

Innovation and entrepreneurship in the Łódzkie, Podlaskie and Dolnośląskie regions

WHY

This short note summarises the technical assistance offered through the World Bank, to the three Polish regions of Łódzkie, Podlaskie and Dolnośląskie, during the 2018-19 period on regional innovation and entrepreneurship (I&E) support. The activity's objective was to enhance the regions' capacity in leveraging Technology Transfer from Public Research Organisations to private enterprises to increase their competitiveness. The three regions, presently categorized as 'catching-up', have the potential to improve technology and knowledge transfer to local enterprises and entrepreneurs to be key drivers of regional competitiveness and growth. However, technology transfer and industry-academia collaboration are often lagging compared to regional leaders and industrial hubs. Following up on the WB experience in supporting the design of the Podkarpackie Centre for Innovation (PCI) in 2017-2018, it was suggested that the PCI model could be 'rolled-out' to the three regions.

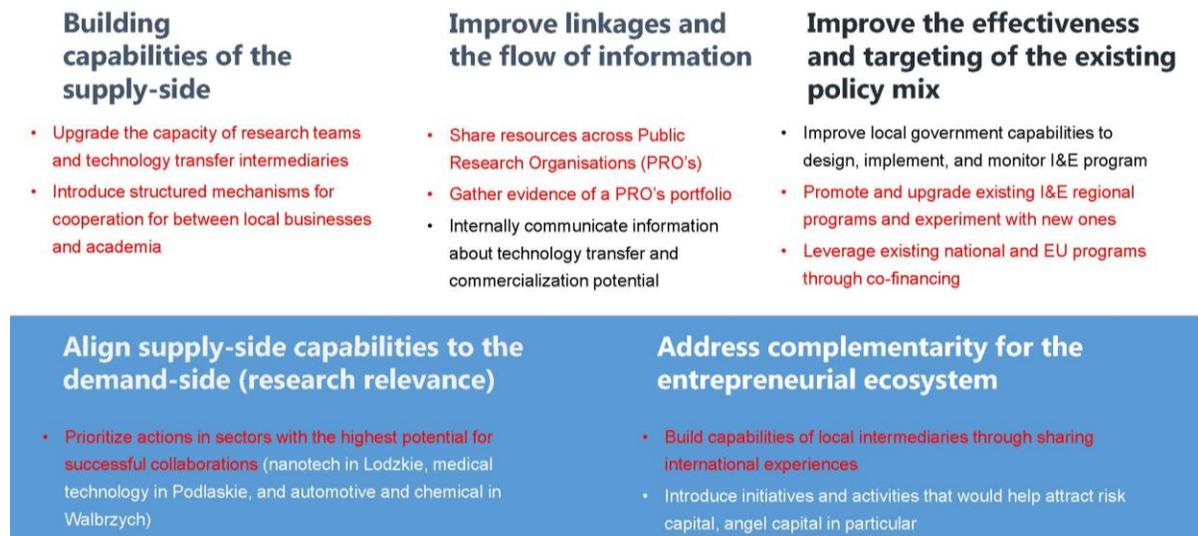
In Podlaskie and Łódzkie, the symptoms of the problem were similar to those of the Podkarpackie region. These can be summarized as: low level of R&D investments, especially by private firms, lack of university-based research projects with strong commercialization potential, low level of innovation and contract research by the region's enterprises, and low up-take of funds from Regional Operational Programs (ROP). These problems were seen to be distributed evenly across each region. In contrast, low innovation activity in the Dolnośląskie region was concentrated in one of its four sub-regions – the Wałbrzych area. This sub-region has a number of specific characteristics including low startup creation rates, lack of skilled workforce aggravated by growing out migration of young people to Wrocław, and low linkages between companies in Wałbrzych with the nearest public R&D provider – the Wrocław University of Science and Technology, located some 70 km away.

