



Perception of entrepreneurship as alternative to facing the post-pandemic crisis

Percepção do empreendedorismo como alternativa para enfrentar a crise pós-pandêmica

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Abstract

This article aims to identify the perception of a group of incubated projects about the importance of entrepreneurship as alternative to face the economic crisis due to the new coronavirus pandemic. Entrepreneurship is a transversal subject to many areas of research and has been the object of study within themes such as economic, technological and innovation. The crisis in several sectors caused by the pandemic of the new coronavirus, raised other research possibilities. With a qualitative approach and through the case study method, using a structured questionnaire, it sought to investigate a group of companies/projects incubated in

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a technology-based business incubator, in the municipality of Mossoró in the state of Rio Grande do Norte. With the results, it was possible to verify that incubated have a positive perception about the importance of entrepreneurship in facing the crisis, thus pointing out that it is an alternative for the post-pandemic crisis period.

Keywords: Entrepreneurship. Crisis. Incubator. Post-Pandemic.

Resumo

Este artigo tem como objetivo identificar a percepção de um grupo de projetos incubados sobre a importância do empreendedorismo como alternativa para enfrentar a crise econômica devido à nova pandemia de coronavírus. O empreendedorismo é um tema transversal a muitas áreas de pesquisa e tem sido objeto de estudo dentro de temas como economia, tecnologia e inovação. A crise em vários setores causada pela pandemia do novo coronavírus, levantou outras possibilidades de pesquisa. Com uma abordagem qualitativa e através do método de estudo de caso, utilizando um questionário estruturado, procurou investigar um grupo de empresas/projetos incubados em uma incubadora de empresas de base tecnológica, no município de Mossoró, no estado do Rio Grande do Norte. Com os resultados, foi possível verificar que os incubados têm uma percepção positiva sobre a importância do empreendedorismo para enfrentar a crise, apontando assim que é uma alternativa para o período pós-pandêmico da crise.

Palavras-chave: Empreendedorismo. Crise. Incubadora. Pós-Pandêmica.

Introduction

Society has evolved over the years, especially from the point of view of technological and economic development. The means of production, producing organizations, teaching and research institutions, as well as governments, have had to keep up with this change due to a latent need to adapt and prepare for increasingly complex and urgent challenges (Silveira, 2020).

In this sense, there is a promising methodology that aims to identify the source that generates knowledge-based socioeconomic development to improve university-industry-government interactions called Triple Helix, which presents ways to examine local strengths and weaknesses and fill gaps in this interaction, with the aim of developing a successful innovation strategy (Etzkowitz and Zhou, 2017).

Initially, the Triple Helix model was very rigid, as each agent had its previously defined and static functions (Da Costa, Souza, De Castro, 2020). Organically, the environment itself, that is, the innovation ecosystem demanded an evolution of the model, and in this change the academy was the most affected, going from just a generator of basic science to a developer of solutions by fostering entrepreneurship and innovation actions, based on its science (Soares and Prete, 2018).

Entrepreneurship is a term that is usually linked to innovation, and it becomes complex to argue about one without intertwining the other in the same context. Innovation, according to the Organisation for Economic Co-operation and Development (OECD, 2005), is the placing on the market of an entirely new or significantly improved product or service in relation to an existing version, it is also linked to a new organizational activity, a method, a management tool. And yet, innovation can be in an organization's marketing process, in a way that its business model is impacted.

Second Vieira *et al* (2011), At the same time, entrepreneurship can be considered an extremely dynamic and open system, that is, it is influenced by external agents, but has a unique ability to manage the resources involved in this social process (material resources, intellectual and social resources), everything working as a great system that aims to collect and work demands, and deliver some concrete solution to society (*inputs - transformation - outputs*).

