

Supporting start-ups – comparison of chosen aspects between Poland and Sweden

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Abstract: According to the OECD, the city of Malmö is ranked on the fourth position globally in patent applications per 10,000 inhabitants. Presenting this ranking list, Forbes magazine described Malmö as young and diverse. The two other largest Swedish cities, Stockholm and Gothenburg, also scored high – on the 8th and 12th places, respectively. Regarding the presented facts the main aim of the article is to describe both Polish and Swedish systems of supporting new business, crucial from the innovation-creation perspective. These two countries were chosen basing on the fact, that Sweden is one of the most innovative countries globally and it's start-up supporting system could be an inspiring benchmark for Poland, which is a maternity country for the authoress. Both parts are based on the authoress' observations as well as direct talks with entrepreneurs and start-up supporting organizations. As an added value of this comparison, the concluding part of the article presents a list of best practices and suggestions for Polish start-ups.

Keywords: start-up, innovations, entrepreneurship, Swedish start-up model, best practices
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1. Introduction

Start-up numbers on global markets are growing so fast nowadays as to prompt *The Economist* magazine to compare the process to the Cambrian explosion in the Earth's natural history (Tech start-ups Report 2014). This robust expansion of technology firms has reached virtually every corner of society. Most of them are denizens of the internet, where they can approach a multitude of potential clients rapidly and at low cost. A good idea, contacts on social websites and sufficient determination with these ingredients, the news of a new start-up can reach thousands of people in no time at all.

Important top information economy start-ups are (The Global Start-up Ecosystem Ranking 2015: 13): Kodak – Instagram (Photography), Borders Books – Amazon (Books), Tower Records – Apple, Spotify (Music), Hotel chains – Airbnb (Travel), Taxi – Uber/Lyft (Transport), Recruitment / CV – LinkedIn (HR), Newspapers – Social media (Consumption of information), Retailing – eCommerce (Shopping). Among technology start-ups, the most important players over the past two decades have been Facebook, Google and Amazon. They are global economy leaders today, but it can be safely assumed that by 2025 the top league on the dynamically changing start-ups market will comprise companies no-one has heard of yet – companies not even in existence today. Their location will most likely be the Silicon Valley, but it can also be Singapore, Amsterdam – or Sweden, the theme of the present article.

Start-ups play important roles in national economies, by attracting investment, supporting innovation and also providing jobs. Young firms are also known to be the “engines of growth” in the sense that they account for a disproportionately large chunk of aggregate job creation (Haltiwanger et al. 2013: 347-361) and that a fast pace of entry and exit is associated with productivity-enhancing creative destruction (Foster et al. 2006: 748-58). According to the Laderman and Leduc (2014: 1) small businesses with few employees tend to grow faster than large businesses (c.f. also Birch 1987; Neumark et al. 2011: 16-29). That is why start-ups need to be one of the key elements of the whole entrepreneurial ecosystem.

While distinguishing features of entrepreneurial ecosystems, we could point following: a core of large established businesses, including some that have been entrepreneur-led (entrepreneurial blockbusters), entrepreneurial recycling – whereby successful cashed out entrepreneurs reinvest their money, time and expertise in supporting new entrepreneurial activity as well as an information - rich environment in which this information is both accessible and shared. A key player in this context is the deal-maker who is involved in a fiduciary capacity in several entrepreneurial ventures. The important aspects of an entrepreneurial ecosystem include its culture, growth capital, the presence of big companies, universities and provides of services and, what is crucial, the availability of start-ups (Mason, Brown 2013).

There are several elements of the start-up ecosystem: inventions, ideas and researches, entrepreneurs, start-ups at diversified stages, start-up team members, start-up mentors, start-up advisors, Angel investors, other entrepreneurial minded people, third people from other organizations with start-up activities.

The key elements of a start-up ecosystem are people, startups in their diversified stages and different types of organizations in a location (physical and/or virtual). Those elements interact as a system in order to create new startup companies (www.startupcommons.org/what-is-startup-ecosystem.html). These organizations can be further divided into categories: universities, research organizations, funding organizations, support organizations (such as co-working spaces, accelerators, incubators etc.), service provider organizations (e.g. financial services, legal etc.) and big companies. Different organizations typically focus on specific parts of the ecosystem function and/or startups at their specific development stage(s).