Despite the commonalities in symptoms, the underlying causes of the performance inhibiting problems in each region, appeared to be different. This was confirmed through analytical work and meetings with key regional stakeholders. These differences combined with the "yet-to-be seen" performance of the PCI led the World Bank team to ultimately propose different I&E policy intervention methods for each region. Although the resulting pilots that were proposed did not fully draw on the PCI methodology they did incorporate strong proven experience from I&E support mechanism from the U.S. and other EU member states. They also offered an opportunity to channel wider international experience of initiating a culture change towards innovation and entrepreneurship in universities, in both education and research. This is particularly valuable for Poland as it can leverage on activities initiated under the Poland 100 program.

Alongside the introduction of new supporting mechanisms, the World Bank team also proposed revisiting and improving more traditional instruments such as innovation vouchers and Proof of Concept grant schemes. The key role of the Marshall Office in improving take-up of funds to support innovation was also recognised. The World Bank team therefore focused its effort on supporting the Business Innovation Centres to better target support instrument to enterprises that needed most.

The key areas that the WB team targeted are highlighted in the figure below.

Figure 1 Emerging Practical Recommendations and Key Areas for Policy Support



Source: World Bank Analysis

HOW

The project set out to establish an analytical base to provide the foundation for policy interventions.

The analysis was based on both qualitative and quantitative data and included consultations with different individuals and groups, to validate findings, test assumptions, and build regional support.

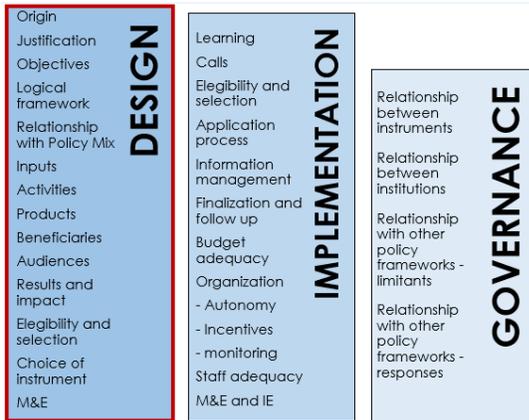
The World Bank team focused on uncovering the root cause of symptoms, to expose the real problems facing technology transfer and innovation in the regions. Second, the team developed a set of options for policy intervention based on the following criteria:

- *Grounded in the analytical findings* that emerged from the data and field work, and designed to address identified gaps and potentials within the supply and demand framework;
- *Designed for piloting*— experimental in nature and intended for short- term implementation with the intention that if a pilot fails to achieve its objectives, it can be adjusted, refocused, or terminated;
- *Low cost* - so that it does not require substantial budget commitment, but leverages resources from regional and national, private and public, stakeholders;
- *Easy to implement*—by ensuring that they do not require complicated administrative procedures, or institutional and governance structures; rather, they are expected to leverage the existing structures and institutions.

The pilots' design and development process built on the framework established by the functional and governance analysis component of the World Bank Public Expenditure Review for Science, Technology, and Innovation (PER STI)¹. The elements of effective policy design are listed in Figure 2 below.

¹ Correa, Paulo. 2014. Public Expenditure Reviews in Science, Technology, and Innovation: A Guidance Note. World Bank Group, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/21064>
License: CC BY 3.0 IGO.

Figure 2 Dimensions and Categories of the Policy Instrument Functionality



Source: World Bank Analysis

What

A strong analytical base for evidence-based policymaking was established. This highlighted issues for each region and enabled the World Bank to clearly identify and diagnose problems. These issues became the target for tailored interventions that leveraged present strengths and opportunities and fit to the existing or modified ROP. The team designed five pilots for the three regions as shown in the Table 1 below.

Table 1 Pilot actions

Region	Proposed Pilots
Dolnośląskie	Business-Led Challenges
Podlaskie	Partnership for University-Industry Cooperation
	Proof-of-Concept (PoC) Support Program
Łódź	Łódź Enterprise Innovation Support
	Poland I-Corps Program

Source: World Bank Analysis

Each pilot instrument was described through a concept note that aligned the new action with the existing or revised ROP, outlined a roadmap for development, secured the necessary stakeholders for implementation and proposed a budget and timeline for implementation.

