

## INNOVATIVE COMPANY PROFILE: AGE, SIZE AND SOURCES OF FINANCING

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**Purpose:** The purpose of this work is to present the features of an innovative company, especially age, size and sources of financing. In addition, the paper shows the impact of these features on the company's innovation and the relationship between age, size and the available financing methods.

**Design/methodology/approach:** Due to the cognitive nature of the article, the aim of the work will be achieved using the method of analyzing the literature on the subject. Literature studies include Polish and foreign publications.

**Findings:** Innovations are the basis for the functioning of enterprises in competitive markets. Innovative enterprises are able to adapt to environmental conditions and quickly respond to the needs of consumers. The presented research confirms the positive relationship between the increasing size of the company and the growing level of innovation. In the case of the relationship between the development stage and innovation, it is indicated that younger companies are more inclined to implement innovations than mature ones. It is worth emphasizing that the degree of innovation of a company, in addition to its size and maturity, also depends on many other factors, including: type of innovation, enterprise, industry or business model.

**Originality/value:** The article is a review of the literature on innovative company. This work can help entrepreneurs who want to innovate their companies and achieve long-term growth because it allows to understand the impact of a company's size and maturity on its level of innovation. Moreover, managers can find out what sources of capital they can use depending on the characteristic of their enterprise.

**Keywords:** innovative company, innovations, age company, size company, sources of financing.

**Category of the paper:** Research paper.

## 1. Introduction

Enterprises operating in competitive markets, must build their position on the basis of innovations in order to effectively compete with others. Growing consumer demands result in the need to constantly implement innovations. The faster a company responds to the needs of the market, especially the niche market, the better it has a chance of survival. Innovations must be implemented at every stage of the company's operation. However, the scale and the type of innovation depend on the size, maturity and financial capacity of the company. Access to various sources of capital is of great importance, without which enterprises cannot start long-term and often uncertain innovative activities. The availability of various ways to raise capital, in turn, depends on the size and degree of development of the company.

Due to the above, the work focuses on presenting the features of an innovative company, especially age, size and sources of financing. These are features that influence each other and determine the innovative activities of enterprises. The work is based on an analysis of the literature.

## 2. Innovative company

Innovations bring many benefits to enterprises, therefore it is believed that they are the basis for the functioning of modern enterprises. They allow firm to stand out on the market and gain a competitive advantage. The concept of an innovative enterprise should take into account economic conditions, and above all, technological progress. Organizations in highly developed countries have replaced the extensive development model based on quantitative development, without qualitative and structural changes, with an innovative model based on human resources. Innovative enterprises are entities which can create, absorb and sell new products or services. They can make constant changes and adapt to changes taking place in their environment. They quickly respond to market needs by introducing new solutions, technologies and forms of marketing (O'Sullivan, 2000).

Innovative enterprises are distinguished by (Białoń, 2010):

- a wide range of R&D works,
- systematic introduction of scientific and technical novelties,
- high share of new technological, product and organizational solutions,
- introducing innovations to the market,
- having the ability to predict the future,
- flexibility of operation; having creative teams of employees,
- the ability to use the innovative potential,
- cooperation with clients; ability to continuously generate innovation.

An innovative company should be an organization which learns, *inter alia*, from through experience, based on knowledge and working in networks created by entities from the external environment. In innovative enterprises, the main place is taken by knowledge, organizational structures are flattened, intellectual capital is constantly enlarged and developed. An innovative enterprise can be considered as an organization that facilitates team learning among employees and is constantly changing. The company is a place where new knowledge and new skills are created. It is customary for innovative companies to cooperate with scientific and research units, but also with the client (Jasiński, 2000). Usually, innovative enterprises are able to find a niche in the market and maintain a long-term competitive advantage (Porter, 1980). The company's innovativeness is assessed on the basis of its involvement in innovative activities and the introduction of at least one innovation by it during the period under study (the recommended period should be from one year to three years). There are three types of innovative companies:

- companies with at least one innovation, their innovative activity is continuous,
- companies that have introduced innovations, but do not carry out further innovative activities,
- companies that have not implemented innovations but are actively working to do so in the near future.

It is very rare for a company to be inactive in innovation, but such situations may arise when actions were taken earlier than the research period and their implementation did not result in the introduction of innovations (OECD, 2018). The resources at the disposal of a company have a large impact on its degree of innovation activity. These include human capital, tangible and intangible assets, business experience and available financial resources.