The start-up ecosystem, more (Sweden) or less supportive (Poland), is the issue, to which the authoress of this article pays a particular attention. The reason to choose Sweden is that this country is a mature ecosystem, with worldly recognized hubs like Stockholm, Malmö and Gothenburg. Having produced six unicorns to date, Stockholm is the second prolific tech hub globally, right after Silicon Valley. Those of the entrepreneurs, who are succeed, re-invest their time and money into the many start-ups with high potential to grow. Entrepreneurs share their knowledge and experience through various initiatives like recurrent meetings or open sessions.

The great advantage of the Swedish ecosystem is that it is easy to start your own business with an open access to the most forms of the capital from the government funds (for 34.9% start-ups the government is the main source of financing), through VC financing or Angels' support. Moreover, the country is filled with early adopters and it has the fourth highest internet rate in the world – 94% users. There are a lot of affordable programs tailored to start-up founders' needs. A flat structure of the organizations encourages creativity and innovations in the workplace (Kollman et al. 2015: 11).

The review of already existing literature and reports brings to the conclusion that Poland has a great potential to develop its start-up ecosystem, however there are still some obstacles to overcome. The compilation of two start-up ecosystems in Sweden and Poland, more- and less mature ones, where some of the Swedish solutions could be perceived as benchmarks and implement into Polish system, is an added value of this paper.

2. Start-up as an idea

In this article, the notion of a start-up will be understood as a project where the business model has information processing and related services and technologies as its key component. This is in line with both academic and political understanding of the “new economy”, which has also been referred to as “e-economy” and “e-business” (Skala et al. 2015: 10). Similar definition was provided by start-up pioneer Eric Ries (2012). He defines a start-up as an organization dedicated to creating something new under conditions of extreme uncertainty (Ries 2012). As such, it may be launched and run by either a single individual or a hierarchical group, and – unlike a typical economic entity – it is an innovation-driven venture, with no counterpart on the market. Consequently, its value proposition must resonate with the consumer and set the start-up apart from incumbent competitors.

The rise of the start-ups can be attributed to a number of factors. One is the steep decrease – to around a tenth of previous levels – in product development costs over the past decade (The Global Start-up Ecosystem Ranking 2015: 14), benefiting from large-scale technological resources and the relatively easy integration via application programming interfaces (APIs). And the previously high server costs can now be reduced under instalment plans. Next comes a major broadening of venture capital (VC) investments, the issue described in the majority of empirical work dedicated particularly to financing innovative start-ups. Hall and Lerner (2010: 609-639), Da Rin, Hellmann and Puri (2013) and Cumming and Johan (2009) provide comprehensive papers on this subject (Kerr, Nanda 2014: 13).

When the company is able to lower the starting capital threshold, new seed-funding options emerged, such as angel investing, business incubation, or mini-VC. With lower per-project investments, a VC fund can provide funding for a greater number of start-ups which, at their initial phases, are happy with even these smaller amounts.

Furthermore, the start-up community has developed its own management methodology. Forty years into the modern start-up era, S. Blank (2013) and E. Ries (2012) laid the foundations for the Lean Start-up movement. The Lean Start-up philosophy is based on flexibility. When developing the business model for a new firm, one must never forget about continuous adjustment to market realities and requirements, and must be constantly searching for the optimal point between planning and flexible reaction.

The Lean Start-up business models is based on canvas (Blank 2013: 4). They involve good planning, smooth deployment and the testing and modification of initial hypotheses. The starting point is to identify the problem which will be solved by the product one's firm plans to launch in the market. Additionally, a number of questions, typical for the innovation project, have to be answered, such as these: Are customers indeed looking for a solution to this problem? If so, why? How can the problem be solved? How much will people be prepared to pay for it?

Only when replies are provided to these questions can the target group of company clients be defined. Learning their habits, motivations and requirements will be instrumental in the optimal adjustment of the product and, later, its validation. The product's value-added – that which brings positive change to customers' lives – should be communicated to them.