According Da Silva (2017), entrepreneurship has been characterized as a kind of phenomenon of social relations, with a prominent status at a global level, as its influence on the dissemination of knowledge about the dynamics of the relationship between companies, governments, academia and the consumer market has been of great relevance. Due to this success, entrepreneurship has increasingly attracted the attention of scientists, and many works are published in large and influential science and business journals.

Entrepreneurship as a research area has been on the rise since the 1980, where many researchers with different conceptions on the subject have increased the discussions and analyzes on the subject, which has presented itself as a phenomenon capable of changing the characteristics of the market through innovation. (Ladstrom *et al.*, 2012). Currently, entrepreneurship has become something widely discussed within the themes of economic and technological development.

In this way, it can be seen that the innovation process, in order to be characterized in this way, must be objective, something has to be delivered to the applicant or available to the consumer market. Thus, the relationship with entrepreneurship begins in a more concrete way,

since entrepreneurial activity is necessary so that demands are identified or even encouraged, and it is through the activities of a company that innovations reach the market. This is the most traditional cycle of generating innovative solutions, and can be confirmed by Miguez and Lezana (2018) when he states that the leadership practiced by the entrepreneur positively influences decision-making, the development of strategies and the ability to innovate, so much so that Brazil has improved its ability to innovate as it has increased its ability to perceive opportunities and develop new products.

The academy, not only in Brazil, has a prominent role in fostering entrepreneurship and innovation, especially for its ability to generate and transfer knowledge and technology, in addition to dominating the field of scientific research (Champenois and Etzkowitz, 2018). In this sense, universities ceased to act as supporters of the innovation process and began to develop solutions, enabling the creation of intermediary institutions, such as technology transfer offices or science parks, which facilitated the capitalization of knowledge through formal channels (Arrows, Takahashi and Figueiredo, 2022). For example, during the outbreak of the COVID-19 pandemic in 2020 (Wang, Cheng, Yue and McAleer, 2020), which made the importance of universities and the institutions created through them even more evident.

Among these intermediary institutions there are the so-called business incubators, which have gained a lot of importance in recent years and are characterized as a strong arm of the academy in the generation of innovative companies and in the dissemination of knowledge about the subject. According to the National Association for the Promotion of Innovative Enterprises (2020), Incubators can be conceptualized as entities whose primary objective is to stimulate innovative entrepreneurship, and act in the generation of innovative companies based on a qualification cycle called business incubation, which offers management support from (mentoring, consulting and advisory), access to the academic network, in some cases offering temporary physical space for the beginning of activities.

Incubators have a relevant representation of the functioning of Triple Helix, with university-company integration, and have gained notoriety in contemporary times. They arrived in Brazil in the 90, ten years after the worldwide movement led mainly by countries like the United States in the 80 (De Azevedo, 2016), birthplace of these organizations and where large companies emerged that had this support in their creation and initial formation.

For Silva (2018), incubators provide a great impact on the lives of entrepreneurs, as they increase the chances of generating successful innovative companies, enabling the generation of social development, economic and human, act as an instrument of integration of teaching, research and extension aimed at solving society's problems acting as a catalyst,

providing assistance and support to the initial stage of enterprises, in addition to favoring knowledge, organizational autonomy and economic viability.

In view of the above, this study is salutary, which aims to identify the perception of a group of incubated projects on the importance of entrepreneurship as an alternative to face the economic crisis due to the new coronavirus pandemic. To achieve this general objective, the following specific objectives are set: to map the enterprises incubated in the incubator studied, exploring geographic location, area of operation, profile of entrepreneurs, and whether it is a formal company or startup project; and identify the perception of those responsible for the projects/incubated companies about the potential to face the economic crisis through innovative entrepreneurship.

Methods

This research is characterized in terms of its methodological approach as qualitative, which, according to Gil (2021), is the most appropriate to know the essence of a phenomenon, describe the lived experience of a group of people, understand integrative processes or study cases in depth, as well as carry out a systematic search on values, attitudes, perceptions and motivations on a certain thematic subject (Gonçalves e Meirelles, 2002), in this case entrepreneurship as an alternative to face an economic crisis caused by a global pandemic.