### **3. Size of the innovative company**

In line with Schumpeter's views, many economists argue that larger firms are more innovative (Cohen, and Klepper, 1996). The most popular measure of company size is the number of employees (preferably converted to full-time jobs) and turnover. Another measure may also be the value of assets held, useful for the productivity analysis (OECD, 2018). Large enterprises have greater financial, marketing, research, etc. opportunities, which facilitate the implementation of innovations. They also have a greater tolerance for potential losses due to unsuccessful innovations. Additionally, they can employ more skilled workers and therefore have a higher technological potential (Damanpour, 1992). Large, innovative companies create the flexibility and autonomy required for innovation by organizing smaller, specialized branches while maintaining the advantages of large sizes. Although some economists indicate that large companies may be a barrier to the development of innovation. Small businesses are more flexible, have a greater ability to adapt and improve, and accept and implement changes

faster (Mintzberg, 1979). The strength of the relationship between size and innovation depends on the industry. It should be emphasized that the size of the enterprise influences to a greater extent the innovation of production enterprises than service enterprises, as well as profit-oriented enterprises than non-profit enterprises. Small businesses tend to have a high level of innovation in industries where manufacturing costs are low (Damanpour, 1992).

The research conducted by N. Bosma and G. de Wit (2004) also confirms that along with the size of the company, its innovation grows. The authors point out that larger companies are better at coping with market uncertainty and have greater opportunities to apply for subsidies. However, this Research shows, that patenting innovations is associated more with a smaller enterprise size.

The size of the enterprise also affects the type of innovation introduced. Small companies are not interested in introducing process innovations, mostly medium-sized companies do it (Fang, 2009). With the size of the company, the likelihood of the emergence of product innovations increases, which stimulate market expansion, increasing both sales and employment, thus influencing the growth of the size of companies (Bogliacino, and Pianta, 2010). A. Vaona and M. Pianta (2008) took into account the strategies of innovative activity in their research and noticed that product innovations result from the search for technological advantage and are based on the strategy of market expansion and patent activity. In contrast, process innovations result from a price competitiveness strategy achieved through flexible production, larger markets and greater investment in machines related to innovations. Small companies have little opportunity to compete with large companies in the above-mentioned strategies, because they do not have such extensive sales markets and cannot incur such high investments in machines, which at the same time reduces their innovation compared to large organizations. Research based on the business model shows that large enterprises are successful in targeting innovation towards customer relationships, while medium-sized enterprises should target their innovation at suppliers. It is emphasized that smaller companies depend on the big ones to undertake innovative projects, and cooperation helps to overcome limitations. On the other hand, large companies are under great pressure, above all, from stakeholders to introduce innovations for sustainable development (Aguilar-Fernández, and Otegi-Olaso, 2018).

One of the more recent studies focuses on the relationship between company size and the implementation of eco-innovations which improve environmental performance (Carrillo-Hermosilla et al., 2010). The research shows that large companies use more advanced management processes and better cope with the external situation based on their experience, therefore they are more environmentally open. They better fulfill their social obligations and thus implement more eco-innovations. An additional advantage of large enterprises is organizational maturity and a clear internal structure. These companies are seen as specialists in implementing eco-friendly innovations because this innovations are more effective when

implemented on a large scale. Thus, it discourages small businesses from introducing eco-innovation (Lin et al., 2019).

Most studies confirm a positive relationship between the size of the company and the level of its innovation. However, it should be remembered that many factors can influence the strength of this relationship. These are i.a. type of innovation, sort of enterprise, industry or business model.

#### **4. Age of an innovative company**

Apart from the size of the enterprise, age is a very important indicator of innovative companies as it reflects accumulated experience. Older companies have a chance to gather more knowledge on how to implement changes and obtain the desired results from them. Longer time of learning can affect company's ability to innovate as well as its results. On the other hand, younger companies may be more agile in implementing innovations. The age of the enterprise is calculated as the number of years in which the enterprise was economically active (OECD, 2018).

