

Original Article

Brazilian Incubators: Study on the Support Process and Service for Incubated Ventures

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Abstract: Incubators are defined as a dynamic business development process and an economic development tool. The primary objective is to analyze the leading incubators in Brazil's Northeast Region and determine how they facilitate the development of incubated ventures. These entities play a pivotal role in fostering the conversion of promising concepts into thriving enterprises, thereby contributing to economic and technological advancement. To achieve these objectives, a quantitative and bibliographic methodology was implemented for data collection and analysis. Consequently, the findings shed light on the support mechanisms provided by incubators and the factors that underpin this process, as well as the key elements necessary to cultivate an environment conducive to the growth and success of nascent businesses. It is evident that the capacity to deliver high-quality, tailored support distinguishes successful incubators, empowering incubated companies to surmount obstacles, refine strategies, and flourish. As these enterprises evolve and distinguish themselves, the positive impact of the incubator on entrepreneurial growth and innovation becomes apparent, solidifying its significance in the market and the entrepreneurial ecosystem. Thus, the success of incubated companies serves as a crucial indicator of the efficacy of the incubator, underscored by the support provided by each.

Keywords: Business Incubator, Support, Service, Innovation.

1. INTRODUCTION

Innovation has assumed an increasingly vital role across various sectors worldwide. Therefore, innovating may be a prerequisite for gaining prominence and achieving significant outcomes in the market. According to Harrington and Voehl (2020), innovation involves individuals creating value through the implementation of new, creative, and unique ideas that generate measurable added value for the organization's stakeholders. Based on this context, innovation is a key element for the creation, development, and implementation of new ideas, products, processes, or services to drive continuous improvement and seek innovative solutions for the labor market and societal challenges.

However, despite being a contemporary term, innovation has ancient roots. It was through the economist Joseph Schumpeter that the term gained popularity in the twentieth century. According to Bozeman (2000), innovation involves the commercial introduction of a new product or a new combination of something already existing, created from an invention belonging to the realm of science and technology. This emphasizes the role of innovation as a significant driver of economic growth and the business cycle. He defined an invention as an idea, sketch, or model for a new or improved artifact, product, process, or system.

Thus, entrepreneurs are also innovative individuals seeking to turn ideas into concrete actions, facing challenges and uncertainties to achieve success. Entrepreneurship also plays a fundamental role in the economy by stimulating job creation, driving innovation, and promoting economic development. In this context, for new innovative ventures to be established in the labor market, business incubators play an important role in supporting their development and growth. Therefore, business incubators are often seen as catalysts that enable the transfer of knowledge and innovation through the commercialization of providing office spaces, equipment, mentoring services, venture capitalists, as well as other administrative supports for entrepreneurs (Sansone et al., 2020).

According to Monteiro Neto (2001, p. 124), business incubators are characterized by their role in establishing an entrepreneurial culture, empowering entrepreneur-business owners, supporting job creation, and revitalizing businesses. They also contribute to reducing the failure rate of new micro and small businesses, introducing new products, processes, and services to the market, and facilitating collaboration between companies and educational and research institutions. Additionally, they play a crucial role in consolidating micro and small companies with growth potential and fostering the integration of new technologies into these businesses.



This study underscores the importance of business incubators in fostering the growth and development of new ventures. In addition to driving regional development and job creation, incubators strengthen the local entrepreneurship ecosystem, thereby positively impacting the region's economy.

Given the importance of fostering innovative development in incubated companies, it is essential to analyze the support provided by incubators and develop strategies to create an environment conducive to innovation and growth. Thus, it is relevant to identify the key incubators in the Brazilian Northeast region, including their locations, market areas, methodologies, and support processes, as this information can help leverage innovative ideas in the market.

In this context, this article aims to analyze the main business incubators in the Northeast Region of Brazil, identifying the support processes and services offered for the development of incubated ventures.

The paper is organized in the following way: Section 2 presents a discussion of the literature review, which is at the incubator's context and models. Furthermore, the section refers to the incubation process and support. Section 3 focuses on the research method and the main findings of the analysis. Section 4 offers a detailed discussion of the findings, concludes with the limitations of the research and gives directions for further research.

II. LITERATURE REVIEWS

A) *Incubators Context*

The first activities related to business incubation emerged in the United States in the mid-1960s. From there, the success of the venture continued to grow, prompting similar initiatives in Western European countries such as England, Spain, the Netherlands, France, Germany, Belgium, Italy, and Finland, and later in Eastern Europe, Japan, China, and India, and subsequently in various other locations (Lunardi, 1997).