In relation to the research objectives, it has a descriptive character, which, according to Freitas *et al* (2000), it is in this type of study that a search resides in the sense of describing the detailed characteristics of what is being considered the phenomenon in question, identifying opinions, attitudes and perceptions of a certain population selected as research subjects.

The research has the case study method, as it aims to study a group of companies/projects formally incubated in a technology-based business incubator, located in the municipality of Mossoró in the state of Rio Grande do Norte, being linked to a Higher Education public institution. Gil, in a study of (2010), explains that the case study consists of a deep and exhaustive research of one or a few objects, making it plausible to provide detailed and broad details about the phenomenon researched in that universe.

Considering the previously structured methodological procedures, as well as the choice, for accessibility, of an incubator of the local entrepreneurship and innovation ecosystem that has more than a decade of constant activity, it becomes feasible to reach the

objectives outlined and the construction of a study that demonstrates the reality of perception of the universe successfully approached.

How collection instrument with the incubated companies, the structured questionnaire was chosen, because it is the most suitable for the descriptive character of the research, which normally uses standardized data collection techniques, and has the questionnaire as its main tool (Andrade, 2012) the Google Forms tool was used to create the questionnaire, and it was sent to the research participants via e-mail.

The sampling technique used was the intentional non-probabilistic type, which, according to Goode and Hatt (1979), is employed when a sample is deliberately chosen because it has peculiar characteristics that are believed to be specific to the observation of the phenomenon.

Results and Discussion

Based on the data collected from the forms applied in the mapped innovative ventures, 57,1% of the projects were placed as service developers, while only 14,3% of the projects were characterized with solutions in the product format. The percentage of 28,6% of the projects that pointed to a hybrid reality was also identified, that is, they develop solutions that have characteristics of products and services at the same time.

In the applied questionnaire, seven types of economic areas of activity were placed as an answer option, so that one could be chosen as its area of focus, obtaining the following result as shown in Table 1.

Area	Quantity	Percentage
Agribusiness	4 projects	57,1%
Consulting sector	1 project	14,3%
Information Technology	1 project	14,3%
Other sectors	1 project	14,3%

Table 1. Economic areas of activity of the projects

Font: Own authorship, 2021.

It is possible to highlight that most of the projects mapped are aimed at the agribusiness sector, a fact that corroborates the focus of the incubator studied in having a special look at the agribusiness sector. In addition, it can also be stated that the characteristics of the city of Mossoró and the state of Rio Grande do Norte are aligned with the high percentage of projects aimed at agribusiness, as it is the area with the greatest economic impact in this region.

When asked about the number of solutions currently being developed by the enterprises, it can be inferred that most projects are developing more than one solution, reaching a maximum of seven solutions in one of the projects addressed (Figure 1). This denotes an effort to expand the portfolio of innovative solutions, given that it is natural for projects to work with just one innovative solution in the selection process for entry into the incubator.

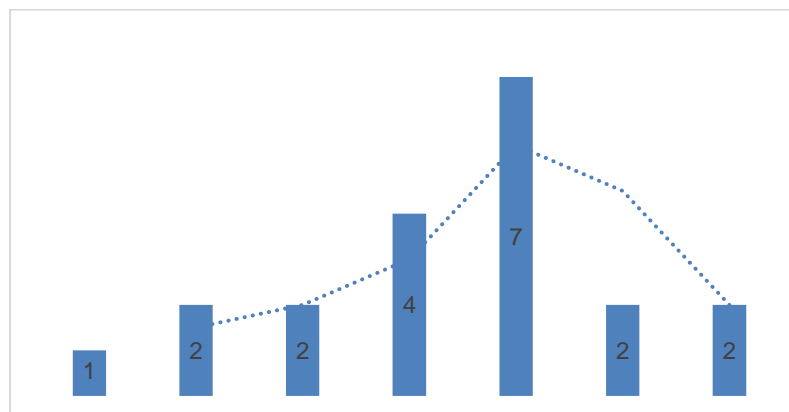


Figure 1. Number of solutions developed

Font: Own authorship, 2021.

