



Project of Empirical Research on Innovative Organizations in Poland

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Received date: 30 April 2020; Accepted date: 29 July 2020; Published date: 16 October 2020

Academic Editor: Jana Makyšová

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Abstract

Today, young entrepreneurs who begin their "adventure" with business and are in the start-up stage, the so-called pre-seed stage, have problems describing their business plans in terms of their vision, strategy and innovation. They tend to follow the usual patterns and often make too hasty decisions about the final establishment of their business. What is more difficult is the fact that the control group formed by companies that are no longer start-ups (the so-called post-start-up stage) and are already building their brands, is not relevant, because their development paths were poorly thought out and even very often resembled someone else's idea which is usually adapted to the demand and economic conditions of the day. This article presents the results of research on Wrocław enterprises (start-ups) concerning the analysis of the company's mission and vision along with the identification of innovation sources, resources and elements of the Lean Canvas strategy. The original research assumption was to identify the extent of using creative problem-solving techniques in the context of open innovation. However, in the course of research, it turned out that Wrocław start-ups know very little about the problem being studied, which resulted in a change in the research objective.

Keywords: Innovation, Startups, Creativity, Entrepreneurship

Introduction

J. A. Schumpeter was a pioneer in the research on enterprise innovation. Contemporary theorists and practitioners are still discussing the categories he introduced. The classic combinations of

production factors in the form of new products, production methods, raw materials, markets and industry organization (Schumpeter, 1960) are currently taking completely different forms, because they take into account the soft social sphere, which have been ignored by

the Schumpeter school, focusing rather on the technical aspects of innovation. Schumpeter's theory arose during the capitalist economy of the early 20th century, which was based on a large concentrated mass industry, and the most important resources were land, labor and capital. The dynamic imbalance caused by entrepreneurs, which is the backbone of the market economy to a greater extent than balance and optimization (Bielski, 2000), has remained unchanged. The analysis of the changes that have taken place in recent years in the generally understood organization management process allows us to see important trends in creative destruction. They concern not only the emphasis on introducing technological innovations as the main direction of the company renewal, but also the changes in the perception of the sources of these innovations. The environment of modern organizations is becoming a new source of innovation, which results in the emergence of open innovations.

The purpose of the article is to present the results of a research carried out in the third quarter of 2015 on a group of startups which is the foundation of a planned empirical research on the so-called post-startup stage. The research was initially intended to identify the extent to which creative problem-solving techniques were used in the context of open innovation. However, while conducting the research, the research team decided to change its objective due to the fact that the respondents knew so little about the creative techniques of project management, hence studying it made no sense. Therefore, the research focused on the mission and vision analysis, identification of innovation sources, resources as well as planned strategies and elements of the Lean Canvas business model. The presented research should be treated as a preliminary research for further empirical procedures.

The study consists of three parts. The first part presents the research methodology and description of the target group. Part two presents the results of a research carried out in 2015 on the basis of SWOT methodology, and part three presents

elements of the Lean Canvas methodology. The conclusion presents the questions of the planned research, which was decided to be carried out among the respondents from 2015. The form of research will thus be longitudinal, although as it turns out - the objectives of the current research will be significantly expanded.

Research Methodology and Description of The Group of Respondents

The concept that has changed the approach to the innovative activity of companies and which can become the foundation of value innovation is open innovation. It is a relatively new concept that is not fully recognized in the world of management (Huizingh, 2001). This concept was introduced in 2003 by H. Chesbrough. Open innovation is the antithesis of a traditional, vertical innovation model in which internal innovation activities lead to the internal development of products or services. The author calls this model 'closed innovation' and describes open innovation as *the deliberate use of inflows and outflows of knowledge to accelerate internal innovation and the expansion to external markets* (Chesbrough, 2012). Shifting the focus from the center of the organization to its environment does not mean giving up creating innovations inside the company, which in turn leads to the creation of two types of open innovations: outside-in and inside-out. The first one makes use of external sources of knowledge - users, competitors, suppliers, partners and local communities (crowdsourcing). The second one is about sharing the existing internal knowledge with other entities that can use it in their activities. This model is much less recognized and understood, both in academic environments and in business practices (Chesbrough, 2012). The research problem identified in 2015 was based on observations of organizations developing in the business incubator ecosystem: the Wrocław University of Economics and the WSB University. Observation showed that entrepreneurs were not able to creatively work on their projects, and they were unable to identify their needs in terms of the range of methods they could use. At that time, there were no well-established