In Latin America, according to Lunardi (1997), Brazil was the first country to implement a business incubator in 1985 in the city of São Carlos (SP). Subsequently, these initiatives expanded to other municipalities such as Campinas and São José dos Campos. Later, they spread to other regions, including Florianópolis (SC), Campina Grande (PB), Brasília (DF), Rio de Janeiro (RJ), Curitiba (PR), and Porto Alegre (RS). Currently, according to data from ANPROTEC (National Association of Promoters of Innovative Enterprises), Brazil has become a global example in the creation of incubators.

The development of incubators was also driven by the establishment of the Technology Parks Program, implemented in 1984 by the National Council for Scientific and Technological Development (CNPq), an agency of the Ministry of Science, Technology, and Innovation (MCTI). In this context, business incubators have a rich and multifaceted history, shaped by economic, technological, and social changes. Thus, they continue to play a crucial role in supporting entrepreneurship, promoting innovation, and driving economic development on a global scale.

The principal representatives of innovative enterprises in Brazil, specifically the National Association of Promoters of Innovative Enterprises (ANPROTEC) and the National Business Incubation Association (NBIA), define incubators as a dynamic process of business development and an economic development tool (NBIA, 2001) and according to ANPROTEC (1998), it is a flexible and encouraging environment where facilities are offered for the emergence and growth of new enterprises. Therefore, it is observed that the diversity of definitions in the literature regarding the concept of business incubators stems from the evolution and innovation over the years; as stated by Vedovello (2000, p. 280), there is no single definition that can be applied to all technology parks and business incubators, due to the fact that these mechanisms present a very large diversity and heterogeneity in relation to their models. In light of the above, it is necessary to highlight some definitions as shown in Table 1 below:

Table1 - Incubators context

Authors	Concepts
Uggioni (2002)	A planned facility designed to support the development of innovative enterprises, providing various services and assistance for the initiation of emerging high-technology ventures or traditional businesses.
Bhabra-Remedios and Cornelius (2003)	They are networks supporting technological innovation, formed by a dynamic process where young companies are nurtured to survive during periods of uncertainty, especially during the initial phase of the business.
Grimaldi and Grandi (2005)	They serve as an effective means of linking technology, capital, and know-how to foster entrepreneurship, stimulate the creation of new businesses, and accelerate technology exploitation, providing flexible space and sharing administrative equipment and services.

Luzzardi; Oliveira; Duhá (2006)	Entities capable of assisting new businesses through the formation of strategic partnerships and innovation training, being an important mechanism for job creation and regional and national development.
Dornelas (2007)	They are mechanisms maintained by governmental entities, universities, and community groups, among others, that use an environment where facilities are offered for the emergence and growth of new ventures.
Bergek and Norrman (2008)	Encompass organizations that have a joint location and provide support through services to companies participating in the network during the initial phase of the venture.
Raupp and Beuren (2009)	They comprise a conducive environment for the development of new businesses that facilitates access to knowledge and entities providing financing.
Honig and Karlsson (2010)	Organizations whose purpose is to support the creation and growth of new businesses by providing a shared office environment and clustering of new and small businesses.
Hausberg and Korreck (2020)	They support the establishment and/or growth of new businesses as a central element of their organizational objective.

Based on the concepts presented above, it is noticeable that the concept of business incubators has evolved over time to adapt to changes in the innovation landscape, as well as in business and technological contexts. Initially, however, incubators were primarily seen as physical spaces that provided office rooms and shared resources for nascent businesses.

Nevertheless, this concept has evolved to encompass a variety of models, types, and services within the scope of incubators. They have innovated by offering services beyond physical space, such as mentoring, training, and access to online resources. Additionally, a current characteristic is the specialization of each incubator's sectors. Therefore, the evolution of incubator concepts reflects the current diversification of models, types, and services aimed at the growth and development of new ventures. Thus, this evolution demonstrates the adaptability of incubators to market changes, technological advancements, and the dynamics of entrepreneurial businesses. Consequently, modern-day incubators play a crucial role in driving innovation, promoting economic development, and shaping a robust and diversified entrepreneurial ecosystem. This relationship between business incubators and innovation and technology underscores their significance in fostering entrepreneurial endeavors.

B) Incubators Models

According to Anprotec (2023), incubators can be classified based on the specific areas in which companies operate: solidarity economy, technology-based, and traditional. Solidarity economy incubators involve a significant number of people from their inception but are limited in growth by geographical and organizational characteristics (e.g., cooperatives). Technology-based business incubators typically consist of individual ventures or small groups of partners. They focus on producing high-value-added goods and services with market potential, showing growth throughout the incubation and graduation process. Incubators focusing on traditional products and technologies have the highest ratio between the average sizes of graduated and incubated companies.