The next stage includes deploying, testing and modifying the product in accordance with customers' needs and expectations. To achieve this, the start-up project must feature flexibility, a strong market-monitoring capacity and readiness to embrace change. Similar to another business projects, a key to keeping the project operational are continuous deployment, course correction and validated learning.

3. Polish start-up policy

With the total area of 312,679 square km and population over 38.5 million people, Poland is considered as the 9th largest in Europe and the 8th most populous country in Europe and the 6th most populous member of the European Union (Eurostat 2014). The country is now considered one of the most dynamic economies of the EU. However, its position in innovation rankings does not reflect its recent economic success. According to the Global Competitiveness Report (2015) Poland is located on the far 64th place among 140 countries. Despite the fact that government has sustained commitments to invest in public sector research and in higher education, there are still some issues to address to create an ecosystem that would further support innovation and start-up creation (Tataj 2014).

The first research into Polish-registered digital start-ups – conducted in 2015 and crowned with the report *Polskie Start-upy. Raport 2015* – covered 423 entities, representing 17% of the entire digital start-up population of some 2,400. Most of them were found to be based in the cities

of Warsaw (28%), Kraków (16%) and Poznań (13%), followed by Gdańsk/ Gdynia/ Sopot conurbation and Wrocław (7% each). While the study was confined to analysing the technology sector, the identified problems affecting would-be entrepreneurs are similar in other industries as well. The barrier indicated most frequently is funding, and this despite the many potential sources of finance, such as bank loans, venture capital, mini-VC, business incubators and angel investors.

In seeking a bank loan, start-ups face the biggest problem when required to provide their credit history, which obviously reflects the short period they have been present on the market. In this context, mention should be made of JEREMIE (2007), Joint European Resources for Micro-to-Medium Enterprises, an initiative launched in 2007 by the European Commission and the European Investment Bank to provide revolving loans, credit guarantees and other endorsements. JEREMIE seeks to facilitate access to capital for micro-to-medium enterprises, by offering them financial engineering instruments adjusted to their requirements. Polish start-ups may also turn to the Start-up Hub Poland (SHP) foundation, established in 2014 to facilitate technological development in Central and Eastern Europe. Towards the end of 2014, SHP entered into an agreement with the National Centre for Research and Development (NCBiR), providing for collaboration in implementing a 5-year Bridge Alfa project, which targets foreign scientists and engineers from the region and homeward-bound Polish expats, intending to commercialise their research in Poland. The StartVenture@Poland fund, set up towards the end of December 2015, has 12.5 million to invest under this programme.

Financing instruments provided under the Operational Programme Intelligent Development – Starter and BizNest (www.biznes.gov.pl) – are available to entities which either have no market operations at all or have been present in any market for less than 7 years from their first commercialisation.

Yet another source of capital for start-ups is the Operational Programme Eastern Poland, targeting potential entrepreneurs, under 35 years of age, in these voivodships: Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie and Warmińsko–Mazurskie. Details are available at technology parks and incubators implementing the programme *Start-up platforms for fresh ideas* (www.platformystartowe.gov.pl/). Participants are offered access to office facilities, along with mentoring and coaching services.

In this context, the findings of the research can be seen as cause for concern: as many as two-thirds of questioned start-up owners named their own capital as the main source of financing.

Only 85 respondents (20%) indicated angel investing, and a similar proportion pointed to venture capital. European Union subsidies were cited by 25% of those questioned.

Why is it that only a few companies make use of venture capital, admittedly one of the best ways to finance innovation? As it is, the Polish capital market is very shallow, and there are only few investors ready to support start-ups. Among the indispensable success factors – capital, a professional network to allocate capital, and innovative technology companies – Poland lacks in particular the second one, which around the world is supplied by venture capital funds. They support high-risk innovations, investing in the most promising inventors and entrepreneurs.

According to the former European commissioner for taxation and customs union, audit and anti-fraud, Algirdas Šemeta, venture capital is the driving force for many small-to-medium enterprises. And the EU's 2020 Agenda says that measures to improve these enterprises' operating conditions are of paramount importance, especially where government seeks to achieve a strong economy and sustainable growth. Consequently, there is the need for a smoothly working VC market in Europe, which requires doing away with all existing tax-related roadblocks (Brussels 2010).