Young companies introduce product innovations more often because they are more flexible and react faster to the needs expressed by the market, especially the niche market. In addition, they more easily overcome the constraints of capital resources when introducing new products. Older companies may introduce innovations in order to maintain their position or increase their competitive advantage. At the same time, mature companies are more oriented towards implementing process innovations (Pellegrino, and Piva, 2020).

In the low and medium technology sector, young innovative companies are perceived as being able to achieve better results from their innovative activities. They do not have a strong position in high-tech industries. Young companies complement the innovative strategies of mature companies, successfully invest in new solutions, but do not exceed long-term entities (Cincera, and Veugelers, 2014). It often happens that young companies introduce breakthrough innovations, on the basis of which mature companies introduce new innovations by improving and developing the full potential of these innovations. The effectiveness of these processes depends on the strength of intellectual property protection and control over these assets (Gans et al., 2002).

The quality of technical innovations declines with the age of the company. Research confirms that as the enterprise ages, the cost reduction benefits of learning are more than offset by the diminishing benefits of technological advances. The older the enterprise is, the lower the profits are, with the same degree of R&D intensity (Balasubramanian, and Lee, 2008).

A study of Italian companies confirms that aging means building resources and capacity, although the correlation between the frequency of product innovation implementation and age is negative. At the same time, the long-term tenure of the president and the long time since the introduction of the last innovation reduce the company's tendency to product innovations (Cuculelli, 2018).

On the other hand, a study conducted on Spanish companies confirms that young companies are more affected by a lack of financial resources than mature ones. The lack of skilled workers is an obstacle for companies, while only older companies actually perceive it. Finally, older companies face obstacles related to market conditions and demand, which means that they have not been able to keep up with its changes (Pellegrino, 2018).

Enterprises entering the market are usually associated with less innovation, but have a very high potential. At the same time, exiting firms have poor innovation performance. Middle-aged firms appear to be almost as active, if not more than newcomers (Huergo, and Jaumandreu, 2004).

The youngest companies more often give up their innovative projects at the concept stage. However, most often older companies give up projects aimed at introducing radical and incremental innovations. (Coad et al., 2016).

A review of the literature on the age of the enterprise and its innovativeness indicates that younger companies are characterized by higher innovativeness, despite many barriers, mainly financial. It is worth noting that the degree of innovation may differ depending on the industry, the level of technological advancement or the type of innovation.

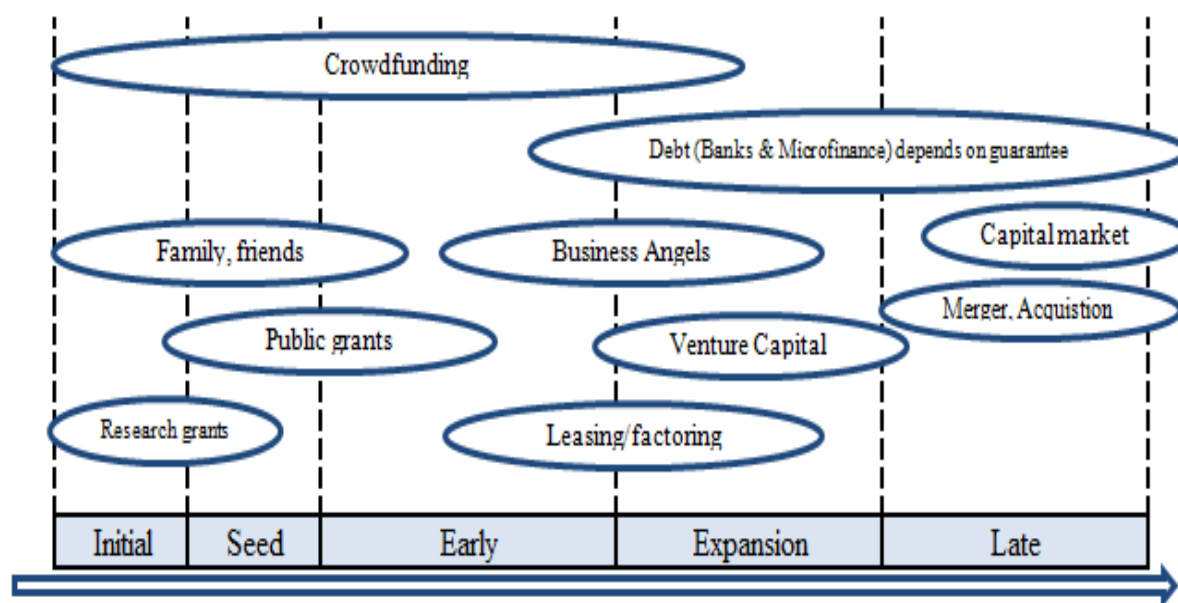
## **5. Methods of financing innovative enterprises**