Similarly, Inovates (2014) indicates that incubators are considered centers that foster entrepreneurship, presenting new classifications: Cultural incubators, supporting ventures in the cultural sector such as music, sculpture, photography, cinema, and events, among others; Social incubators, supporting ventures from social projects linked to traditional sectors whose knowledge is public domain, addressing the demand for employment, income, and improved quality of life in the community; Agro-industrial incubator, an organization housing ventures in agricultural and livestock products and services to facilitate entrepreneurial and technological innovation processes; and Cooperative incubator, supporting cooperatives in formation and/or consolidation, located within or outside the municipality, with the aim of creating jobs and income.

On the other hand, according to the Ministry of Science and Technology (MCT, 1998), incubators are classified into three different models (Technological, Traditional, and Mixed). From this standpoint, the Technology-based Business Incubator incubates companies that produce products or services based on applied research results where technology is the main foundation. The Traditional Sector Business Incubator is related to the regional economy, disseminating technology to add value to its products or services with the purpose of absorbing and developing new technologies. In conclusion, the Mixed Business Incubator incubates companies from the two aforementioned models.

Therefore, according to Grimaldi and Grandi (2005), incubators are classified into four main types: Business Innovation Centers (BICs), which offer basic services to tenant companies, including space, infrastructure, communication channels, and funding information; University Business Incubators (UBIs), created by universities to play an entrepreneurial role in generating and disseminating scientific and technological knowledge; Independent Private Incubators (IPIs), established by individuals or groups to assist entrepreneurs in creating and developing businesses; and Corporate Private Incubators (CPIs), owned by large companies to support the emergence of new independent business units.

Based on the above, Grimaldi and Grandi (2005) argued that with the evolution of the incubator industry, it was appropriate to develop two incubation models, with BICs (public) aiming to provide tangible assets on one end and private incubators (CPIs and IPIs), whose services are oriented towards more intangible and high-value assets, on the other end, and university business incubators (UBIs) aiming to provide knowledge-based companies with continuous access to advanced scientific and technological knowledge, academic infrastructure, and laboratories and equipment.

In theory, incubators can also be classified into two basic types, according to Moreira (2002): public or private. Therefore, the author identifies that public incubators are those that aim to create opportunities for society and are supported by the government, emphasizing that they are nonprofit, as their origin is associated with foundations and institutions that manage them. Conversely, private incubators involve financial and institutional investors or Business Incubators formed by large companies that develop this type of program with the purpose of creating new technologies and businesses. Therefore, private incubators are for-profit, and their admission process is more restricted than public ones.

C) Incubation Process

The process used by business incubators corresponds to the stages and requirements that each business faces during its incubation. Therefore, these incubation phases are essential for planning, organizing, and controlling the companies. According to Moreira (2002, p.60), during this time, the company is accompanied by the incubator team, which works to organize it managerially and thereby improve its chances of success and permanence in the market.

However, the initial process of selecting companies for incubation is provided for in Law 13,243/2016, which, in article 3o-B, paragraph 1º, states that business incubators will establish their rules for the selection and admission of companies (BRAZIL, 2016). Thus, the rules for selection and admission are at the discretion of each organization. However, most of the time, they are disclosed through a notice or form published by the incubators themselves or by universities and technology parks that are interconnected with the incubators.

In this way, the process that the company participates in is divided into stages, each with distinct characteristics and functions. Therefore, it is noted that some authors present studies where the number of phases and their objectives can vary. Below in Table 2, some stages that can be applied during the incubation process will be presented.

It's evident that Moreira (2002) outlines five stages inherent to the incubation process, adding one more compared to Medeiros and Atas (1995). Despite this disparity, there are notable similarities between the two. Furthermore, Russi Junior (1999) introduces a distinct stage focused on product or service launch, albeit the remaining stages align closely with those presented previously. This evolution underscores the dynamism and sophistication of the incubation process, reflecting the evolving demands of the innovation ecosystem. Given that Moreira's (2002) stages generally encompass others and are widely adopted in contemporary incubation practices, let's delve into each point in detail:

1. **Selection Stage:** In this stage, the selection of potential ventures to be inserted into the business incubator occurs, representing the first stage of the incubation process that can be carried out through a notice or online form. Thus, for the company to progress, it needs to meet the requirements demanded by the incubator. Also, in this first contact with the incubator, a business plan is requested from the participants to verify their objectives and proposals.
2. **Incubation Stage:** This stage is defined as an intermediary phase between selection and development; therefore, during the incubation process, formalizations take place where the infrastructure needs are evaluated, the terms of the contract are presented, the rules and norms of the incubator, contract signing, and company installation. Thus, according to Moreira (2002), it is at this stage that the business plan is pre-approved and sent to the institution's board with the objective of analyzing it for possible final approval. So, in case of approval, the procedure follows for contracting, and in case of rejection, the board presents the points that need improvement and may request correction.
3. **Development Stage:** In this phase, the incubated company begins its activities with the purpose of developing commercial strategies for its business, planning its functions, organizing processes, and controlling resources. It is a challenging stage that interferes with the final result of the business, as most activities and resources are for product development. However, Moreira (2002) emphasizes that problems related to possible delays in the development process, team issues, lack of resources, and lack of planning on the part of the entrepreneur of the incubated company are usually the rule during this phase, and the entire process is monitored.
4. **Growth Stage:** This stage demonstrates the progress of the processes defined in the previous stage, so the incubated company must have growth strategies for its business. According to Moreira (2002), the company needs to seek commercial development, conquer new market opportunities or reach new consumer markets. Thus, this stage is

considered to have the longest duration than the others, since the incubated companies must present characteristics of managers and autonomy that do not require support to manage their business.

5. **Release Stage:** This last stage is called release because it results in a possibly positive outcome of the incubation process. In the release stage, the company has completed all stages and can leave the incubator, as its performance has reached a level that allows it to continue its development autonomously. Since the incubators consist of limited space for incubated companies, when it reaches a level of expansion that provides opportunities for other incubated companies to participate, it represents the detachment of the incubated company from the incubator because, after going through all the stages and acquiring experience and development, they are able to continue operating independently in the market.

On the other hand, according to Uggioni (2002), the incubation process consists of the following steps:

1. **Implementation:** This stage involves the establishment of the company, the formation of the team and the business, as well as obtaining investments to carry out its activities.
2. **Growth:** This can be called development, as in this stage, there is technical improvement of the products, processes, and services that the incubated companies want to develop and carry out their commercialization.
3. **Consolidation:** This stage prioritizes the maturation of administrative, financial, and technical issues of the business.
4. **Graduation:** This stage determines the end of the formal involvement of the incubator with the company; therefore, the company must be able to operate independently.

In summary, all these stages that constitute the incubation process are currently being used by business incubators with other denominations but with the same objective; according to the Brazilian Service of Support for Micro and Small Enterprises (SEBRAE), the incubation process is classified into the following stages: pre-incubation, incubation, post-incubation, and graduation.

1. **Pre-incubation:** In this stage, the incubator can provide services such as guidance for creating business plans, assistance in identifying sources of financing, and support for creating prototypes and market testing; however, it occurs before the incubated company is formally established.
2. **Incubation:** The first action of this stage is to formally establish the company to then offer support in areas such as product development, marketing, human resources, finance, and operations, as well as provide physical space, shared services, and access to networks of investors and mentors.
3. **Post-incubation:** In this stage, the incubated company must be able to operate independently and seek additional financing if necessary; thus, the company continues to receive support from the incubator on a more limited basis.
4. **Graduation:** This stage determines the end of the formal involvement of the incubator with the company; therefore, the company must be able to operate independently.

In this context, it is observed that the stages of the incubation process of companies, which comprise pre-incubation, incubation, post-incubation, and graduation, highlight the vital importance of this cycle for the sustainable and successful development of new ventures. Therefore, business incubators are organizations whose purpose is to promote the growth and economic development of a region; therefore, during all stages of incubation, support is offered to assist incubated companies in their formation, growth, and development.

Therefore, the incubation process is a crucial path to transforming ideas into successful ventures. Each stage plays a specific role in the development and growth of companies, providing support, guidance, and necessary resources to overcome challenges and achieve maturity to consolidate in the market. Thus, the complete incubation process, from pre-incubation to graduation, represents a continuous responsibility and commitment to entrepreneurship and innovation, contributing to the strengthening and diversification of the regional economy through incubated ventures.

In addition to processes, Lingfang and Hongli (2010) present two types of benefits that business incubators offer as support for incubated businesses: tangible and intangible benefits. Therefore, tangible benefits are considered to be related to lower operational costs. In contrast, intangible benefits are related to moral support, counseling, and dialogue with other incubated companies aimed at interactions and information exchange. In Table 2 below, some supports provided by the incubators to the incubated companies are presented according to Dornelas (2002).

