
Institutional Support for Innovation: National versus Local Level: Insights from Poland

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Abstract:

Purpose: The aim of this paper is to examine whether and how the development of business environment institutions at national levels reflected supporting innovation in local SMEs.

Design/Methodology/Approach: The article presents the results of a survey carried out in 2021 on a sample of 26 small and medium-sized enterprises representing traditional industries located in south-eastern Wielkopolska. The scope of this research concerned various forms of support for small and medium-sized enterprises proposed by business environment institutions and concerned the period 2019-2021.

Findings: The results show a decrease in the intensity of cooperation between SMEs and business environment institutions (compared to previous years). Such cooperation usually concerned various forms of business development rather than fostering innovation. However, due to the limited size of the research sample the obtained results should not be fully generalized.

Practical implications: The study can be used as a starting point for further discussion on supporting innovation in small and medium-sized enterprises. The obtained results may be useful for business practitioners, managers of innovation and entrepreneurship centres, as well as policy makers responsible for innovation policies.

Originality/value: The article sheds some light on the changing role of business environment institutions in Poland and provides new insights into supporting innovation and entrepreneurship during the COVID-19 pandemic period.

Keywords: Business environment institutions, entrepreneurship, innovation, small and medium-sized enterprises.

JEL codes: L26, L53, O31, R11.

Paper type: Research article.

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1. Introduction

Innovations constitute a key factor of enterprises competitiveness nowadays. A lot of authors (Morales, 2021; Leppäaho and Ritala, 2022) also perceive innovations as the best reply to crises caused by external shocks, such as COVID-19 pandemics. Moreover, pandemics also caused a number of significant changes in enterprises' innovative activities models.

The following factors become more and more important: cooperation with external partners, the ability to take fast and decisive actions (also under conditions of limited resources), or rational management of intellectual- property rights (Chesbrough, 2020; Markovic *et al.*, 2021).

Despite of its important role, innovative activity of enterprises encounters a lot of obstacles. The most vulnerable entities are small and medium – sized enterprises, especially from developing countries, which undergo transformation. In their case, the problems may be connected with not only limited access to resources, but also unfavourable economic conditions and unstable law-political environment (Markovic *et al.*, 2021). Due to this fact, innovations are supported through many instruments of innovative policy (Weresa, 2014).

One of the instruments supporting innovative entrepreneurship may be creating professional institutional background in a form of innovativeness and entrepreneurship centres, more often referred to as business environment institutions. Their main aim is to help entrepreneurs in development process and respond to the challenges created by enterprises environment (Domańska, 2019).

These entities, however, constitute a very inhomogeneous group, within which the following three groups are differentiated: entrepreneurship centres (e.g., training and advisory centres, business incubators), innovation centres (e.g., technological parks, the price of technology transfer), and non-banking financial institutions (Lisowska, 2016).

These entities may offer financial and non-financial support instruments depending on the profile of business (Daniluk, 2016), and their offer may be directed to already existing enterprises or people only planning starting their own business (Rogalska *et al.*, 2022; Leoński, 2022). A lot of institutions in business environment is created in cooperation with universities, which realize activities aimed at transfer and commercialization of technology within so called third mission (Nowakowska, 2021).

The aim of this article is determining if and in what way the development of business environment institutions in the scale of the whole country transfers to support of innovations in local small and medium-sized business. In pursuit of the objectives, the following research questions have been created:

- What kinds of changes appeared within the range of business environment institutions' services development in the analyzed period on a national level?
- What were the changes in the intensity of cooperation with small and medium-sized enterprises with small and medium-sized businesses in a researched region?
- What were the business environment institutions' services which were most often used by small and medium-sized enterprises in a researched region?
- What are the problematic issues connected with cooperation between small and medium-sized enterprises and supporting institutions on a local level?

Results of empirical research performed in the end of 2016 in 26 small and medium enterprises representing traditional industries from South-Eastern Wielkopolska region have been used in this article. This research concerned different forms of support proposed to small and medium-sized businesses by business environment institutions and were related to years 2019 - 2021 (including the pandemic period). This article also uses statistical data concerning business environment institutions' functioning in Poland, published by Polish Business and Innovation Centers Association.

2. Business Environment Institutions in Poland

First initiatives connected with creating innovativeness and entrepreneurship centers were undertaken by local enthusiasts in the early 1990s. Conceptions based on western solutions, implemented with the support of foreign consultants and experts and financed from different aid funds e.g. British Fund Know-How, American Agency of International Development or Local Initiatives Program PHARE were predominant in those times.

