectives and practical insights from regional innovation actors. Over two days, participants engaged in keynote lectures, paper sessions, policy discussions, and a field visit to a leading innovation hub.

Keynote Lecture 1: Rethinking Human Capital

Frank Neffke (Complexity Science Hub)

Frank Neffke's keynote challenged traditional approaches to human capital by adopting an economic complexity perspective, which views skills and capabilities as highly complementary and increasingly complex combinations of knowledge. He argued that the growing burden of knowledge has driven greater specialisation and division of labour, making collective capabilities more important than individual skills alone. Drawing on digital trace data from software developers, the presentation demonstrated how jobs can be characterised as bundles of interrelated skills, with skill co-occurrences helping to predict the emergence of new capabilities. Using software industry data, Neffke mapped the geography of new digital skills such as AI, deep learning, cloud computing, and big data engineering, showing that their emergence depends less on physical location and more on the presence of related existing capabilities. The analysis highlighted the value of novel data sources for understanding how regions develop and diversify their knowledge bases over time.

Session 1: Technology, Innovation, and Societal Outcomes

This session examined the complex relationships between technological change, innovation processes, governance structures, and socio-economic outcomes.

Presentations

Frontier Technology Readiness, Democracy, and Income Inequality in Africa

Isaac K. Ofori

Examined the relationship between frontier technology readiness and income inequality across 39 African countries. Using panel data and GMM estimation, the study found that greater readiness for frontier technologies tends to increase income inequality; however, democratic institutions can help mitigate these effects. The findings suggest that democracy acts as an inclusive institutional mechanism, although its moderating influence depends on reaching a sufficient democratic threshold.

Internet Adoption, Gender and Productivity in Informal Firms in India

Jayati Chatterjee

This presentation examined whether internet adoption improves productivity among informal firms in India and whether it can help reduce gender-based productivity disparities. Using large-scale firm-level data covering 14 years, the study found that internet access has a positive and significant effect on labour productivity. Importantly, female-owned firms benefit disproportionately from internet adoption, helping to narrow the persistent productivity gap between male- and female-owned enterprises. The findings suggest that digital technologies can enhance market access, expand customer reach, and contribute to more inclusive economic outcomes in the informal sector.

Income, Sovereignty, and Cohesion: The Political Economy of Europe's First-Mover Innovation Deficit

Martina Pardy

Europe's stagnation stems from a structural failure to lead in first mover innovation, rooted in four interlocking weaknesses — fragmented finance, misaligned labour markets, insufficient urban scale, and gradualist innovation policy — that together create a stable low-innovation trap that standard one-by-one reforms cannot break. The paper proposes a way out through a Mutual Commitment Game: a coalition of willing European states simultaneously commits to public investment and regulatory reform, triggering a private sector response through cross-border knowledge spillovers that drives the system toward a high-innovation equilibrium. Crucially,

Europe need not abandon its social model to achieve this — but it must confront the distributional tensions that first mover innovation generates, particularly around entrepreneurial rents and inequality.

Investigating the Simultaneity of Transport Decarbonisation, Social Impact Institutions, and Inclusive Governance: Insights from Italy

Arjay Dineros

This study explored the interconnections between public transport decarbonisation, social impact institutions, and inclusive governance, arguing that these factors reinforce one another rather than operate independently. Drawing on evidence from Italy, the research found a stable bidirectional relationship in which stronger civic engagement and cooperative institutions support the adoption of sustainable mobility policies, while improvements in public transport enhance access to employment, services, and civic participation. The findings suggest that inclusive governance and social capital are important enablers of transport decarbonisation, while sustainable transport systems can in turn strengthen social inclusion and local institutional capacity.

