



Technopolis - Tatjana Guznajeva, Juanita Garcia Gutierrez, Anastasiia Konstantynova, Olaf Kooijmans

Create favourable conditions for the launch and development of innovative industries/organisations, particularly in disadvantaged and peripheral areas

The creation and development of innovative industries/organisations are conditioned by the environment for doing business and innovation. The conducive factors include supportive and clear regulations, availability of skilled labour and of organisations that stimulate science, technology and innovation, access to (consumer) markets and to finance, good quality of infrastructure etc. Thus, greater economic activity, innovative and inclusive job creation are predominantly concentrated in capital regions/areas. This implies that policymakers should promote innovative and inclusive job creation and ensure supportive ecosystem, particularly in the peripheral and other disadvantaged areas. The latter is particularly important, since the EU recognizes that rural areas represent the fabric of the European society¹. Both local and regional public authorities recognize that, for example, rural areas must be built on the fact that they all display large differences in the characteristics – topography, location, degrees of remoteness, as well as, demographic, economic and environmental differences². These all should be considered by policymakers in developing the strategies for rural areas.

Set business-friendly, stable legal and regulatory frameworks

Setting business-friendly, stable legal and regulatory frameworks is critical for all organisations, especially those engaged in innovation and risky ventures. These frameworks should consider the amount of time that it takes to start a business, deal with construction permits, get electricity, register a property, get a credit, as well as, procedures that protect minority investors, paying taxes, trading across border and enforcing contracts³. Provision of stable frameworks assures organisations of clarity, transparency and predictability of the policy/political environment in which they operate. Hence, it encourages investors, innovators and entrepreneurs to make long-term decisions, to access and to commit

¹ EPRS. (2021). EU long-term vision for rural areas . Europarl. Retrieved December 20, 2022, from <u>https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690699/EPRS_BRI(2021)690699_EN.pdf</u>

² EPRS. (2021). EU long-term vision for rural areas . Europarl. Retrieved December 20, 2022, from https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690699/EPRS_BRI(2021)690699_EN.pdf

³ Doing Business 2020. (2020). Chapter 6 ease of doing business score and ease of doing business ranking. Retrieved December 20, 2022, from https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402_Ch06.pdf





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resources for realisation of more risky/innovative ideas⁴. To increase attractiveness of the peripheral/disadvantages areas, policymakers can introduce various preferential measures, such as the special economic zones with lower taxes or provide lower regulatory barriers than in other regions/area. Such preferences can be given to targeted industries/organisations that will support development of a desired industrial specialisation.

Foster synergies between existing industrial structures and innovative industries

There is evidence that the entry/emergence of innovative industries is linked to higher wages when they are related to the existing industrial structures. In addition, synergies between existing/old industrial structures and new innovative enterprises are producing a larger job creation effect⁵. Moreover, collaboration between different types of economic actors reinforces their financial sustainability, namely innovative industries support innovation in existing industries thereby increasing their competitiveness, while the latter ensures demand for products/services of innovative industries. Such collaboration also stimulates greater sharing of ideas and resources (e.g., infrastructure) that will increase efficiency, productivity and economic performance of all involved actors. To foster such synergies, policymakers should analyse existing industrial structures and industrial specialisation, attract or support the development of innovative industries in related sectors, and create platforms/ecosystems/networks for collaboration.

Ensure availability of high-quality hard and soft infrastructure

Hard infrastructure refers to the physical systems (e.g., roads, bridges) that support modernisation of industries, while soft infrastructure refers to human capital and institutions that support the delivery of services, such as healthcare, law enforcement, education. Investment in both hard and soft infrastructure is necessary to support the creation and development of innovative industries/organisations⁶. The disadvantaged/peripheral areas are typically characterised by a lack or low quality of both hard and soft infrastructure. This creates logistical barriers, increases costs and causes other complexities for innovation and entrepreneurship, leading to departure of talent and capital from such areas. Thus,

⁴ Trémolet, S., & Binder, D. (2009). Instability – how can regulators ensure stable (and predictable) regulatory regime under changing market and technological conditions? Regulation body of knowledge. Retrieved December 20, 2022, from <u>https://regulationbodyofknowledge.org/faq/foundations-of-regulation/instabilityhow-can-regulators-ensure-stable-and-predictable-regulatory-regime-under-changing-market-andtechnological-conditions/</u>

⁵ Boschma. (2022). Industrial dynamics and regional wage disparities. Pillars Working Paper. Retrieved 2022, from <u>https://www.h2020-pillars.eu/sites/default/files/2022-</u> 02/PILLARS_Deliverable_1_4_Industrial%20dynamics%20and%20regional%20wage%20disparities.pdf

⁶ Infrastructure investing: Why now? Brookfield. (2021, July 14). Retrieved December 21, 2022, from <u>https://www.brookfield.com/insights/infrastructure-investing-why-now</u>





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investment (public or private) in infrastructure in the peripheral areas is an essential element of success.