Table 2: Support offered

Infrastructure	Basic services	Advisory	Qualification	Network
<ul style="list-style-type: none"> • Individual Rooms • Collective Rooms • Laboratories 	<ul style="list-style-type: none"> • Telephony • Internet Access • Receptionist 	<ul style="list-style-type: none"> • Management • Accounting • Legal 	<ul style="list-style-type: none"> • Training • Courses • Training sessions 	<ul style="list-style-type: none"> • Municipalities • City Halls • Universities

<ul style="list-style-type: none"> • Computers • Auditorium • Library • Meeting Room • Reception 	<ul style="list-style-type: none"> • Security • Photocopying • Electricity • Cleaning 	<ul style="list-style-type: none"> • Production • Financial • Marketing • Export • Sales 	<ul style="list-style-type: none"> • Access to databases • Forums • Congress 	<ul style="list-style-type: none"> • Companies • Fairs
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Therefore, based on what was presented in Table 3 above, it can be observed, in general, the support possibly offered by the business incubators, bearing in mind that they may vary since each incubator has its own set of resources offered. However, they share a common goal regarding the support process, which aims not only to accelerate the development of companies but also to increase their chances of success in a highly competitive business environment.

The first point presented in Table 3 is the Infrastructure offered by a business incubator, which may vary depending on the institution, its location, and its focus. However, they are generally designed to provide a conducive environment for the growth and development of new ventures, which may include the following elements: physical office space, which may include private offices, shared workstations, and coworking areas; auditoriums for events or meetings; access to laboratories, specialized equipment, and research facilities, which may be crucial for product development. Another essential support presented is basic services such as reception, printing, telephone answering, mail, high-speed internet access, and telephone services; thus, these services focus on assisting with routine tasks.

Similarly, the support presented above on Advisory and Qualification generally offers some factors such as administrative, financial, and accounting advisory, as well as personalized guidance and counseling to help entrepreneurs make appropriate decisions, develop effective strategies, and identify challenges and opportunities as well as business plan development, training, and workshops with various different themes that are relevant to each field of activity, which may include topics such as business planning, strategy, marketing, financial management, product development, and specific skills, such as presentation skills, negotiation skills, communication skills, and other professional skills.

Consequently, the last item in Table 3 regarding support is Networks that play a fundamental role in providing resources and opportunities for incubated companies, which may be universities and higher education institutions that provide access to research, laboratories, academic resources, and volunteers, local, state, or federal government agencies to access grant programs, tax incentives, and financial support. Similarly, partnerships with companies and corporations can provide collaboration opportunities, investment, and product development, and with nonprofit organizations that focus on specific causes, such as health, education, environment, or social innovation. Thus, it is related to law firms and accounting firms in order to provide legal and accounting services that are essential for legal matters, tax issues, and regulatory compliance.

Therefore, it is essential to emphasize the importance of the support offered by the business incubator, whose goal is to leverage the growth and success of the incubated companies. In summary, the support is to help avoid common mistakes and also assist in their decision-making, where they will share business strategies, product development, marketing, finances, and other important aspects for the business to sustain and develop in the job market. In this context, it is observed that business incubators not only offer physical space for business development but also cultivate an enriching environment that fosters creativity, resilience, and entrepreneurial vision. Therefore, throughout the support process offered, the essential contribution to the construction of a solid and efficient business community is notable, where incubated companies have the opportunity not only to establish themselves in the market but also to thrive in the dynamic business scenario by adapting to innovations and technologies.

III. METHODOLOGY

According to Prodanov and Freitas (2013), methodology is the application of procedures and techniques that must be observed for the construction of knowledge, with the purpose of proving its validity and usefulness in various spheres of society. Therefore, this research is considered quantitative, being applied, exploratory, and bibliographical. According to Prodanov and Freitas (2013), quantitative research considers that everything can be quantified, which means translating opinions and information into numbers to classify and analyze them. It requires the use of resources and statistical techniques (percentage, mean, mode, median, standard deviation, correlation coefficient, regression analysis, etc.).

Hence, given the lack of analysis of the support offered by the incubators, which can lead to unsuccessful businesses, it is important to aim to understand the functioning and process of support provided by the incubators. In this context, being a bibliographical research since, according to Gil (2008), this type of research is developed through references of materials already elaborated. Thus, the theoretical framework of the work was developed presenting topics correlated with the main themes on the historical context and definition of incubators, as well as the models, incubation process, and support offered.

Based on the objectives of the work, books, scientific articles, Google Scholar, magazines, websites, digital platforms such as Instagram and LinkedIn, as well as theses were used as theoretical background in order to substantiate the analysis of the data. Therefore, these tools and sources were essential for the understanding and validity of their results, which will be presented in the results and discussion section of the work.