Keynote Lecture 2: Where Bytes Meet Watts – Mapping the Geography of Twin Transition Technologies

Sandro Montresor (University of Trento)

In his keynote, Sandro Montresor examined the geography of technologies underpinning the digital and green transitions, collectively referred to as “Twin Transition” technologies. He highlighted that while digital and green transformations are both driven by technological innovation, only a small share of patented inventions—around 1.3%—can be classified as genuinely contributing to both transitions simultaneously. The global production of these technologies is highly concentrated, with the United States, China, and South Korea leading a group of five countries responsible for approximately 85% of twin transition inventions. The presentation showed that regions that enter emerging technological fields earlier tend to receive greater recognition and impact, as reflected in higher patent citations. Developing twin transition technologies requires a complex and diverse knowledge base that combines expertise from different technological domains. Finally, Montresor emphasised that regional context matters: local institutions, universities, and technology transfer policies can support innovation, although the capabilities of firms themselves remain the most important driver of twin transition development.

Session 2: Unpacking Labour Market Inequality

This session explored the drivers of labour market inequality and examined the roles of industrial structure, skills, and gender in shaping regional disparities.

Presentations

Evolving Pathways in the EU: How Industrial and Skill Capabilities Shape Regional Income Inequality

Federico Colozza

The presentation examined how industrial capabilities and skill structures shape regional income inequality in the EU, focusing on whether industrial relatedness influences inequality directly or through labour market mechanisms. It considered the idea that automation and structural change may reduce middle-skilled routine jobs while reshaping hiring patterns across skill groups. The main empirical finding showed that industrial relatedness did not directly affect income inequality; instead, it increased the standardisation of skills demanded by firms within EU regions, meaning regional labour markets became more aligned in terms of skill requirements and less reliant on rare or idiosyncratic skill combinations. Importantly, the results indicated that regions with higher skill standardisation experienced lower income inequality, suggesting that skill standardisation played a mediating role between industrial structure and inequality. Overall, the study highlighted that the evolution of regional industrial structures shapes development outcomes primarily through their impact on how skills are organised and demanded within regional labour markets.

Structural or Compositional? Recent Employee-Level Evidence on the Gender Pay Gap in Italy

Adeniran Adeboye

The paper investigated the gender pay gap in the Italian private sector and asked whether it is driven mainly by structural differences in worker characteristics or by unexplained factors reflecting discrimination or other unobserved mechanisms. Using microdata from the *stipendioGiusto.it* survey (2024–2025), which is skewed toward Northern Italy and includes a sample with higher male representation, the study documents an unadjusted gender pay gap of about 10.5% despite women being, on average, more highly educated than men. To disentangle the sources of this gap, it applies an Oaxaca–Blinder decomposition, separating the “explained” component (differences in observable characteristics such as age, tenure, and education) from the “unexplained” component (differences in returns to those characteristics). The results show that only a small portion of the gap—around 4.3%—is explained by observable factors, with age and education contributing modestly, while the majority remains unexplained and varies across job roles and industries, highlighting persistent structural inequalities in the Italian labour market.

Session 3: Regional Development, Attractiveness, and Economic Outcomes

The final academic session examined regional attractiveness, tourism, and economic development from multiple perspectives.

Presentations

Measuring Attractiveness with FLAIR

Simon Delage

The presentation examined how “territorial attractiveness” is defined and measured, questioning what it means for a place to be attractive and for whom this attractiveness is actually produced. It situated the concept within the context of rising territorial competition under globalisation, where regions and cities increasingly compete to attract flows of people, capital, and activity, often guided by rankings and “attractiveness agencies.” The speaker critically reframed attractiveness as not only the capacity to attract young, skilled, mobile populations, but also as the ability of a territory to be liveable and sustainable for its existing residents. Methodologically, the study constructed a composite indicator—an aggregated index combining multiple dimensions into a single score—to operationalise attractiveness. Using 51 administrative indicators across French communes (covering economy, social life, health and education, climate and risk exposure, and housing), the index is built through normalisation, weighting, and aggregation, with spatial smoothing techniques such as distance buffers, winsorisation, and outlier treatment, followed by sensitivity analysis. The results highlighted strong spatial heterogeneity, particularly driven by housing constraints and urbanisation, and reveal spatial autocorrelation, meaning that a municipality’s attractiveness is influenced by neighbouring areas, underscoring that attractiveness is both multi-dimensional and spatially interdependent.