The increase of interest in innovations and entrepreneurship centers took place in years 1994-1997 and was a result of initiation of small business development project or of creation of National System of Services. Mainly training and advisory centers, business incubators and loan and guarantee funds were created in those times. Basic services supporting self-employment and the unemployed in form of trainings and advisory were developed. Activities connected with innovativeness and technological potential were marginal (Matusiak, 2006).

Since 2004, development of business environment institutions has resulted from the state's innovation policy and has been strictly related to realized EU projects. In the time perspective 2004-2006, the priority was the support of launch and development of companies. This task was realized through Increase of Enterprises Competitiveness Sector Operational Program and Integrated Program of Regional Development.

At those times, half of active entities were training and advisory centers (the easiest to start due to low financial expenditures). It was, however, accompanied with gradual increase of significance of centers supporting innovativeness such as

technological parks. During this period, i.a. science and technology parks in Gdańsk, Toruń and Płock, as well as the first fully private Nickel Technology Park Poznań. In the subsequent financial perspective (2007-2013) the emphasis was put on the increase of innovativeness of Polish enterprises, and the main instrument of this plan realization was Innovative Economy Operational Program.

One of the priorities was supporting enterprises representing high innovation potentials. The development of innovation centers, such as technological parks, technology transfer centers, pre-incubators and academic incubators of innovativeness, technological clusters or platforms was also supported at those times. Quantitative development of business environment institutions is presented in table 1. Presented data is based on Polish Business and Innovation Centers Association’s research report (Mażewska *et al.*, 2021).

Table 1. *Changes in the number of business environment institutions in Poland*

| Description | Year | | | | | | | |
|---------------------------------|-----------|------------|------------|------------|------------|------------|------------|------------|
| | 1995 | 2000 | 2004 | 2007 | 2012 | 2014 | 2017 | 2021 |
| Technology parks | 1 | 1 | 12 | 15 | 40 | 42 | 37 | 34 |
| Technology incubators | 4 | 44 | 53 | 16 | 14 | 24 | 23 | 16 |
| Business incubators | 29 | . | . | 47 | 58 | 46 | 37 | 41 |
| Academic business incubators | . | . | . | 49 | 73 | 24 | 20 | 16 |
| Technology transfer centers | 1 | 20 | 39 | . | 69 | 42 | 55 | 52 |
| Innovation centers | . | . | . | . | . | 47 | 39 | 25 |
| Seed capital funds | . | . | . | . | 68 | 103 | 58 | |
| Regional loan funds | . | 33 | 76 | 84 | 86 | 81 | 58 | 64 |
| Credit guarantee funds | . | 24 | 57 | 64 | 55 | 58 | 52 | 31 |
| Training and consulting centers | . | 142 | 280 | 326 | 319 | 207 | 151 | 103 |
| Other institutions | . | . | . | . | 24 | . | . | . |
| TOTAL | 35 | 266 | 517 | 652 | 821 | 681 | 560 | 382 |

Note: . - no data available

Source: Mażewska *et al.*, 2021.

The increase of number of business environment institutions took place till 2012, and in the subsequent years decreased in a sudden way. Such state of matters is observable till current times. This decrease mainly concerned training and advisory centers. Probably part of these centers could not adjust to change of financing priorities directed towards innovative activity support.

As a consequence, they did not receive financial resources for further development. Financial perspective 2014-2020, after all brought the continuation of a trend started in 2007-2013, and the majority of finances were directed to support research and development activity. The main instrument of this aim realization was Smart Development Operational Program. Business environment institutions could receive

financial support mainly within Measure 2.3 – Pro-innovation services for enterprises (Kordela, 2016).

A significant decrease of number of business environment institutions in 2021 referred mainly to training and advisory centers. It was accompanied by the decrease of basic training services in the scope of entrepreneurship and starting business (in different range) in all innovation and entrepreneurship centers.

One of the reasons can be sought in limited access to financial resources, related with the end of seven years long period of EU financial perspective. The other reason was coronavirus pandemics which led to income decrease from these centers activity and the increase of costs related with epidemic prevention measures.

However, in this period, the range of realized advisory services increased. These were such services as: developing a business model, technological advisory or intellectual property protection. These services are most often realized by technological parks and technology transfer changes. However, it should be noticed that the majority of supporting centers which advised on technology commercialization area is located in cities of at least 3000 thousand citizens (Mażewska *et al.*, 2021).