Adopt a multi-fund approach

Access to finance is a key challenge for innovation, as it is associated with risk. A multi-fund approach that implies a streamlined and combined access to finance from public and private sources or a combination (i.e., public-private) is considered effective in facilitating access to finance. To develop this approach, policymakers should create favourable conditions for investors and offer a variety of financial instruments to innovative industries/organisations. In disadvantages/peripheral areas, the threshold for accessing finance should be lowered to stimulate investment, while private funders that provided capital should be offered guarantees or compensatory mechanisms in case of inability to fulfil financial obligations.

Ensure effective functioning of business support organisations

Business support organizations are non-profit, public and for-profit resource organisations that serve local businesses and support their growth and success. Such organisations include clusters, ecosystems/networks, technology/innovation and business centres, industry associations, public investment and innovation agencies etc. Their services encompass matchmaking for identification of talent, partners or investors, co-working spaces and infrastructure, and a broad range of information/advisory/training support services. Overall, the business support organisations play a vital role in the economy, particularly in disadvantaged/peripheral areas. Policymakers should ensure effective functioning of these organisations by regularly checking what support is needed and by designing other complementary measures that will support innovative industries/organisations.

In combination with the above, due to vast differences and peculiarities of the disadvantaged areas, policymakers should tailor their policies/interventions based on a specific context. Beyond this, the governments should assure a bottom-up participation of local communities to be aware of their needs and to turn them into 'smart villages' – those that use advanced technologies to improve the quality of life, maintain the principles of sustainable development, protect the natural environment, and achieve the desired effects with the lowest costs incurred in the long run.

Consider the following PILLARS and external resources to create favourable conditions for the launch and development of innovative industries/organisations, particularly in disadvantaged and peripheral areas:

Title and weblink	Authors and year	Description
Successful Practices and	OECD, 2010	The findings presented in this report encapsulate insights
Policies To Promote		from various case studies spotlighting optimal methods
Regulatory Reform and		for fostering regulatory reform and entrepreneurship at
		the regional level. The study encompasses the
		involvement of three Mexican states (Baja California,





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<u>Entrepreneurship at The</u> <u>Subnational Level</u>		Jalisco, and Puebla), along with three provinces from other nations: British Columbia (Canada), Catalonia (Spain), and Piemonte (Italy).
<u>Regional Diversification</u> <u>and Inequality between</u> <u>and within Regions</u>	Ron Boschma, 2022 (PILLARS REPORT)	Understanding the connection between diversification and wage inequality in regions is a challenge. Related diversification is vital for regional economic growth, but its effects differ based on industry complexity: in more complex sectors, it heightens wage gaps between regions, while in simpler industries, it reduces inequality. Balancing smart growth with inclusivity remains a pressing policy issue in regional development, posing a challenge for policymakers aiming to foster both economic progress and fairness.
<u>The 2022 EU Industrial</u> <u>R&D Investment</u> <u>Scoreboard</u>	European Commission, 2022	The EU Industrial R&D Investment Scoreboard (the Scoreboard) offers economic and financial data derived from the latest audited accounts of the top 2500 global R&D investors and the EU's 1000 R&D investors. It serves as a resource to compare EU firms with their international counterparts, track trends over the past decade, and grasp the dynamics of industrial R&D. Embracing Open Innovation principles, the database is openly accessible, enabling stakeholders like companies, policymakers, and researchers to conduct their individual benchmarking and monitoring activities.
European Cluster Collaboration Platform	European Union, 2023	The ECCP acts as the primary online hub for European cluster stakeholders and international partners seeking collaborations. It provides modern tools and resources to cluster organizations, partnerships, and networks, aiding them in efficient networking, cross-sectoral cooperation, and staying updated on cluster development. Additionally, it supports enhancing competitiveness and knowledge in industrial ecosystems and cluster formation.
<u>The dark side of the</u> <u>geography of innovation:</u> <u>relatedness, complexity</u> <u>and regional inequality in</u> <u>Europe</u>	Flavio L. Pinheiro, Pierre-Alexandre Balland, Ron Boschma & Dominik Hartmann, 2022 (PILLARS REPORT)	As regions progress economically, they tend to diversify their activities, potentially leading to both positive development and regional inequalities. Analyzing data from industries and patents across 283 regions in 32 European countries over 15 years, this study reveals that only the most advanced regions can diversify into highly complex activities. These developed areas focus on related high-complex tasks, while less developed regions concentrate on low-complex activities, fostering spatial inequality. This poses a challenge for innovation policy, as strategies to enhance Europe's knowledge system