Similar arguments were put forward by Mieczysław Bąk, head of the Institute for Research of Democracy and Private Enterprise, in a speech at the 5th Forum of Young Entrepreneurs "Young and Innovative", organised in May 2015 by his institute in collaboration with the National Chamber of Commerce (KIR). He stressed the need for removing all barriers to entrepreneurship, and especially the most acute ones – financial and administrative (www.naukawpolsce.pap.pl). His position was backed by an expert from the Polish Agency for Enterprise Development (PARP), Bożena Lublińska-Kasprzak, in whose opinion public instruments to support start-ups in Poland are insufficient.

The fact that start-ups have problems with staying on the market are confirmed by findings of the *Polskie Start-upy* report. The most customers of start-ups are among business firms, and these can be micro-, small, medium-sized and large companies, mostly in the sectors of software, e-commerce, mobile services and internet services. One-third of the respondents see their revenues stabilised after several months in the market but, on the other hand, having no regular earnings is also declared by one in third. A half of the respondents expect at least a fivefold increase over the next two years. Members of this group of "optimists" have no major problems

with attracting external financing, and are more likely to describe their products as novel (*Polskie Start-upy* report 2015).

Polish start-ups do not seem to be growing at a spectacular pace, in the light of the report's findings. Only a quarter declare annual growth rates of more than 50%. These usually have big companies as their clients, and compared to the remaining slower-growth segment of the respondents they are much more likely to operate in the mobile sector and have more employees. It turned out that 54% of the respondents declare exporting their products to global markets, which no doubts should be seen as a factor accelerating their growth, what is not bad, but still hardly an impressive ratio, given the need to build a long-term competitive advantage. Interestingly, more than 50% opted to call their product an innovation on a global scale (*Polskie Start-upy* report 2015).

The next hurdle for start-ups, after capital, is the availability of qualified staff – and it is particularly acute in the digital sector, affected as it is by a shortage of programmers, who often prefer working for companies with a stable position and assured revenue flows. Respondents often pointed to administrative procedures as a barrier to the emergence of new start-ups and growth of those already in existence (*Polskie Start-upy* report 2015).

There is also insufficient collaboration between new entrepreneurs and academe. But here, according to the expert of SpeedUp Venture Capital Group, Bartłomiej Gola, the biggest impediment is not a lack of instruments – after all, start-ups have access to grants from the National Science Centre (NCN) and to more deployment-oriented NCBiR competitions – but rather an unfriendly attitude towards business on the part of Polish universities and colleges.

While this opinion can hardly be questioned, a full picture would also require looking into how the science sector is perceived by Polish business. On the one hand, companies eagerly collaborate with universities/colleges and run joint internship programmes for students, but on the other they rarely transcend the established cooperation frameworks and rarely get involved with research projects which end up with market deployment. From authoress' perspective, until business-academe collaboration grows in scale and extent, the commercialisation of scientific pursuits in Poland will remain more of a problem than a solution. And it should be remembered that creating a start-up requires three complementary components: venture capital, flexible entrepreneurs, and the academic and research community.

4. Support for entrepreneurial activity in Sweden

One of the least densely populated countries in the European Union, Sweden has an area of 449,964 km² (the third largest in the bloc) and a population of 9.5 million. It boasts one of the highest living standards in the world, reflecting an advanced economy (including in the high tech sector) and a comprehensive system of social transfers. From the start-up perspective, a small market may come as both an obstacle and an opportunity. The Swedish economy, having come out of the financial crisis as one of the strongest in Europe, is among the most globalised economies on the planet (*Przewodnik po rynku Królestwa Szwecji* 2012). With a limited number of target group customers on the small-scale local market, it is only natural that Swedes often transcend the national borders when searching for customers. These circumstances offer a big chance for those engaging in start-up activity.

In 2015, Sweden came 9th in the World Economic Forum's Global Competitiveness Index (see Table 1) (Boguszewski 2015: 18). This rank is important due to the fact, that supportive start-up ecosystem has a crucial positive impact on the country's competitiveness, which level is increased by, among the others, setting up new businesses.