3. Materials and Methods

Empirical data collected in the course of the research performed on a research sample including 26 small and medium-sized enterprises from South-East Wielkopolska region. The research was conducted by students of Calisia University, who were appropriately instructed and equipped in a survey questionnaire. The questions included in the questionnaire concerned different aspects of innovative activity of the researched enterprises, also cooperation with business environment institutions and used forms of support.

The research time range referred to years 2019-2021, so mainly the period of COVID-19 pandemics. Unfortunately, the COVID-19 pandemics was the biggest research obstacle (the majority of interviews were realized in the end of 2021). A lot of entrepreneurs refused to participate in this research due to concerns connected with their health or due to lack of time and the workload in the company, related to pandemics.

These circumstances influenced greatly the reduction of the number of companies included in the research. The characteristics of the researched enterprises was as follows: the majority of them conducted business activity in a form of limited liability company, general partnership or companies conducted by natural persons. Ownership structure of the researched companies did not differ significantly from the structure of small and medium-sized enterprises in Poland. Medium-sized enterprises constituted the biggest part (46%) of the research sample, than there were

small enterprises (38%) and micro enterprises (15%). The majority of enterprises (80%) represented traditional industries, such as: food industry, packages production, plastic processing, furniture or boiler industries. Some enterprises was engaged in more technologically advanced activity, such as, among others, electric wires production or switchgear and control gear equipment.

While analysing the age structure of enterprises' owners, the domination of middle-aged people (40-60) – 53% is observable. Older people (above 60 years old) constitute 30%. Half of the entrepreneurs had higher education and secondary education – 42%, and only 8% of entrepreneurs had basic vocational education. The researched companies were managed by well educated people, who had had large experience in business activity.

The majority of enterprises 77% declared to be family businesses, functioning on the market for more than 15 years. Taking into consideration innovative activity, 80% of the researched companies implemented at least one innovation in the analyzed period of time. However, it is worth noticing that these were mainly new products in the scale of the whole company. Thus, these entities characterized with relatively low innovative activity resulting from specific nature of conducted activity.

Only two companies implemented products new in the national or international scale in the researched period of time. Interestingly enough, nine out of all researched companies declared conducting research and development activity, and four companies even possessed their own, separate research and development department. The following question arises due to above presented business environment institutions development on a national level: Did small and medium-sized enterprises on a local level used the support of business environment institutions in years 2019-2021 and if they did, what was the range of this support?

Additionally, in order to show changes which have taken place for the last few years, obtained results have been compared with results of similar research concerning years 2011-2013 on a research sample of 54 small and medium-sized enterprises from South-East Wielkopolska (Mizgajska, 2015).

4. Results

The results of performed research are presented in Tables 1 and 2.

Table 2. *Cooperation between enterprises and business environment institutions in 2011-2013 and 2019-2021(% of indications)*

| Type of institution | 2011-2013 (n=54) | 2019-2021 (n=26) |
|------------------------------|---------------------|---------------------|
| Technology transfer centers | 1.8 | - |
| Science and technology parks | 17.0 | 11.5 |

| | | |
|---------------------------------|------|------|
| Business incubators | 20.3 | 19.2 |
| Chambers of commerce | 33.3 | 19.2 |
| Industry associations | 38.8 | 30.0 |
| Loan and guarantee funds | 35.2 | 15.3 |
| Training and consulting centers | 33.0 | 38.4 |
| No cooperation | 18.5 | 15.3 |

Source: Own study and (Mizgajska, 2015).

In years 2019-2021 the share of enterprises declaring cooperation with almost all types of business environment institutions decreased. Training and advisory centres were the only exception. None of the researched enterprises declared cooperation with technology transfer centres, and only three enterprises cooperated with technological parks.

These were medium-sized enterprises which led own research and development works. They also cooperated with various science centres in scope of mutual research, licences, expertises and attests. Contacts of these enterprises with technological parks concerned legal and tax advisory, technical advisory or raise EU funds.

However, the researched enterprises did not take advantage of services related to commercialization and technology transfer or advisory connected with intellectual property protection, or such support forms which are directly connected with innovations implementation.

Five enterprises took advantage of business incubator offer, mainly in the scope of raising EU funds and legal and tax advisory. A bit larger group of enterprises cooperated with Chambers of Commerce and Industry and industry associations.

These are institutions which have associated entrepreneurs for years (mainly craftsmen), offering them legal advisory, basic training concerning enterprise management or trade training. The largest number of companies cooperated with training and advisory centres, taking advantage of legal and tax advisory, support connected with raising EU funds or participating in trainings and seminars within business management. Therefore, the above-mentioned forms of support were not directly related to innovation.

