

START-UP ENTERPRISES - DETERMINANTS OF GROWTH AND SUPPORT POLICY. THE CASE OF WROCLAW

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Abstract

Start-up enterprises attract a lot of attention of scholars nowadays due to their dynamic expansion in high-tech industries, innovative potential, productivity and potential contribution to economic growth and competitiveness of national economies.

Many researchers point at the concept of start-ups, determinants of their growth, as well as, novel mechanisms of financing such business ventures. Still, however, there is a niche in the field of support policy of both public and private stakeholders on central and local level of individual economies, including agglomerations in CEE countries.

Wroclaw is one of the fastest growing business centers in CEE countries, attracting young talents, F&A, R&D and Shared Services Centers of international and global brands. It can serve as a good point of reference for studies on development of innovative enterprises including small & medium businesses. Hence, the objective of the paper is to present the determinants of growth of start-ups and support policy of local government aimed at innovative small businesses in Wroclaw. The paper will present the results of an empirical research conducted among start-ups located in Wroclaw.

Key words: start-up, innovations, SME, Wroclaw

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Introduction

Wroclaw is one of the most dynamically developing cities in Poland. The potential, good investment and economic climate means that the capital of Lower Silesia is ranked among the most attractive Polish cities for both domestic and foreign investors. According to the Association of Business Service Leaders (ABSL) Report, Wroclaw is the largest hub of R&D centers in Poland, often referred to as the “Polish Silicon Valley”.

As an innovative city Wroclaw attempts to establish a start-up ecosystem and helps local start-ups to develop. Well working ecosystem usually consists of a net of entities like companies, local authorities, investors, universities that co-operate with each other, establish

relationships (networking), share knowledge and experiences. The same situation takes place in Wrocław - the system consists not only of companies, but also of local authorities and institutions which are clearly visible in the system. Among the most involved entities are Wrocław Technology Park (WPT)¹ and Wrocław Agglomeration Development Agency (ARAW)² should be listed. The last one is the initiator and administrator of a website which collects information about all forms of support offered to start-ups in the city.

The objective of the paper is to present the determinants of growth of start-ups and support policy of the local government aimed at innovative enterprises in Wrocław. The paper employs both secondary (relevant literature review, support system review) and primary data. The primary data was collected during an empirical research conducted among start-ups located in Wrocław, using the method of in-depth interview (IDI).

1 Theoretical frameworks

There are numbers of academic and practical analyses, as well as, reports concerning start-up enterprises, their development, types and strategies. A start-up, according to Ries (2011), is a human institution designed to create new products and services under conditions of extreme uncertainty. It may be also recognized as a company that is confused about what its product is, who its customers are and how to make money. Thus, start-ups may be understood as business aimed at solving contemporary problems, satisfying current demands, however, with no guarantee of success. Čalopa *et al.*, (2014) defined start-ups as newly founded companies or entrepreneurial ventures that are in the phase of development and market research. Start-ups used to be recognized as an engine of economic growth, source of jobs, wealth in economy in general, as well as, innovation (Storey, 1994; Birch *et al.*, 1995; Kirchoff and Newbert, 2007).

Due to rising importance of innovative start-ups in the modern economy, scholars, practitioners and policymakers tend to seek for mechanisms to support their development and expansion, including internationalization. A key challenge, however, as studied by, among others, Beck and Demirgüç-Kunt (2006), Blumberg and Letterie (2008), Cosh *et al.* (2009), Freel *et al.* (2012), Carpenter and Petersen (2002), Denis (2004), Gabrielsson *et al.* (2004), appears to be a funding gap of small innovative enterprises related to, for instance, high R&D expenditures, high demand on working capital enhanced by rapid growth, important role of intangible assets with limited collateral value. Carland, Hoy and Carland (1988) and Terpstra

¹ In Polish: Wrocławski Park Technologiczny.

² In Polish: Agencja Rozwoju Aglomeracji Wrocławskiej.

and Olson (1993) pointed at scarce market knowledge and sales capabilities, or poor timing. As indicated by Čalopa *et al.* (2014), most start-ups are technology-oriented ventures located in large agglomerations, however, more and more emerge in traditional industries and business sectors nowadays.

Recent studies on innovative start-ups were made, among others, by Anokhin and Wincent (2012), who used multi-source dataset covering 35 countries over the period of six years from 1996 to 2002, Tognazzo and Mazzurana (2017) built a conceptual model to indicate the role of relationships on the example of Italian innovative start-up, Gozman *et al.* (2018) used cluster analysis to group 402 fintech start-up firms. Florida and King (2018) analyzed urban start-ups districts by mapping venture capital and start-ups activity.