Tourism’s Contribution to Regional Sustainable Development: An Occupation-Based Modelling and Circular Economy Perspective

Matthias Fuchs

The paper examined tourism’s contribution to regional sustainable development in South Tyrol (Bolzano), adopting an occupation-based modelling and circular economy perspective. It described tourism as a key economic driver in the region, supported by strong manufacturing activity, rich natural and cultural heritage, and significant agricultural production, with the sector accounting for around 14.8% of total employment and 10.7% of gross value added. The study used input–output (IO) and Social Accounting Matrix frameworks to assess direct and indirect effects of tourism growth on output, employment, income, and tax revenues, focusing on intersectoral linkages and multipliers across key tourism-related sectors such as retail trade,

transport, accommodation and food services, and creative industries. It framed the regional economy through a circular economy lens, emphasising the cyclical and mutually reinforcing relationships between sectors, as well as regenerative and transformative processes. By incorporating intermediate input structures and occupational-level modelling, the analysis disaggregated employment effects across different skill types and sectors, highlighting how tourism demand propagated through the regional economy. Overall, the study concluded that combining macro-level IO methods with occupation-based modelling provided a more fine-grained understanding of tourism's socio-economic impact and its role in regional development.

Who Cuts Travel First? Income Shocks and Heterogeneity in Tourism Spending

Chandan Sharma

The paper examined how income shocks affected household vacation spending in India, using high-frequency panel data from the Consumer Pyramids Household Survey (2022Q1–2024Q2), which covered around 179,000 households and a wide range of expenditure categories. It built on the idea that tourism was a highly income-sensitive component of consumption, but argued that aggregate data often masked heterogeneous household-level adjustments, particularly regarding whether families reduced vacations or reallocated spending toward social obligations. Focusing on India's volatile incomes, imperfect credit markets, and strong social commitment structures, the study filled gaps in the tourism demand, consumption smoothing, and household finance literature by providing micro-level evidence on joint vacation–obligation dynamics. Using fixed-effects regressions and a local projection framework, it showed that negative income shocks led to significant and concentrated reductions in vacation spending, especially among households with higher baseline tourism consumption, while credit access increased baseline spending but did not meaningfully buffer tourism cuts. It also found that households reallocated expenditure toward social obligations rather than uniformly reducing consumption, with this “reallocation index” varying by caste, religion, and obligation burden. These effects were strongest on impact but faded within a few quarters, suggesting temporary adjustments. Overall, the study concluded that vacation spending was a flexible consumption margin, with reductions driven by income shocks and shaped by social identity and normative obligations rather than purely financial constraints.

The second day of the workshop shifted attention towards policy engagement and regional innovation practice. The panel discussion explored how academic research can better inform policymaking and how innovation ecosystems can facilitate knowledge transfer and regional development.

Policy Engagement Session: Bridging Worlds – Connecting Research, Policy, and Innovation Ecosystems

Carlo Menon (OECD Spatial Productivity Lab)

Carlo Menon's presentation explored how stronger connections can be built between research, policymaking, and innovation ecosystems through the work of the OECD's Spatial Productivity Lab. Drawing on experiences from the Trentino Productivity Board and regional productivity reviews in Trentino, Veneto, and Sicily, he emphasised the importance of establishing broad partnerships involving policymakers, businesses, trade associations, and labour unions. A key lesson was the need for regions to clearly define their position and challenges through a simple, evidence-based narrative. Reflecting on how research can achieve policy impact, Menon argued that impact is more likely when researchers ask the right questions—those that are timely, relevant, and capable of informing ongoing policy debates—while acknowledging the challenges involved in translating research into policy practice. He also stressed the importance of direct communication and highlighted the “evaluation paradox”: although rigorous policy evaluation is widely recognised as essential, high-quality evaluations remain surprisingly rare in practice.