In view of this, the research was based on three stages: survey, data collection, and data analysis. In this initial survey stage, a survey of Brazilian incubators located in the Northeast region was conducted, which were identified through the ANPROTEC website and also through Google search. Then, after this survey and identification of the incubators, a population of 61 incubators in the Northeast region was identified, and a sample of 19 incubators was selected for the object of study of this research.

Similarly, in the second stage, data collection from the incubators was conducted based on the selection in the previous stage, which was obtained through the website and social networks of the incubators. Thus, the research instrument was a data collection spreadsheet to gather information aimed at understanding the profile of each one, obtaining details such as year of establishment, city and state location, types of incubators, objectives, services provided, methodology, and stages of the incubation process.

In this way, the last stage was completed by obtaining an analysis of the data that aimed to comprehensively address the processes, services, areas of activity, network of relationships, and location of the incubators. Therefore, after this data treatment, an analysis of the identified incubators was carried out, making correlations between them, which allowed for the elaboration of final considerations on the topic.

IV. RESULTS

Based on the defined methodology of the work and through data analysis, the results presented below show what was defined as the objective of this present work, addressing aspects of the surveyed incubators related to their location, field of operation, incubation process, and support offered. Thus, Table 3 presents the incubators that were studied in this research, along with their location and the year they were founded.

Table 3: Brazilian Northeast incubators

Name	City/State	Foundation year	Address
IN PACTO	Salvador/BA	2019	http://inpacto.salvador.ba.gov.br/
INETI	Ilhéus/BA	2005	https://ineti.org.br/
PADETEC	Fortaleza/CE	1991	https://www.padetec.ufc.br/
ÁITY	Salvador/BA	2012	https://inovacao.uneb.br/aity-incubadora/
INCUBATIC	Fortaleza/CE	1996	https://www.itic.org.br/incubatic/o-que-e-o-incubatic
INCUBA	Cruz das Almas/BA	2003	https://ufpb.edu.br/portal/noticias/769-a-incubaufrb-incubadora-de-empresendimentos-solidarios-esta-entre-as-melhores-do-brasil
QUITANDA SOCIAL	Barreiras/BA	2018	https://ufob.edu.br/a-ufob/inovacao/ecossistema-local-de-inovacao/quitanda-social
IEPS	Feira de Santana/BA	2008	https://incubadorauefs.blogspot.com/p/cantina.html
ITCP	Salvador/BA	2003	https://portal.ifba.edu.br/proex/acoes/incubadora-tecnologica-cooperativas-populares
I-TEC	Aracaju/SE	2004	http://itecse.org/
INTESOL	Campus das Auroras/CE	2013	https://intesol.unilab.edu.br/apresentacao/
ITEPS	Cariri/CE	2009	https://liegs.ufca.edu.br/projetos/parcerias-e-vinculos/incubadora-tecnologica-de-empresendimentos-populares-e-solidarios-iteps/
ITCART	Natal/RN	2011	https://www.schoolandcollegelisting.com/BR/Natal/416379658467501/ITCART---Incubadora-Tecnol%C3%B3gica-de-Cultura-e-Arte
CATAVENTO	Natal/RN	2017	https://catavento.uern.br/
INCUBES	Zona na Mata – litoral/PB	2001	https://www.incubesufpb.org/

INCUBACOO	Recife/PE	1999	https://pt-br.facebook.com/INCUBACOO.UFRPE.DED
INCUBATECS	Recife/PE	2015	https://incubadoraufpe.wixsite.com/incubatecsufpe/copia-a-incubatecs
ITES	Maceió/AL	-	https://ufal.br/ufal/pesquisa-e-inovacao/empreendedorismo/incubadoras/incubadora-tecnologica-de-economia-solidaria-ites

In the table above, the incubators in the Northeast are shown, and it is noticeable that they are, with greater relevance, in the states of Bahia with 7 incubators and Ceará with 4 incubators. The following states, each with 2 incubators, are Rio Grande do Norte, Paraíba, and Pernambuco, and the states of Sergipe and Alagoas have 1 incubator each. Thus, several reasons influencing this distribution can be noted, which can be explained by the economic development of the region, interest, and investment in the field of innovation and technology.

Among these incubators operating in the Northeast region, the Social type comprises 42.1%, the Mixed type 31.6%, and the Technology-Based type 21.1%. The type of incubator with the least activity in this region is the Traditional type, which accounted for 5.3%. Thus, the diversity of incubator types reflects the adaptability of the business incubation concept to different needs and objectives.