To date, however, there is a niche in the studies on a support policy dedicated to start-ups both on regional and local level, thus, Wrocław may serve as an interesting field of research.

2 Wrocław support system³

According to recent data, provided by Wrocław Agglomeration Development Agency, there were 137 start-ups in Wrocław in the database provided by this institution⁴. The companies were operating as www portals, IT applications, manufacturing or service enterprises, in, among others, e-commerce, social media, finance, analytics, settlements, transport, healthcare, culture and education.

Wrocław Agglomeration Development Agency (2019) is one of the most important elements of the support system of innovative companies. It is a public non-profit company fully owned by Wrocław commune, with the initial capital of 26 million PLN. ARAW promotes the region as a business location, supports development policies of local governments and absorption of EU funds. ARAW co-operates with, among other, authorities of special economic zones, Polish Information and Foreign Investment Agency, Wrocław Technology Park, Lower Silesian Agency for Economic Co-operation and EIT + Wrocław Research Center. Among key projects conducted by ARAW there are Invest in Wrocław (promotion of the city as a location for foreign and Polish investments), Study in Wrocław (promotion of educational offers of Wrocław universities), Polish Champion (support of enterprises with Polish capital that want to invest abroad), and www.wroclaw.pl – official Wrocław website with numerous dedicated

³ Data obtained from: Startup Wrocław (2019).

⁴ Importantly, database considered here is incomplete, the specific number of start-ups operating in Wrocław is higher.

sites. An important part of the last project is a site dedicated to start-ups. According to the initiators of the website, its ultimate goal is to support innovative companies with all the relevant information about the city's offer: financing, events, working/lab spaces, reports, analysis, articles, knowledge and above mentioned start-up database, which has become an integral part of ARAW's policy of promotion and support of entrepreneurship with the mission of developing a modern region.

Wroclaw provides eighteen co-working offices (e.g. Rebel Campus, Full Service Office), fourteen incubators (e.g. Lower Silesian Park of Innovation and Science, Academic Business Incubator of the Wroclaw University of Economics) and nine virtual offices (e.g. BLW Corp, IdeaPrestige).

A key role among institutions supporting start-ups is played by Wroclaw Technology Park⁵, which hosts the Lower Silesian Incubator of Entrepreneurship and the Incubator of Entrepreneurship and Technology. Both students, as well as, graduates of Wroclaw universities are encouraged to start their own businesses at facilities of WPT, which offers highly advanced infrastructure. Start-ups are invited to regular business meetings and networking events, both office spaces and R&D infrastructure are provided under preferential terms. Moreover, WPT supports commercialization of scientific works through provision of laboratories, trainings, consulting and pro-innovative services accompanied by *de minimis* aid to start-ups (Wroclaw Technology Park, 2019).

In terms of financing, Wroclaw's ecosystem offers a platform of business angels (Angels Den), thirteen venture capital funds (e.g. Arkley Seed Fund, Leonarto), four accelerators (e.g. Climate-KIC, RST LIFT-OFF Startup Accelerator), as well as, two public funds (Polish Development Fund, National Centre for Research and Development).

Every year there are numerous events dedicated to start-ups in Wroclaw, e.g. conferences, workshops and debates on new trends in technology, innovation and business management, for instance, GeekWeekWro#5 organized by Centre of Audiovisual Technologies (2019), Top 500 meet-up PAMI organized by Wroclaw University of Technology (2019), Startup Wroclaw: Evolution-Money organized by Wroclaw Agglomeration Development Agency (2019), Additive Manufacturing Meeting 2019 organized by Wroclaw University of Technology (2019), DoIT Conference organized by Unit4 Poland (2018).

⁵ WPT was established as a common initiative of Wroclaw University of Technology, University of Life Sciences in Wroclaw, University of Wroclaw, Foundation for the Development of Wroclaw University of Technology, University of Economics, Dolmel Investment Company, Lower Silesian Chamber of Commerce, Wroclaw Voivode (representing the State Treasury), Wroclaw commune.

According to a recent report of Start-up Poland Foundation, Wroclaw was ranked 2nd, after Warsaw, in terms of start-up activity in two consecutive years: 2017 and 2018. An average size of capital attracted by start-up in Wroclaw in 2018 was 2.5 million EUR, more than in case of Warsaw or Trojmiasto, however, less than in case of Cracow. As stated in 2018 report, start-ups from Wroclaw possess an advantage in analytics and big data, with successful global frontiers like wLiveChat, which service over 25 thousand enterprises from 150 countries.