Table 1. Top 10 in GCR rankings, 2005–15

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Switzerland	4	4	2	2	1	1	1	1	1	1	1
Singapore	6	8	7	5	3	3	2	2	2	2	2
USA	1	1	1	1	2	4	5	7	5	3	3
Germany	8	7	5	7	7	5	6	6	4	5	4
Netherlands			10	8	10	8	7	5	8	8	5
Japan	5	5	8	9	8	6	9	10	9	6	6
Hong Kong		10						9	7	7	7
Finland	2	6	6	6	6	7	4	3	3	4	8
Sweden	9	9	4	4	4	2	3	4	6	10	9
UK	3	2	9				10	8	10	9	10
Canada				10	9	10					
Denmark	7	3	3	3	5	9	8				
Taiwan	10										

Source: Boguszewski (2015).

The country is also in the group of the most advanced industrial economies, where research plays a key role in driving economic and social development, and this is reflected in its high positions in scientific and technological development rankings globally (The Swedish Innovation Strategy 2015: 1, 15). Sweden is also among the Top-3 in Global Innovation Index 2015 (The Global Innovation Index 2015, 2015), just after Switzerland and the United Kingdom (Poland comes 46th in this classification) (see Table 2).

It is also interesting to look at the list of the world's Top-15 most inventive cities, compiled by Forbes magazine based on OECD data. Measured by the number of patent applications per 10,000 metropolitan-area residents, and headed by Eindhoven (22.58), the roster is dominated by cities in north-western Europe and the United States. It has as many as three Swedish entrants: Malmö (the 4th position, with 6.85 patent applications per 10,000 inhabitants), Stockholm (8th; 5.72) and Gothenburg (12th; 4.4).

Table 2. Movement in the Top 10 of the GII

	2012	2013	2014	2015
1	Switzerland	Switzerland	Switzerland	Switzerland
2	Sweden	Sweden	United Kingdom	United Kingdom
3	Singapore	United Kingdom	Sweden	Sweden
4	Finland	Netherlands	Finland	Netherlands
5	United Kingdom	USA	Netherlands	USA
6	Netherlands	Finland	USA	Finland
7	Denmark	Hong Kong (China)	Singapore	Singapore
8	Hong Kong (China)	Singapore	Denmark	Ireland
9	Ireland	Denmark	Luxembourg	Luxembourg
10	USA	Ireland	Hong Kong (China)	Denmark

Source: authoress's own elaboration based on Cornell University, INSEAD, and WIPO (2015).

A good illustration of Sweden's focus on developing a right climate and capacity to innovate is provided by a long-term initiative, The Swedish Innovation Strategy, promoting development-oriented measures to increase competitiveness, deliver future-oriented public services, and respond to social challenges globally.

The strategy is based on three pillars:

1. The best possible environment for innovation – Innovative people, who have the capacity, willingness and conditions to contribute to innovation; high quality research and higher education; framework conditions and infrastructure for a strong innovation climate,
2. Innovative businesses and public sector,
3. Innovative regions and environments (*The Swedish Innovation Strategy 2015: 1*).

The strong emphasis on entering foreign markets and developing global solutions, backed by a competitive and innovative economy, provides an exquisite ecosystem for entrepreneurial activity. Compared to Poland, the Swedish start-ups have a much wider range of advice and assistance opportunities to choose from. Acquiring seed money for research and early prototypes is much simpler, and there is a more advanced start-up-serving infrastructure, including business incubators and accelerators, and universities/colleges ready to support innovative projects.

Along with academic institutions which run separate start-up-dedicated units, other independent projects have also been created with this goal in mind. An interesting example is the Ideon Science Park, promoting entrepreneurship in the academic town of Lund and the area north-east of it. The park comprises more than 350 companies, with a combined workforce of 2,700, operating in sectors such as IT, telecommunications, life science, clean tech and biotech.