Finance is a key part of innovation, it enables research to be carried out, necessary technologies to be implemented, and innovation to be developed and commercialized. Innovative enterprises sometimes have difficulties in obtaining capital. This is due to the unique features of innovative activities. It cannot be fully protected, therefore there is a fear of imitating the developed solutions. This results in an increased risk for capital providers. What's more, innovation processes tend to be lengthy and uncertain (Bernstein, 2017). Acquiring an effective and cheap source of capital is a huge challenge for companies.

There are many sources of financing for innovative activities. Usually, enterprises finance their activities with equity capital, which can be divided into internal and external. Internal capital includes, among others: reinvested profit, depreciation expenses. External capital includes share capital increase, issue of shares/bonds, Venture Capital. The sources of capital can be divided into private capital (credits, loans, factoring) and public capital (subsidies from the state budget or public entities). In addition, there are other options for dividing sources of

capital. It is worth emphasizing that enterprise financing is closely related to the cost of capital and risk (Sosnowska et al., 2003).

Financial needs and the availability of various types of capital sources are closely related to the stage of development of a given organization. At the initial stage of business development, due to the lack or little experience, the enterprise may have limited access to external sources of capital. In the initial phase when research is developed and carried out, there is great uncertainty about the emergence of innovations and their quality. Enterprises usually finance their activities with equity. It is also possible to get money from crowdfunding. It is an increasingly popular way of financing young, innovative companies (Hervé, and Schwienbacher, 2018). It is also possible to receive public support at this stage. The market usually provides less money for innovation than the companies need. For this reason, many governments develop innovation policies that allow them to subsidize the innovative activities of enterprises. Authorities can use various instruments, such as research and development grants, pre-commercial procurement, tax breaks (Hölzl, and Peneder, 2019). With the development of the enterprise and the increase in the advancement of innovative activities, new opportunities for obtaining capital appear. Business angels or venture capitalists who are knowledgeable about new technologies and who can take a lot of risk can secure money for the company. Mature enterprises can obtain money from more traditional capital suppliers (bank, capital market). This allows for further expansion of the company and carrying out innovative activities on a larger scale (Figure 1) (Ottosson, 2019).



**Figure 1.** Sources of financing an innovative company depending on the stage of its development. Source: own study: Rossi, M., Lombardi, R., Siggia, D., & Oliva, N. (2015). The impact of corporate characteristics on the financial decisions of companies: evidence on funding decisions by Italian SMEs. *Journal of Innovation and Entrepreneurship*, 5(1), p. 3.

Access to these mentioned sources depends on the size of the enterprise. Large organizations can more easily finance their activities using their own funds, obtaining a bank loan, issuing bonds or raising capital on the stock exchange. Small and young enterprises have much more limited funding opportunities. They often have to rely on capital borrowed from family or friends before they can obtain capital from other sources (Bravo-Biosca et al., 2012).

## 6. Summary

Innovations are the basis for the functioning of enterprises in competitive markets. Innovative enterprises are able to adapt to environmental conditions and quickly respond to the needs of consumers. They are characterized by high expenditure on research and development, introducing new products and services to the market, and the use of modern technologies. Above all, they are the sources of knowledge generation through highly qualified employees. The presented research confirms the positive relationship between the increasing size of the company and the growing level of innovation. In the case of the relationship between the development stage and innovation, it is indicated that younger companies are more inclined to implement innovations than mature ones. It is worth noting that both large and more developed enterprises have greater opportunities to obtain capital for their innovative activities, due to their experience and the possibility of securing them. Small and young companies usually struggle with financial problems using their own funds or borrowing cash from friends. Young companies usually have a high innovation potential, while mature companies introduce small changes that allow them to maintain their long-standing position on the market.

It is impossible to clearly indicate the features of an innovative company, because the degree of innovation of companies, in addition to size and maturity, also depends on many other factors type of implemented innovation, sort of enterprise, industry or business model.

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