As stated in the report entitled: “Wroclaw. Innovation driven city 2018” issued by ARAW, Hays and JLL, Delloite classified 8 start-ups from Wroclaw among the fastest growing enterprises of this type in Central and Eastern Europe. Authors stressed, that there are over 1 million square meters of office spaces in Wroclaw, whereas other large investments are in progress, such as Business Garden Wroclaw, Cu Office, City Forum, Infinity and Carbon Tower. According to the survey by Hays Poland, 59 percent of employers look for IT specialists in Wroclaw, 12 percent – specialists in finance and accounting. The highest salaries nowadays are offered to the first group mentioned above – for instance, Python developer with work experience up to five years may get over 3.2 thousand EUR per month, Java developer – 4.5 thousand EUR, IT project manager with the experience of more than five years – up to 6 thousand EUR.

The proposals of a support system are the one thing but it is more important if they are in compliance with the requirements of the representatives of start-ups. The data below presents the results of the empirical research conducted among Wroclaw start-ups. The aim of the research was to evaluate the elements of ecosystem, with the special emphasis on the information provided to companies and the quality of website devoted to start-ups in Wroclaw.

3 Empirical research⁶

3.1 Methodology of research

The survey was conducted using an in-depth interview (IDI) method (B2B International, 2019), among Wroclaw start-ups at various stages of development. The group of respondents was made up of owners and managers of start-ups from the following industries: system measurements, IT services, catering, finances/investments, HR/ SMEs, educational robots, research and development, mHealth, automobile. The average age of start-ups that participated in the survey was 1.5 years. Most companies were in the broadly understood initial phase of

⁶ Due to limitations in terms of the size of the paper, authors present partial results of empirical research, omitting some aspects of the local ecosystem and barriers faced by start-ups, recognized as less important.

enterprise development. The group of respondents also included entities at the scaling stage in the early phase, as well as, just before.

3.2 Determinants and barriers to development of start-ups

In the first part of the survey the respondents were asked about the determinants and issues connected with setting up a business and about predicted barriers in the future. Among the factors significant to the respondents in the initial phase of the company there was the selection of the legal form of a business. According to the respondents, it is very important to determine which form of operation will be the best. It is crucial to acquire knowledge and support related to the choice of the legal form of business and administrative activities in this area. Another factor is building the offer in the substantive and technical context. Some of the respondents emphasized that the time, the valuation of their technologies, as well as, the process of issuing opinions on their innovativeness is a big barrier.

One of the biggest issues determining the emergence of start-ups is financing. Start-up owners often create a product or market service „by fits and starts" which extends the process of its creation, but allows, in some way, to collect additional funds to finance the first stage of such activities. One of the respondents stressed that it raises the risk of increased competition. Some of the respondents established their start-ups using only their private capital, while others were seeking for external financing at various stages of development. Some of the respondents pointed to a significant problem, which is the lack of investment awareness among investors and start-ups. According to the respondents, only some start-ups are aware that "*(...) the product will not start earning until it gets investment, and investors are not likely to invest in products that do not earn (...)*".

Respondents were asked about the potential barriers in the future that may affect the further development of the start-up. One of the main barriers is to acquire capital. According to one of the respondents the barrier in this area is the previously indicated low awareness of investors and start-ups. Another problem of a financial nature is raising capital to buy technology from the institution where it was established. This creates an obstacle for the company related in obtaining a patent for technology. One respondent identified the problem in the current legal regulations on crowdfunding and venture capital financing.

Another important barrier for start-ups in the future is the speed with which a start-up is formed and makes decisions, which is one of the most important elements of its competitive advantage. Some respondents also pointed to a challenge of building sufficiently large customer database, which is the basis for development in Poland and abroad. Another issue that might

limit the development of start-ups in the future is the lack of knowledge about foreign markets where the company would like to work.

3.3 Start-up ecosystem in Wroclaw

In the next part of the survey the respondents were asked about Wroclaw start-up support system and its quality, as well as, proposed changes (see: Tab. 1). Most of the respondents evaluated it quite positive. One of the respondents described it as a strong and strongly developed environment. According to him, it is visible in the number of companies, located in Wroclaw, with great potential of research and commercialization. Among the advantages of Wroclaw, he enumerated the research facilities and access to advisers from various fields. Another start-up representative stressed that „(...) *Wroclaw is an open environment. As human factor is an important part of it, I must say that it is easy to acquire good interpersonal relationships here. People like each other, share equipment and knowledge (...)*”.