The Ideon Science Park offers 120,000 m² of office and laboratory space in modern buildings, where the interior design encourages integration, discussion and exchange of knowledge, and where entrepreneurs can find the infrastructure needed to run their own businesses. A number of incubators operate at the park – Ideon Innovation, The Creative Plot, The LIFT Incubator, VentureLab – dedicated to particular aspects of start-up activity. For each innovative project Ideon supplies the necessary infrastructure, which includes office space, laboratories, access to business and legal consultancy services and, where needed, mentoring care. This option resembles Poland's Business Incubators which operate much along the same lines, even if in a less extensive version. The conceptual and developmental phase is based on relationships. Ideon provides entrepreneurs with access to a network of contacts which they can draw upon in accordance with their operational goals.

In this context, mention should be made of integration events and group discussions. On a certain day of the week, usually in the morning, everybody can make a 15-minute pitch

presenting his or her new start-up idea, and also associated problems and doubts. A public discussion follows, open to all those present. This collaborative model taps into group synergy, thus stimulating creativity and inviting attendees to exchange knowledge and experiences. The speaker does not necessarily have to leave the meeting with a ready-made solution, but the public discussion gives them various kinds of inspirations to follow previously unnoticed or ignored paths.

Psychological support is a matter of utmost importance for start-up founders who, often operating alone in problem-ridden environments, may see their motivation and confidence waning after some time. This, in the opinion of those Ideon members, to whom the authoress had an opportunity to talk to, is successfully countered by such group initiatives and consultations with others.

Ideon also enables contacts with external companies and universities, whereby invited guests take a look at the way start-ups operate, which may sometimes result in more permanent cooperation. More than 900 successfully operating firms have spun off the Ideon Science Park, including 15 ones which are listed on the stock exchange. Over 60% of just started ventures already operate as prospering companies.

Malmö's media-industry hub, a membership organisation known as Media Evolution City, offers an interesting example of support provided to local businesses. The main motive for its establishment has been to lay down conditions for an expansion – through cooperation – of various kinds of media-related companies. The Media Evolution philosophy is about exchanging knowledge and acting together to achieve better outcomes, a concept which fits in well with the teamwork-oriented Ideon activity.

Media Evolution City promotes diversity, giving a chance for collaboration among media agencies and creative firms, small and large. This leads to the emergence of new, previously unheard-of projects, and greater efficiency of most of the people involved.

Just as in the case of Ideon, the building's architecture – a source of pride for its administrator – plays an important role in stimulating creativity and driving inspiration. This modern office structure, created in a former industrial district, is a perfect fit with its environment, while leaving a great deal of freedom to those working there.

Most rooms have glass walls, revealing what is going on inside, but staffers seeking greater privacy can pull down blinds. The glass can be used as a board on which to make notes.

Integration space has been given an important role in the design of the building; it includes kitchens with large tables and conference rooms with walls made of live plants, where pouffes and cushions can be used as either seating places or “structural” elements used in presentations.

During rest breaks, the denizens of Media Evolution City may take yoga lessons or other forms of relaxation. Integration sessions are held once a month, open to staffers of all companies based in the building, and they are highly popular, giving testimony to people’s sense of feeling good and a high degree of identity with the company.

Media Evolution Center’s offer is primarily addressed to companies already in existence, but start-up ventures are also present at the compound, which benefits themselves and the others as well. The start-ups have an opportunity to learn from those who have been present on the market for some time now, plus share experiences and engage in open discussions. And for the established business, the knowledge possessed by start-ups may offer inspiration, when they seek to solve their own current problems.

Both Ideon Science Park and Media Evolution City place emphasis on exchanging knowledge within a group, as a factor stimulating the spirit of enterprise. A multitude of experiences, approaches and information gives ample space for driving innovation and efficiency. Along with transparent and simple procedures, the success of a start-up venture hinges on good strategy and safe financing. With the first component assured, what is left for Swedish start-ups to do is carefully devise the business plan and arrange for adequate funding from optimal sources.