Alongside the analysis and the pilot design the World Bank also designed and delivered a number of capacity building activities for the main stakeholders. These were intended to build design and implementation capacity within the regions’ stakeholders, both to implement the proposed pilots and also to engage more effectively in design of new I&E policy instruments. These included workshops to support better understanding of the state aid issues that are inherent in ancillary use of publicly funded research facilities for commercial organisations, introducing researchers to tools that are used by US counterparts under the U.S. NSF I-Corp program, to test the viability of their research projects for entry in to the commercial market and adjust their subsequent development pathways and frameworks for policy instrument design. The World Bank team also designed a study visit to the city of Prague to

introduce and connect the Dolnośląskie region counterpart to the SSP and Co@Fitt² program which connects students to business-led challenges; an example of problem-based learning through business led challenges delivered by the Technical University of Prague.

Lessons learned

A number of transferable lessons emerged from this activity related to the design of regional I&E programs and policy instruments. These lessons are based on direct observations from the project and draw on good practices in the design of innovation policy instruments. The key emerging principles for effective design of regional I&E policy instruments include:

- 1 Availability of evidence as a justification for policy intervention
- 2 Early and sustainable stakeholder engagement
- 3 Clearly identified instrument and program objectives that are measurable
- 4 Complementarity with the existing regional and national policy mix
- 5 Explicit and realistic logical framework and monitoring and evaluation (M&E) indicators
- 6 Keen consideration of the implementation capacity and costs

Each of these instruments is discussed below:

Availability of evidence as a justification for policy intervention:

Evidence-based intervention to design policy actions is critical, particularly on the regional level, where analytical and financial resources are usually scarce. It is critical to identify the root cause of an identified problem, as otherwise there may be a tendency to treat symptoms rather than root causes.

Showcasing examples from other countries that have clear commonalities with the pilot under development has strong benefits for all stakeholders. This approach enables stakeholders to talk to counterparts at a different phase in the implementation trajectory, and to consider options that have not previously occurred to them, or that have been seen as being unfeasible or high risk. Innovation policy design is by nature imitative. Policymakers tend to imitate initiatives and programs implemented elsewhere, sometimes with little consideration of their impact. This is particularly important when considering ongoing pilots for replication, as they will not have had the time to mature and demonstrate success and impact. However, it is important to experiment, take risks, and not to simply copy solutions from elsewhere.

Early and sustainable stakeholder engagement

Early, regular and meaningful stakeholder engagement with key stakeholders and actors from the public sector, academia, private sector, and intermediaries is critical for I&E policy design process.

Embedding emerging bottom-up ideas and nascent initiatives from stakeholders into a pilot could secure increased commitment.

Clearly Identified instrument objectives that are measurable

Once the appropriate solution has been identified and agreed upon, the objectives of the intervention need to be defined in such a way that reduce ambiguity and conflict. To accomplish this, goals must be

² See <https://ssp.fit.cvut.cz/>

clearly articulated; they must be realistic; and they must be observable and measurable, as opposed to abstract and generic. The instruments' objectives need to be juxtaposed to other existing instruments to ensure complementarity and avoid overlap.

Complementarity with the existing regional and national policy mix

It is important that there is a clear complementarity between regional pilots and the existing or planned national instruments/programs.

Keen consideration of the existing regional initiatives and instruments could yield better outcomes than launching new ones.

An explicit and realistic logical framework and M&E indicators

The proposed policy instrument should make clear how it will bring about sustainable change. Pilot instruments should include a clear M&E framework with appropriate key performance indicators.

Keen consideration of the implementation capacity and costs

The capacity to implement actions through competent and connected human resources needs to be assured alongside the pilot design.

Identification of the source and size of the budget for pilots should happen very early in the process.

When additional resources can be identified, there is a tendency to design actions to a scale and size that will fully adsorb this new funding opportunity. However, substantial resources for large scale new initiatives are not always the optimum solution to an identified problem.