methodologies in Poland to lead a team during the implementation of creative projects (e.g. brainstorming). There was also a gap in the area of open innovation (the approach, in which the most important part is the belief that companies can and should use both external and internal ideas in their innovation processes), which eliminated the possibility of a proper assessment of the work of project teams. Due to the need to redefine this goal in 2015, the analysis covered the mission and vision, sources of innovation, resources as well as planned strategies and elements of the Lean Canvas business model.

The research work was carried out through the following stages:

- a) Analysis of the selected literature - comparison between foreign techniques, in terms of their degree of effectiveness and impact on individual stages of designing solutions.
- b) In-depth interviews with representatives of 20 startups operating in Wrocław business incubators - based on a detailed scenario developed on the basis of the applicant's experience and conclusions from the literature - qualitative research
- c) Conducting research using a questionnaire among entrepreneurs (40 startup companies) operating in Wrocław - quantitative research

The first research stage of the project was a systematic analysis of the literature on the subject in the fields of open innovations, design thinking, brainstorming and tools used in the blue ocean strategy as well as the purchase of access to databases (Harvard Business Review, Stanford University case studies database - Graduate School of Business - areas: leadership, human resources, entrepreneurship, innovation in developing economies). This allowed to systematize the knowledge of commonly used methods and tools in the processes of creative problem-solving, as well as to select the research issues that were implemented

as practical applications for contemporary entrepreneurs.

The next stage of the research involved selecting and conducting meetings with representatives of 20 companies (Startup) based in Wrocław, working on innovative projects. In-depth interviews were conducted on the basis of an in-depth interview scenario. The choice of individual in-depth interviews in the proposed project was supported, among others, by the need to analyze individual opinions and experiences, business specificity and the limited time availability of the respondents. Survey questionnaires made it possible to conduct a quantitative analysis of entities operating in Wrocław incubators, which enabled a comparative analysis.

The study covered the circles of Wrocław enterprises that started their operations at the Academic Business Incubators. The research was carried out on a group of 30 people up to 30 years old, 21 men and 9 women. The group included active students (27%), previous year's graduates (13%) and university graduates from 2009-2012 (60%), including 2 persons with doctoral degrees. For 9 people, the analyzed idea was their next initiative.

Most of the respondents (70%) decided to work individually and independently implement their ideas. 6 ideas were implemented in a group of 2 people, others in teams of more than 3 people, including one in a team of 6 people. Having analyzed the education profile of the respondents, it was observed that 18 of the analyzed ideas belonged to industries consistent with the originators' education profiles. 50% of the respondents have economic education (students and graduates - including post-graduate studies - of the University of Economics, Wrocław University of Technology, the WSB University, and the University of Business in Wrocław). 11 people have technical education, 8 of which are educated in IT.

Researchers were aware of the disadvantages of the developed scenarios, used for structured in-depth interviews (SSI), such as the researcher's subjectivity,

but the choice of this method in the present study was supported by:

- The need to analyze individual opinions and experiences,
- Specificity of the business and
- Limited time availability of the respondents.

According to the authors of the study, the group of respondents (young originators) had to be contacted directly to avoid inconsistencies that could be easily clarified during the interview (directly or by referring to other issues). All interviews were conducted according to the assumed plan.

Research Results: Strengths and Weaknesses, Opportunities and Threats - Perspective of Entrepreneurs

Initially, the project assumed to analyze the environment of Wrocław enterprises starting their operation at the Academic Business Incubator. According to the researchers' knowledge, the level of research on creative techniques for conducting project teams (startups) was very low. This was mainly due to the lack of even basic and, what is worth emphasizing, practical knowledge about creative techniques, which negatively affects the operation of project teams or the behaviors of leaders.

In the course of project work and analysis of business ideas, it turned out that the level of knowledge of the creative techniques of

project management is so low that the goal of the project should be redefined. Therefore, the research focused on the mission and vision analysis, identification of innovation sources, resources as well as planned strategies and elements of the Lean Canvas business model.