Therefore, choosing the appropriate type of incubator depends on the business's speciality, required resources, and strategic objectives. It is important to emphasize that each type of incubator plays a fundamental role in supporting the development of incubated companies and stimulating innovation in their respective fields of activity.

Drawing from the theoretical framework, this study examines the primary support that incubators must provide to the incubated companies. Therefore, Table 4 below indicates whether the identified incubators are meeting the requirements necessary to support the services offered, as outlined in Dornelas's study (2002).

Table 4: Brazilian Northeast incubators support offered

Name	Infrastructure	Basic services	Advisory	Qualification	Network
IN PACTO	x	x	x	x	
INETI	x	x		x	x
PADETEC		x	x	x	x
ÁITY		x	x	x	
INCUBATIC	x	x	x	x	
INCUBA		x	x	x	x
QUITANDA SOCIAL			x	x	x
IEPS	x	x	x	x	x
ITCP		x	x	x	x
I-TEC	x	x	x	x	x
INTESOL	x	x	x	x	x
ITEPS		x	x	x	x
ITCART		x	x	x	x
CATAVENTO		x			x
INCUBES		x	x	x	x
INCUBACOO		x	x	x	x
INCUBATECS		x			x
ITES		x			x

In Table 4 above, the correlation between Dornelas's study (2002) and the main services of the mapped incubators is summarized, and the provision of support by the incubators is observed. Therefore, it is analyzed that the most mentioned services mainly indicate: basic services and qualification. Thus, the category of basic services are the ones considered simpler and easier to offer, as they do not require much financial investment. On the other hand, qualifications are a fundamental requirement for developing skills from business management to specific sector techniques, preparing for market challenges and changes, improving competitiveness, and promoting growth. Well-trained companies are increasingly equipped to thrive in the innovative business environment and reduce errors.

However, it is worth noting that for comprehensive support, advisory services complement qualifications. Based on Table 2, it is noted that these services are offered and developed through support to entrepreneurs for the development and strengthening of their businesses; support for innovation, assistance to innovative ideas; support for knowledge production; interaction with other actors; access to information, and access to the global market. Thus, analyzing these services frequently offered in the incubation process, technical assistance directed at products and innovations developed, parallel to business management, stands out, seeking to guide companies regarding the economic and financial direction of their businesses.

Therefore, one of the greatest challenges for incubators is to comply with the basic services needed in the support process offered for the development and growth of incubated businesses. In this context, it is important to analyze and identify which supports through services are proposed by each incubator studied in this research, as presented in Table 5 - main services of the incubators below:

Table 4: Brazilian Northeast Incubators' services

Name	Services
IN PACTO	Workstations with computers in a shared environment, virtual platforms for Program activities, collective training sessions, consulting, mentoring, and advisory services in legal, accounting, communication, marketing, and design areas collectively form the robust support structure for incubated companies.
INETI	The support includes providing physical workspace, guidance in strategic planning, assistance in project creation for fundraising, specialized courses, workshops, and consultancy services. Additionally, the promotion of incubated companies on CEPEDI and INETI's homepage, and participation in various events, fairs, and congresses enhances their visibility and networking opportunities.
PADETEC	Support for the development of modern and innovative processes, technical assistance to researchers, consultancy for companies in creating innovative products, and facilitation for technology transfer is provided, fostering advancements and fostering innovation within the ecosystem.
ÁITY	The support includes business guidance and monitoring across various dimensions of business development, assistance in project funding applications, and coordination for interaction with university research units. These efforts aim to support the growth journey of incubated companies.
INCUBATIC	Technical support, business guidance, training sessions, press advisory, promotion of products and companies, consulting services, project development guidance, infrastructure provision, and equipment support are provided to assist incubated companies in their endeavors.
INCUBA	Advisory and technical assistance in administrative, productive, and organizational aspects.
QUITANDA SOCIAL	Professional training and courses; administrative assistance; technical and managerial support; support networks, events, and partnerships.
IEPS	Organizational, accounting, financial, and legal guidance; suitable physical environment; formative workshops; development of work plans.
ITCP	Courses, legal guidance, basic administration principles, budget discussions, assistance in planning, constructing regulations, and formalizing the enterprise are provided to support the incubated companies.
I-TEC	Strategic support, a well-equipped and suitable environment, along with courses and lectures, are provided to assist the incubated companies.
INTESOL	The support actions provided include education and training, administrative and communication assistance, production and commercialization support, and strengthening the policy and legal framework of the solidarity economy. These encompass a wide range of activities such as workshops, seminars, administrative organization, commercialization aid, and engagement in policy discussions to empower the incubated groups and foster their success.
ITEPS	Learning in group organization, production processes, and democratic management; accounting and financial support; actualization of the enterprise through product commercialization; and assistance in training and restructuring aspects.
ITCART	Support from industry professionals to format their business projects, coworking facilities, and training opportunities.
CATAVENTO	Strategic planning and business plan development courses; consulting and training sessions; assistance in management, marketing, financial, and legal areas; support in capturing commercial and technological partnerships.
INCUBES	Advisory services in cooperative formation processes, administrative procedures, accounting processes, logistical processes, interpersonal relations, and marketing