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		might amplify disparities by favoring already developed regions.
<u>The adjustment of labor</u> <u>markets over automation</u> <u>cycles: An analysis of</u> <u>European regions</u>	Tommaso Ciarli, Teresa Farinha, Florencia Jaccoud, Fabien Petit and Maria Savona, 2022	The study explores the lasting and immediate effects of exposure to four automation technologies—robots, communication, information, and software/databases— on labour markets across 163 NUTS-2 regions in 12 European countries from 1995 to 2017. Employing a multiple break-point algorithm, it identifies technology investment cycles impacting employment, wages, and wage shares. Long-term observations reveal that robots increased employment but decreased wages and wage shares in regions. ICT had mild positive effects on employment and wages, while software and database technologies negatively impacted employment without affecting wages. Notably, long-term effects often originated from specific investment cycles, such as the positive employment impact of robot investment during the 2006-2013 downturn.
<u>Global Gateway</u>	European Commission, 2023	The Global Gateway represents durable and reliable connections beneficial for both humanity and the environment. It intends to address critical global issues such as climate change, healthcare enhancement, and strengthening the security and competitiveness of worldwide supply chains. Essentially, this model targets investments in both physical and intangible infrastructure, focusing on sustainable areas like digital technology, climate initiatives, transportation, healthcare, education, research, and promoting an equitable environment.
Investing In Public Infrastructure In Europe: <u>A Local Economy</u> <u>Perspective</u>	CEB, 2017	The study provides insights into the CEB's extensive history of enhancing living standards in European urban and rural areas while evaluating contemporary trends and obstacles in funding local infrastructure across member states. It focuses on three parts: firstly, an introduction to public infrastructure in Europe; secondly, an analysis of current challenges and trends in financing local infrastructure; and lastly, an exploration of the CEB's past involvement and future strategies for financing such projects.
Regional diversification and intra-regional wage inequality in the Netherlands	Boschma, Ron, Nicola Cortinovis and Dongmiao Zhang, 2022 (PILLARS REPORT)	This study explores industry dynamics and wage inequality in Dutch NUTS-3 regions (2010-2019), a less- explored area in previous research. It reveals that related diversification in less complex industries reduces intra- regional wage disparities, posing a challenge for balanced regional growth. While most industry exits show no





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		significant impact on regional inequality, exits from unrelated low-complexity sectors tend to heighten intra- regional wage gaps. Overall, related diversification in simpler industries fosters inclusive growth, contrasting with exits in unrelated sectors that exacerbate wage inequality within regions.
Public-Private Partnerships for Research And Innovation: An Evaluation of the Dutch Experience	OECD, 2004	The OECD conducted an assessment of Dutch public- private partnerships in research and innovation, identifying key challenges faced by the Dutch government in science and technology policy. These include enhancing cooperation between public and private innovators, making the Netherlands an attractive destination for researchers and R&D activities, refining innovation support schemes, and improving coordination between departments. The evaluation highlights Dutch Long-Term Initiatives (LTIs) as potential models for other OECD nations, particularly in their competitive selection process and organizational structure. LTIs prioritize industry leadership while ensuring public interests like access to research findings and reinforcing fundamental research capabilities.
<u>The Future Geography Of</u> <u>Industries And</u> <u>Occupations</u>	Ron Boschma, Deyu Li, Sergio Petralia and Milene Tessarin, 2023	This report examines regional diversification in Europe over the last decade, using European Labour Force Survey data to analyze occupational specialization at the regional level. Findings indicate that NUTS 2 regions tend to diversify into new occupations related to their existing
		local labour markets, showing a path-dependent trend. Relatedness significantly influences diversification towards complex occupations, benefiting regional economies, but with varied impacts across regions. While relatedness supports occupational specialization, its significance decreases as GDP per capita rises in European regions. The report suggests policy orientations to guide occupational diversification for European regions.