In all the analyzed cases, the respondents had a clear vision of the purpose of the business, they were able to determine the exact needs of consumers addressed by the startup. The respondents had no trouble determining the business profile, which confirmed their awareness and allowed them to conclude on the successful implementation of the adopted strategy. Only 4 out of 30 respondents claim that at the time they applied to the incubator, their product/service offer had to be refined and could not have been placed in the market yet. Others said that their product/offer was ready to be placed in the local market at least. 14 respondents defined the scope of their activity as nationwide, and 4 respondents indicated that their product/service was ready for the global market. Others (50%) were in the initial stage of operation in the local market, of which, 5 people planned to expand the offer to the nationwide market.

Together with the respondents, the analyses of the strengths and weaknesses of the implemented projects, as well as their opportunities and threats were carried out. Table 1 presents the results of the research.

Table 1: SWOT matrix for the conducted empirical research – preliminary research results

Strengths	Weaknesses
<ul style="list-style-type: none"> - Motivation. - Goal-directing. - Flexibility (understood as openness to new, unconventional solutions and openness to customer needs). - Innovative perspective and positive attitude. 	<ul style="list-style-type: none"> - Inexperience. - Lack of time. - Lack of financial resources. - Lack of brand recognition. - The need to employ unknown subcontractors for larger orders.
Opportunities	Threats
<ul style="list-style-type: none"> - Innovation of the idea. - Continuous technical progress. - The possibility of receiving financial support for startups (EU Funds, regional competitions and finding support from investors), perspective of cooperation with other startups. - Developing a business model. - Growing customer demand for a given service/product. - Help from institutions supporting startup activities: Academic Business Incubators. 	<ul style="list-style-type: none"> - Distrust of young entrepreneurs, increasing customer requirements. - "People outflow" to other, more stable jobs. - Highly qualified competition, transient trends (in the case of startups, focused on nutritional counselling and physical activity) - Increasing costs associated with subcontracting (in the case of sole proprietorships).

Source: Own study.

The strengths and weaknesses in the study concerned the present factors, while the opportunities and threats, due to the timing of implementing the idea, pointed out future discriminants that could but did not necessarily have to appear. The identification of factors by means of a significantly shortened SWOT analysis allowed the respondents to rationalize the idea, and gave them an opportunity to learn about the market from the perspective of objective observers, not emotionally connected with the idea or the originator. In this way, the respondents obtained added value from the research, namely: The verification of project assumptions and discovery of so far unnoticed development opportunities.

Research Results - Elements of The Lean Canvas Methodology

As the need arose to change the empirical assumptions, the research employed the assumptions of the Lean Canvas methodology. This model was developed for startup companies operating in conditions of extreme uncertainty. The first discussed elements of the model were:

- Knowledge of customer segments understood as target groups whose problems are solved by the offered service/product,
- Value suggestions, i.e. understanding and determining the solution to customers' needs,
- Main competitive advantage,
- Solutions and protection of the intellectual property,
- Subjective feelings about the business risk of running a startup,
- Concept of brand and branding,
- Revenue streams and knowledge of cost structures.

Only 9 (30%) respondents affirmatively answered the question about having developed a full business model and stated that in their opinion, it would allow for a stable startup development. In 27 cases, the respondents conducted demand analyses for the products offered. As for the sources of knowledge about market needs, they indicated their own previous experience in the industry, virtual resources (internet forums, blogs, industry websites) and the knowledge of other people from their

contact network. Two respondents indicated trade press and scientific journals as their main sources of knowledge (both had experience of working at a university). The replies also included reports from competing companies that commissioned studies from consulting and advisory companies. In order to verify the value proposition, an expert assessment was made which awarded points (maximum 1) for defining, in response to open questions, the mission understood as the role of the company in the market, the vision, i.e. the image in the distant future, and the strategy, i.e. the awareness and preparation for action in a changing environment. All the respondents were able to clearly assess at least 2 out of 3 points, which indicates their understanding of the proposed solution as a response to customer needs and/or their awareness in shaping the market for the needs of startups, as in the case of innovative solutions. Only 2 respondents used tools protecting the intellectual property, enabling the protection of know-how and solutions. The responses listed confidentiality agreements, patents and trademark protection. It is worth emphasizing that in 3 cases, protection was defined as "keeping the idea for yourself" and "not sharing it with others", which may indicate no willingness to cooperate with other entities. 25 respondents replied that they did not protect their knowledge in any way, of which 60% thought that this problem did not concern them. The results confirm the information published in many reports about the lack of basic knowledge among young entrepreneurs concerning the protection of the intellectual property, tools for protecting an idea and/or a solution or even the ability to see innovations as well as the need to protect them.