Vincent Mauroit (NOI Techpark)

Vincent Mauroit, Director for Innovation and Technology Transfer at NOI Techpark, discussed the role of innovation ecosystems in fostering regional development and technology transfer. He described innovation as the creation of both novelty and value, highlighting the importance of supporting incremental as well as radical innovation. The presentation outlined how NOI Techpark facilitates innovation through both market-pull approaches, responding to firms' needs, and technology-push approaches, proactively connecting research expertise with industry. Mauroit emphasised the challenges of transferring knowledge between academia and business and overcoming the so-called “valley of death”, and presented initiatives such as the Fusion Grant programme, which embeds postdoctoral researchers within firms. He concluded by reflecting on NOI Techpark's transformation from a former aluminium plant into a leading innovation hub, illustrating the potential for regional renewal through innovation and collaboration.

Field Visit: NOI Techpark South Tyrol

Participants visited NOI Techpark, a leading innovation district, where they learned about the organisation's role in fostering innovation, entrepreneurship, technology transfer, and regional development. The visit provided practical insights into how innovation ecosystems operate and contribute to economic transformation at the regional level.

The tour began with a general introduction to the historical site where the Techpark is now located. The area was formerly home to one of Italy's largest aluminium manufacturing plants, which at its peak exported around two-thirds of the country's aluminium production. Its establishment formed part of the broader industrial development and Italianisation policies pursued during the Mussolini era between the First and Second World Wars. Following the decline of the aluminium industry, the site was repurposed and transferred to become the Techpark, which today hosts more than 70 companies, around 40 startups, research centres, and the Free University of Bolzano. During the visit, the group explored several facilities, including one of the most advanced Earth simulation rooms, the startup incubator lab, and other shared infrastructures that are freely accessible to companies based in the Techpark.

Further actions

A news item has been published on WIFO's website, summarising the recent event and providing access to the speakers' presentations, available at: <https://www.wifo.bz.it/en/news/press-releases/437--pathways-to-future-regional-development-an-international-dialogue-on-the-future-of-regional-development.html>. In addition, the press release has been distributed to media representatives in South Tyrol and has been featured in several newspapers, both in print and online. We are also preparing this report for publication in Regions.

Looking ahead, the network may organise one final in-person event before its conclusion in March 2027. While plans are yet to be confirmed, a gathering would provide an opportunity to continue discussions on sustainability, inequality, innovation and future pathways for regional development, while strengthening the collaborations and exchanges developed through the network.

We undertook several steps to promote the RSA both before and during the event. Firstly, we included the RSA logo and listed the Associations as a co-organiser in all our communications, including posts on LinkedIn or Inomics, and announcements via the Geography of Innovation mailing list. Additionally, the details of the events were shared through the RSA's communications channels.

During the event, we formally acknowledged the RSA in both the opening and closing remarks. We also prepared a dedicated slide featuring the RSA logo, which was displayed as a screensaver between sessions throughout the entire day of presentations.

About the Authors of this Report



Dr. Benjamin Cornejo-Costas is a postdoctoral researcher at Utrecht University, working on the Skill Resilience project, which focuses on skills in the context of the green and digital transitions. His research interests include green innovations, migration and innovation, and the role of institutions in regional diversification.



Dr. Martina Pardy, Postdoctoral Researcher at the University of Liverpool and the London School of Economics and Political Science. Her research focuses on local economic development, spatial inequalities, technological change, climate change, and globalisation.



Denise Frötscher works at the Institute for Economic Research (IRE/WIFO) of the Chamber of Commerce of Bolzano/Bozen, where she is responsible for economic communication. Her work focuses on communicating economic research and regional analysis to a broad range of stakeholders, supporting evidence-based discussions on economic development and regional policy in South Tyrol.