There are a number of ways in which to acquire capital (www.start-upoverseas.co.uk). Start-ups seeking bank loans for small-to-medium enterprises would do well if they turned for information to The Swedish Bankers' Association (www.bankforeningen.se). In considering loan applications, banks place emphasis on potential risks and capacity for punctual repayment, as measured by founder’s/co-founders’ business experience, their financial position, education status and the credentials they can produce. A detailed business plan of the project is important, and the bank also analyses the situation of other co-owners of the company with a view to getting additional collateral.

Capital can also be obtained from the state company ALMI Fretagspartner (Corporate Partner) AB (www.almi.se), whose offer includes:

- financing the feasibility studies to establish the project’s market potential,
- company loans,

- micro-lending to companies with lower capital ratios,
- innovation loans to support innovative projects,
- export financing.

Other financing options for start-ups include these:

- FOKUS Verifiering (Verification), which provides development subsidies for research into innovation profitability, technologically and economically. The subsidies are also granted for industrial property protection in respect of research findings with a potential for commercialisation (www.vinnova.se/In-English/),
- The Knowledge Foundation (KK-Stiftelsen), which runs two kinds of programmes to support small-to-medium enterprises, one oriented to research, and the other focusing on skills upgrading (www.kks.se),
- Connect Sweden (Connect Sverige), a non profit networking organisation, which supports start-ups in soliciting venture capital and angel investment(www.connectsverige.se/Hem.aspx),
- The Swedish Energy Agency (Energimyndigheten), an agency supporting projects of commercial importance for the energy sector,
- Industrial Fund (Industrifonden), a long-term investor offering equity and loans for Swedish companies with growth potential on foreign markets.

And finally, two other organisations deserve attention:

- NUTEK - Swedish Agency for Economic and Regional Growth, offering support to business in the form of specialist programmes:
 - Product development of goods and services in small companies,
 - Supplier programme for the vehicle industry,
 - The Power of Action with IT,
 - Skills development within IT and secure electronic business processing,
 - Regional investment support,
 - Regional business operations,
 - Employment grant (www.tillvaxtverket.se/English),
- Foundation for Strategic Research (SSF).

The diversity and multitude of institutions supporting start-up founders, not only in terms of financing, but also conceptual and organisational assistance, give testimony to Sweden’s maturity, economic advancement and the importance the country assigns to innovation.

It is because of this approach, conducive to development and motivation, that one of the largest urban development projects could be devised for the Norra Station/Hagastaden area in the larger Stockholm region. By 2025, a Life Science Park, one of the world’s largest, will be created in-between Stockholm and Solna. A new smart city will include residential housing, green areas, culture and entertainment facilities, and office buildings with the most sophisticated specialist laboratories, capable of conducting pioneering medical research. The campus will be integrated with the hospital New Karolinska Solna, planned to be opened in 2016. It will be gradually expanded, to include, for example, a specialist facility for medical care and a centre for advanced biology research.

Table 3. Best practices of start-up support – Swedish benchmarks for Poland

	BENCHMARK	EXPLANATION
1	innovation park as a concept	The number of innovation promoting centres in Poland is absolutely insufficient. Among the few positive examples are: the High Technology Incubators Complex at the Poznań Science and Technology Park of the UAM Foundation, with its advanced infrastructure and a vigorous management style; and Campus Warsaw, a space for entrepreneurs set up in 2015 in collaboration with Google (as the first such centre in Central Europe and 5 th in the world). There are also less active establishments: Lower Silesia Park of Innovation and Science and Częstochowa Park of Industry and Technology.
2	innovation park as a space	Modern buildings, glass-wall offices, greenery, relaxation facilities, integration-focused architecture are key elements of an innovation supporting environment. Access to sophisticated equipment and laboratories makes it possible to conduct advanced research.
3	sharing knowledge- pitch	Exchange of information supports creativity. Public discussions give those planning to launch a start-up a chance to analyse problems they encounter and benefit from the experience accumulated by others.
4	diverse and multiple sources of financing	Even though a start-up founder in Poland is offered access to many types of financing, acquiring capital is a hard slog in actual practice. Venture capital remains underdeveloped and business angels are few and far between. Banks are reluctant to lend, in the absence of credit history for a company that is just entering the market. And specialist programmes are highly selective.