In published reports on young entrepreneurs and startups, great attention is paid to risk and overestimating their opportunities in the market. 10 respondents considered the business risk associated with launching a product/service to be low or negligible. 6 of them operate in the IT area, which is characterized by high flexibility and volatility, employee turnover and rapid development. The remaining 4 are companies which are about to start their

activity in the artistic or consulting industry (dance school, nutrition counselling), which depend largely on the trends prevailing on the market. In 3 out of 10 cases, the respondents, assessing the risk as low, did not carry out a market needs analysis, the next 3 are not sure if their product/service has a chance to achieve a competitive advantage, and 2 people do not have a clear development strategy. Failure to analyze the needs of the market or the lack of strategy can cause a significant overestimation of your capabilities, distorting the vision of a startup and, as a consequence, delaying the start of the business and entering the market.

According to experts' opinions, small companies entering the market need at least basic knowledge about cost control and cost settlement. It is worth emphasizing that 77% of the respondents control the flow of money, and by entering the structures of the incubator, they can use the services of a qualified accountant.

Together with the respondents, the following categories of innovation were assigned to their business ideas: technological (product, process), organizational or marketing. Although a precise qualification is virtually impossible at the initial stage of development, 15 respondents considered their idea to be a technological - product innovation, understood as significant modifications in products, related to new functional features of the product and tailored to the needs of a new group of service clients. 3 people said that they introduce innovations at the organizational level, and 3 more introduce significant changes in the field of distribution, marketing or product design (marketing innovation). Other people were unable to clearly identify areas of innovation and indicated the vision of a startup. Importantly, the indicated source of innovation in 60% of the analyzed cases was colleagues (their potential) as well as own competences and experience.

Based on the results of the research, it can be concluded that the awareness of cognitive processes that improve creative thinking in project teams is very low.

Conclusion

Contemporary organizations are actively looking for sources of innovation, going beyond the industries in which they previously operated, and thus obtaining tangible and intangible benefits (Lichtenthaler, 2011; Grindley, 1997). However, the most important benefit arising from the implementation of an open approach to innovation is the elimination of the NIH syndrome (not invented here), which is the negative attitude among employees of the organization towards a novel that has not arisen within their structures (Laursen, 2006). Other positive consequences include reduction of risk by spreading it over several entities, saving time and money, and creating new networks of relationships based on cooperation and synergistic relationships. The literature on open innovation focuses mostly on three issues: a) how to measure them, b) interaction between an organization's strategy based on open innovations and company choices, c) the growing integration of open integrations with existing theories of innovation, management and economics (West, 2014). However, as it turns out, along with the degree of popularization of information about the imperative use of creative techniques for solving problems in Western literature - in practice it looked quite different in Poland. Researchers' opinions were deliberately used in those years - to show how huge the difference is between what happened in the Western countries and what happened in Poland. The question is: what is the same situation like today? Therefore, the presented empirical research is considered as preliminary studies to the main research, in which the following empirical research was set:

1. Do Polish startups use creative problem-solving techniques? If so, to what extent? If not - what are the barriers associated with using such solutions?
2. Do Polish startups use the opportunities associated with open innovations? If so, to what extent? If

not - what are the barriers related to the use of such solutions?

In addition, it is planned to conduct longitudinal studies among the respondents who participated in the research in 2015. The main goal of the research is the same as the objectives realized in the presented research, and the specific goal is to identify the discrepancies and determine the level of maturity of an innovative organization in the analyzed contexts. As part of this research group, a decision was made to conduct qualitative research and identify the moments that appeared in the period 2015-2020 which significantly affected the business (barriers, opportunities, crises and their distinguishing features in the area of conducting innovative activities).

Acknowledgment

The project is financed by the Ministry of Science and Higher Education in Poland under the program "Regional Initiative of Excellence" 2019 - 2022 project number 015 / RID / 2018/19 total funding amount 10,721,040.00 PLN.

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