Respondents were asked about the website devoted to them. Most of them had never used the website or had visited it just once. Those who use it, evaluate it rather positive: the website is clear, transparent and easy to navigate. The most valuable content on the website includes methods of financing start-ups, useful knowledge and the database of start-ups and „News” (however, the information is not always up-to-date).

Despite a generally positive assessment of the system, the respondents pointed out a few shortcomings. One of the biggest issues is the scope of co-operation between start-ups and B2B relations between larger and smaller companies. There is a need to strengthen and facilitate contacts and opportunities for co-operation in these groups. In the opinion of the respondents, it would be remarkable to organize more diverse meetings with start-ups and industry sector or academics, adaptation of networking paths, building a knowledge-sharing culture among the community, inclusion of Polish and foreign experts from various fields in the networking group. The respondents also pointed to the need of expanding education and raising the level of knowledge in areas such as: commercialization of the idea, development, prototyping and testing the product, management of the company, funding, marketing. One of the respondents recommended organization of a larger number of workshops, competitions, mentoring programs or programs related to acceleration, aimed at encouraging and facilitating the creation of start-ups in the local ecosystem. The city could help start-ups in obtaining certificates or individual laboratory rooms, for example through subsidized fees or rent. The participants of the survey claimed that a valuable form of help from the city would be some form assistance in

obtaining information about grants from the European Union and assistance in completing the necessary documents/applications. Many start-ups perceive tax obligations as a big issue, so respondents agreed that city could provide some kind of tax relief, especially at the beginning of their existence.

As far as, the website is concerned, few important changes were suggested. First of all, there are no links to social media (for example Facebook), which could disseminate the information of the website, the site is poorly promoted. The website should be divided into industry sections. There should be more information devoted to financing sources - the database should be enriched with information about crowdfunding platforms or funds other than local ones. Even though, the database of start-ups was considered very interesting, the respondents suggested that it should be more interactive and give the owners of start-ups possibilities to post information or contact details. An additional significant element enriching the website would be case studies pointing at experiences of already established start-ups.

The respondents stated that some shortages of local support can be minimized by: undertaking co-operation with start-ups to increase development of Wroclaw Agglomeration, organizing events promoting start-ups, grant-based financial support for start-ups at the initial stage.

Tab. 1: The current state and the proposed changes in Wroclaw start-up ecosystem

Start-up ecosystem - current state	Proposed changes
Strongly developed environment	Organization of networking meetings with start-ups/companies/academics/Polish and foreign experts
Great research and development facilities	Expansion of the education for start-ups (e.g. workshops, mentoring programs, competitions)
Strong commercialization potential	Help in obtaining certificates
Strong human factor	Subsidizing fees or renting premises; grants at the initial stage of a start-up development
Not well recognized website devoted to start-ups	Assistance in obtaining information about EU grants and assistance in completing applications
Limited scope of co-operation between start-ups and other companies/institutions	Tax reliefs
Limited support in the area of education and rising knowledge useful for start-ups	Changes in the website devoted to start-ups in Wroclaw (e.g. usage of social media)
	Co-operation with the city in increasing a development of Wroclaw Agglomeration

Source: own elaboration based on the survey results.

An interesting finding from the survey is that some of the respondents pointed that they actually don't expect any support from the city. At the same time, they claimed that if the city offered support that would meet their needs, they would be willing to use it. A good promotion of the support, easy access and simple, user-friendly procedures are very important.

Conclusion

Innovative start-ups are an integrative part of today's global, fast changing world. Many of them operate basing on their own sources, but a good support system can facilitate their operations, provide knowledge, networking or very needed financial input. Even though, Wroclaw start-up ecosystem is well evaluated by both, companies and external experts, it still needs some improvements.

Among the ideas to upgrade the system the greater promotion of it (including the website) can be proposed. There is a need to use social media, especially Facebook, to disseminate information about the offer and to build networks. The idea of start-ups should also be promoted among students, for example in the form of various competitions, mentoring, financial support or educational trainings. The local institutions could be more involved in the field of networking and match-making, as well as, increasing and facilitating B2B contacts. They should especially focus on enhancing co-operation between companies, local universities and research centers.

It seems that many of the start-ups lack the knowledge about the management, marketing, financing, internationalization or legal issues. It could be a good idea to provide trainings and workshops to companies, prepare manuals/guidebooks or provide relevant information on the website. The start-ups could be involved in the development of Wroclaw Agglomeration, for example, the city could propose competitions to solve the city's problems, co-finance ideas that relate to the improvement of the city or its external promotion.

The last proposed idea relates to funding gap – support of the city may take the form of co-financing/subsidization of costs of obtaining certificates, renting offices or laboratory spaces by start-ups.

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