Contacts with loan and guarantee institutions undergone drastic decrease in the analyzed period of time. Uncertainty connected with COVID-19 pandemics and significant decrease of financial condition in many enterprises caused a drop of interest in taking new loans and advances. At this point, it is worth noticing that pandemics influenced the researched enterprises in different degree. Food industry and packages production companies were not negatively influenced by pandemics.

On the contrary, due to an increased necessity, production in these companies increased. However, the remaining enterprises experienced problems connected with orders and incomes decline, the increase of raw materials prices, lack of workers or disturbances in logistics chains. The part of researched entities received support within government anti-crisis shield (six companies) and temporary exemptions from paying social security contributions (four companies)

Table 3. *Services provided by business environment institutions to the surveyed enterprises in 2011-2013 and 2019-2021(% of indications)*

| Description | 2011-2013 (n=54) | 2019-2021 (n=26) |
|-----------------------------------|---------------------|---------------------|
| Legal and tax advice | 59.6 | 53.8 |
| Trainings and seminars | 53.7 | 42.3 |
| Technical consulting | 44.4 | 38.4 |
| Assistance in fundraising | 33.3 | 7.7 |
| Credit guarantees | 14.8 | 11.5 |
| Business consulting | 20.4 | 19.2 |
| Providing technical information | 22.2 | 3.8 |
| Assistance with business contacts | 18.5 | 7.7 |
| Providing business information | 16.7 | 3.8 |
| No services | - | 15.3 |

Source: *Own study and (Mizgajska, 2015).*

Presented results indicate that, regardless of the kind of business environment institutions, the researched enterprises took advantage only from the basic forms of advisory and trainings, which are the cheapest form of supporting entrepreneurship.

5. Discussion

Business environment institutions' activity in Poland is financed from EU funds. Declared directions of supporting innovativeness on a national level, included in programming documents related to financial perspective 2014-2020 are not reflected in innovativeness support on a local level.

One of the reasons of such state of matters may be weakness of small and medium-sized enterprises sector, manifesting itself in a low number of enterprises interested in innovations implementation, at the same time being potential recipients of support instruments. This problem affects not only Poland. It is also noticed by foreign authors (Deschryvere *et al.*, 2020). It should be also noted that some of business environment institutions concentrate on performing highly specialized services addressed to enterprises which already are innovative (Lewnadowska and Stopa, 2018).

The second reason is uneven location of innovation centres in Poland. They are mainly situated around the biggest city agglomerations (Ładysz, 2020). The

researched enterprises are located in South-East Wielkopolska, where Kalisz is one of main urban centres. Except for business incubators (in Kalisz and Turek), there are also clusters including Food Cluster of Southern Wielkopolska.

Interestingly enough, none of the researched companies declared share in this cluster, even though some of companies represent food industry (e.g. well-known dairy company). It is worth emphasizing that the researched region has large, not fully exploited potential connected with development of Calisia University. This university may be a coordinator, responsible for supporting innovativeness.

The Research and Implementation Centre created by the Polytechnic Department and the development of Academic Business Incubator can serve this role. Currently, it has a role of pre-incubator, since due to lack of own location facilities, its activity is reduced to organizations of trainings for students and business practitioners. Increasing Calisia University awareness concerning this Centre is also one of significant challenges.

6. Conclusions

Changes in business environment institutions observable in Poland in the course of last few years, so far have not corresponded with the way small and medium-sized enterprises use their services. Research results presented in this article indicate the decrease of small and medium-sized enterprises cooperation intensity with business environment institutions. What is more, this cooperation still concerns rather simple forms of supporting entrepreneurship (e.g. trainings and advisory services), not activities focused on innovations implementation.

Maybe, this situation is typical for enterprises representing traditional industries. However, limited sizes of research sample do not allow to formulate such generalization in a thoughtless way. Enterprises taking advantage of pro-innovation business environment institutions services are certainly entities more technologically advanced than the surveyed ones, as well as located in proximity of big agglomerations.

Innovation policy challenge should, therefore, be creation of instruments promoting innovativeness among small and medium-sized enterprises, representing more traditional industries, including the ones from peripheral regions.

Universities can play a significant role in this field. Contrary to leading science – research centres in the country, they seem to possess offer better adjusted to the needs of local business. Thus, these universities should be actively engaged in creation of such elements of business institutional environment as innovation

and technology transfer centres or academic business incubators. However, in each case it should be preceded with an in-depth analysis of own science - research potentials and expectations of the closest business environment.

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