Source: authoress’s own elaboration based on interviews with entrepreneurs in Sweden

The detailed description of the Swedish start-up ecosystem will lead to the comparison presented in a Table 3 with suggested best practices of supporting start-up entrepreneurs in Poland, basing on Swedish proven solutions. The selected elements could well be regarded as

Swedish benchmarks for Polish organisations – state-owned and private – offering support to entrepreneurial businesses.

According to authoress' opinion, Poland, with a less mature start-up ecosystem than in Sweden, should pay a specific attention to the simplifying and broadening an access to the sources of finance support. Another element of ecosystem, which should be adapted to Polish conditions, is knowledge exchange, very important from the entrepreneurs' perspective, especially in the preliminary stage of running their business. Still Poland has a great potential to develop, taking into consideration number of Innovation Parks as spaces and concepts.

Drawing on the best practices developed in advanced economies on the basis of practical experiences, Poland could have a more robust growth in innovative projects. And very likely, a removal or even reduction of barriers to start-up formation and subsequent operation would provide a boost to entrepreneurial activity throughout the entire economy.

5. Conclusion

The conditions in which start-ups operate in Poland have been undergoing dynamic changes. Many organisations have emerged, supporting innovative ventures not only financially, but also in terms of access to research resources and modern office space. These changes, though, are too slow and insufficient. Entrepreneurs still have to grapple with barriers posed by complex, time-consuming administrative procedures; their access to capital is limited and, in the absence of support at later stages, they have problems with staying in the market.

It is therefore useful to take a look at the functioning of an advanced economy where innovative ideas are supported and promoted, an economy whose three entrants have made it to the list of the world's most inventive cities.

Basing on the Swedish example, Polish government should allocate special funds for those planning to set up start-up company. The administrative barriers should be broken down by simplifying formal requirements. Additionally, entrepreneurs in a preliminary stage should get an opportunity to test their solutions created within the frames of start-up. Otherwise, without investors willing to finance the innovative projects, it is hard for start-ups to sustain on the market. Another issue, there should be more attention pay to is knowledge exchange during open

meetings as well as pitches. It will allow entrepreneurs to gain a better idea of the concept finalization stage and to minimise a risk.

In this article, the authoress has illustrated two start-up ecosystems, Swedish and Polish ones, trying to point benchmarks from Sweden, possible to adopt into Polish market conditions. There was much work yet to be done about this issue, however still there is need to conduct broader analysis about Polish situation of start-ups themselves and the start-up environment, especially in the SME sector. A number and characteristic of start-ups appearing within the structures of Polish companies there are also a potential subjects for further research.

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Formy wsparcia start-upów – porównanie wybranych aspektów pomiędzy Polską a Szwecją

Streszczenie:

Według OECD czwartym na świecie, pod względem liczby zgłoszonych wniosków patentowych na 10 tys. mieszkańców, jest szwedzkie miasto Malmö. Przez prezentujący ranking Forbes, zostało ono określone jako innowacyjne i różnorodne. Pozostałe dwa największe miasta w Szwecji, Sztokholm i Göteborg, także znalazły się wysoko, na odpowiednio 8. i 12. miejscu. W powyższym kontekście głównym celem artykułu jest opisanie polskiego i szwedzkiego systemu wspierania nowych przedsiębiorstw, kluczowego z punktu widzenia rozwoju innowacyjności. Wybór wspomnianych krajów związany jest przede wszystkim z wysoką pozycją Szwecji w rankingach najbardziej innowacyjnych państw świata. Polska z kolei jest krajem pochodzenia autorki. W tym kontekście rozwiązania wdrożone przez Szwecję stanowią wartościowy benchmark dla rozwiązań polskich. Obie części, polska i szwedzka, oparte są na obserwacjach własnych autorki oraz na bezpośrednich rozmowach z przedsiębiorcami oraz właścicielami organizacji wspierających start-upy. Wartość dodaną artykułu stanowi zestawienie najlepszych praktyk oraz, wynikających z owego zestawienia, sugestii dla przedsiębiorstw start-upowych w Polsce.

Słowa kluczowe: start-up, innowacje, przedsiębiorczość, szwedzki model start-upowy, najlepsze praktyki

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