INCUBACOOOP	The current diagnosis of each organization involves an in-depth assessment of their current situation and needs, followed by the implementation of thematic workshops focusing on cooperation, the recycling market, and the principles of the solidarity economy.
INCUBATECS	Consulting and advisory services provide comprehensive support to incubated companies in strategic planning, financial analysis, market research, legal compliance, and operational optimization, enabling them to overcome challenges and achieve sustained success.
ITES	Shared workspaces with computer facilities, virtual platforms, group training sessions, and diverse consulting services form a comprehensive support system for incubated companies.

In this context, based on the main services outlined in Table 4 above, it is evident that the key services provided, such as consultancy, mentoring, access to infrastructure resources, networking, funding access, and training, enable entrepreneurs to navigate the business landscape more effectively and increase their chances of success. These services offered by the incubators play an important role in supporting the success and growth of fledgling companies by facilitating the creation of new businesses, helping overcome initial challenges, reducing entry barriers, and promoting innovation.

Furthermore, the diversity of services offered by the incubators allows incubated companies to adapt to the specific needs of different types of businesses, whether they are technology-based, social, traditional, or mixed. This flexibility makes incubators an essential organization for fostering the entrepreneurial ecosystem promoting job creation, economic growth, and innovation across various industries and sectors. Additionally, another aspect that aids in the support process provided by incubators is networking, which plays a crucial role.

However, the incubation process begins with a selection process typically conducted through a call for applications or rarely through a single form available on the official website of the incubator. Thus, the key steps in this incubation selection phase include an initial screening process that evaluates the innovative idea and the business plan. Upon submission of the proposal, it undergoes analysis considering basic criteria such as the technical viability of the product and the economic and market viability of the venture.

Consequently, after selection, each incubator designates its incubation process, typically categorized into pre-incubation, incubation, and graduation or post-incubation, with each stage having a duration chosen by the incubator itself. In the pre-incubation stage, the qualifications and advisory services offered aim to help companies structure their ideas and business plans. During the incubation stage, comprehensive support is provided, including infrastructure, administrative, financial, and accounting assistance, as well as personalized training necessary for business development.

Furthermore, in the graduation or post-incubation stage, the focus is on evaluating and ensuring that the incubated company continues to thrive in the market, facilitating connections with investors and partners. In summary, once selected for the incubation process, the company receives technological, administrative, and training support. Technological support provides assistance to incubated companies through the technical expertise of educational institutions, utilizing laboratories to aid in the development of their products and services. On the other hand, administrative support addresses bureaucratic functions, reinforcing the administrative assistance currently provided to incubated companies.

V. CONCLUSION

This article explores the support process provided by the main incubators in the Northeast Region to incubated companies. The overall objective highlights that this support is offered through various essential components, including infrastructure, basic services, advisory, training, and networking, all playing a crucial role in the development and success of incubated companies.

The article delves into the main incubators in the region, primarily situated in Bahia and Ceará, focusing on social and mixed sectors, catering to both technological and traditional industries. It outlines the support process provided by the incubators, including administrative assistance such as legal advice, business guidance, and financial support for fundraising. Training and infrastructure utilization for management discussions are prominent. The support process plays a crucial role in nurturing the resilience, competitiveness, and long-term success of incubated companies, contributing to local economic growth, innovation, and job creation.

Incubators provide a range of essential services to support the success and growth of emerging businesses, including consultancy, mentoring, infrastructure access, networking, funding opportunities, and training. The incubation process typically begins with a rigorous selection phase, evaluating innovative ideas and business plans. Once selected, companies undergo structured incubation stages, receiving comprehensive support tailored to their needs. This support extends beyond the initial stages, fostering innovation, entrepreneurship, and economic advancement in the entrepreneurial ecosystem.

The article concludes by suggesting further research on how incubators adapt to technological and innovative trends to enhance their support programs, fostering new opportunities for innovation and reinforcing their role in entrepreneurship development and innovation promotion.

VI. REFERENCES

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