Still regarding the incubated ventures, it was possible to observe that the number of members participating in the projects is quite diverse, ranging from a maximum of six participants in a project, having a project with five members, and the reality that is most repeated is the amount of four people in the same enterprise in the case of three companies. Finally, only one project has two members as partners. It is important to point out that all the projects discussed are still in the initial stage of development, which leads to the fact that no project so far generates revenue with its technological solutions. Still at the heart of this characterization of the researched projects, only one is from the city of Caraúbas, with all the others located in the municipality of Mossoró.

In order to identify the respondents' perception of the importance of entrepreneurship in facing the economic crisis in the post-pandemic period, the Net Promoter Score metric scale was used. (NPS) that allows a more assertive feedback about a certain perception of the researched.

The first question in this regard was about your perception, on a scale of 0 to 10, about the level of importance that entrepreneurship has in facing the post-pandemic economic crisis, obtaining as feedback a percentage of 57,1% of the projects indicating level 10 of the scale, that is, they think that the importance is maximum in relation to entrepreneurship as an alternative to facing the post-pandemic crisis. Already 28,6% of the projects chose level 8 on

the NPS scale, and only one of the projects pointed to level 9. Thus, there is a variation by projects between the three highest levels of the scale (7, 8 and 9) that give relevance to entrepreneurship as a tool.

Another question was about the perception of entrepreneurs, on a scale from 0 to 10, of the importance that innovation has in the maintenance and implementation of small businesses in Brazil, obtaining as feedback five projects indicating the maximum level of the scale, while two projects indicated level 9, which denotes a clear perception of the importance of innovation for companies to face the crisis. In addition, 100% of the projects highlighted that innovation is essential for small businesses today, which demonstrates that these entrepreneurs already have a more professional and in-depth view of the innovation ecosystem and its importance for small businesses.

The enterprises surveyed in their entirety indicated that support for innovation was an extremely important point for the search for the services of a business incubator. Also in this sense, 42,9% of the projects indicated the maximum level on the NPS scale regarding the importance of the incubation process for the success of their future business, while 28,6% scored level 9 in this regard, and the same 28.6% think level 8 is the most suitable for this quest.

In order to confront the analyzes made based on the objective answers performed via the NPS scale, an open and subjective final question was elaborated with a descriptive answer about what entrepreneurship means, obtaining three answers.:

“Entrepreneurship is related to developing actions and ideas that cause a relevant and positive impact on the communities where the enterprise is inserted, seeking to solve problems or improve practices.” (Project 1);

“Entrepreneurship is the ability to pool human and financial resources for personal and social improvement.” (Project 2);

“It is the ability to identify a problem, and from this, the individual entrepreneur sees a solution, thus creating a business opportunity that can yield good economics” (Project 3).

Conclusions

Based on the discussion carried out, it can be argued assertively that the perception of incubated projects is largely positive regarding the importance of entrepreneurship in facing the post-pandemic crisis. It can be said that there is a common understanding about entrepreneurship and innovation as activities with high potential for generating new

companies, maintenance and leverage of existing ones, all in the sense of significantly impacting actions to face the economic crisis in the post-pandemic period.

It is noticeable that the speeches of the research subjects converge with the data collected in the objective part of the data collection instrument, and it is possible to point out Entrepreneurship as an alternative to the crisis period, as, in theory, it has ample condition to collaborate to leverage the economy through the maintenance, improvements and creation of new innovative companies with the potential for success and wealth generation.

This research can be extended to other incubated and graduated projects that did not participate in this data collection, as well as for future research that may involve entrepreneurship issues of incubation processes.

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