

The Impact of Business Incubators on the Development of Startups: Empirical Evidence from Some University Incubators in Algeria

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Abstract:

University business incubators play a vital role in nurturing entrepreneurial ventures, fostering innovation, and facilitating the growth of startups. They offer two primary forms of support-administrative and financial-which aid in the maturation and development of new ideas, ultimately contributing to economic growth and development.

This study seeks to assess the impact of select university incubators in Algeria, on startup support. By examining their programs, activities, and outcomes, the research highlights that, despite being a relatively recent initiative in Algeria, university business incubators have a significant positive influence on empowering entrepreneurial ideas and emerging businesses through both administrative guidance and financial assistance.

Key Words: *Business incubators, Startups, Impact, Development, Entrepreneurial.*

JEL Classification: *O31, M18, O10, O40, L26.*

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1. *Introduction*

Innovative, small, and startup enterprises play a crucial role in driving both economic and social development in developed and developing countries alike. They are key indicators of economic growth, as they address various social and economic challenges. These enterprises significantly contribute to job creation and reducing unemployment—pressing issues in many societies—while also introducing innovative products to meet market demands .

However, the success of startups largely depends on their early development stages. Studies highlight that their sustainability is closely linked to the support and guidance they receive at the beginning of their journey. One of the most effective support mechanisms is university business incubators, which have emerged as modern tools for fostering innovation and promoting entrepreneurship. These incubators play a vital role in nurturing entrepreneurial ideas, transforming them into viable projects, and converting innovations into sustainable businesses .

In this regard, Algeria has prioritized the establishment and development of technology-driven and innovation-based enterprises. To facilitate this, a legal and regulatory framework has been put in place, alongside various support structures providing funding and assistance for new ventures. Notably, business nurseries and support centers were introduced in 2003 to help aspiring entrepreneurs turn their ideas into actual businesses. Furthermore, university business incubators were established under Decision No. 1275, issued on September 27, 2022, to support innovative students and enable them to obtain a "Startup Certificate" within higher education institutions .

Business incubators have become a fundamental pillar in fostering innovation and promoting entrepreneurship in Algeria, serving as an essential mechanism for economic and social development. They offer a comprehensive environment for transforming creative ideas into successful enterprises by providing technical support, training, mentorship, and funding. Given the importance of this sector in diversifying the economy beyond rent-based revenues, Algeria has increasingly focused on its growth, especially in light of current economic challenges. Moreover, business incubators help bridge the gap between scientific research and industry, encourage youth innovation, enhance national economic competitiveness, and support sustainability across various sectors.

Building on this significance, this study aims to shed light on the role of university business incubators in supporting startups and their contribution to fostering entrepreneurship and promoting economic development.

Research problem:

The following primary question might be used to construct the research issue:

How do university business incubators influence the support of startups in Algeria?

To answer the research problem, we tried to divide it into sub-questions:

- What are startups?
- What are business incubators?
- How do university business incubators support and accompany startups?

Research Hypotheses:

To answer the previous questions, we propose the following hypothesis:

- University business incubators support and accompany startups from the idea stage to implementation.
- University business incubators provide startups with a range of administrative and financial services and facilities.

Significance of the Study:

This study derives its importance from the crucial role that university business incubators play in supporting and developing startups. Through the various services they provide, these incubators aim to foster the growth and sustainability of startups, ultimately leading to positive and effective outcomes for innovative and creative entrepreneurs.

Study Objectives:

This study aims to achieve several key objectives, including :

- Understanding startups and the "Startup Certificate" ;
- Exploring business incubators and university business incubators ;
- Examining the activities, programs, and outcomes of selected university business incubators in Algeria (University of M'sila, University of Boumerdes, and the University Center of Tipaza).

Study Methodology:

To address the research problem, we adopted a descriptive approach, which is suitable for the theoretical aspect of the study, where we explored the conceptual framework of startups and business incubators. Additionally, we employed an analytical approach by examining and analyzing successful experiences of university business incubators in Algeria.

Study Plan:

In the remainder of this research paper, we will first review a collection of previous studies related to the topic. Next, we will address the first axis, which focuses on concepts surrounding startups. Following that, the second axis will present concepts and definitions of business incubators. Then, in the third axis, we will explore successful models of university business incubators in Algeria by detailing their key programs, tasks, and outcomes. Finally, in the conclusion, we will discuss the main findings of the study and provide some recommendations for further development of the research topic.

2. Literature review:

A study titled *Startups: An Initial Step for Algerian Entrepreneurial Universities* by (Saoud et al, 2024). aimed to assess the success of Algerian universities in transitioning into entrepreneurial universities, focusing on their effectiveness in encouraging students to establish startups as a first step in this direction. The study adopted a quantitative approach, distributing a questionnaire to a sample of 1,034 students from various faculties and academic levels at Bouira University. The data were analyzed using SPSS software.

The results indicated a moderate level of entrepreneurial readiness among students, both in terms of entrepreneurial intention and the motivation provided by the university. This led to a moderate likelihood of successfully launching startups under Decree 1275. Additionally, the study found that entrepreneurial readiness significantly enhances this potential, with university

motivation having a greater impact on success than students' entrepreneurial intentions, although the latter remains a crucial factor in fostering entrepreneurial readiness .

The study recommended expanding future research to include all faculties, extending it over a longer period, and incorporating samples from various Algerian universities to obtain more comprehensive and accurate results.

The study by (Habiburrahman et al, 2022) aims to analyze the critical factors influencing the success of incubators and startups, as the specific factors determining their success in managing their businesses remain insufficiently clear. A quantitative research approach was adopted to describe the findings by collecting data through surveys and interviews with 100 participants. The study was conducted in East Java Province, Indonesia, where primary data was gathered from participants across five different regions. The sample included 41 business incubators and 59 startups, with data collected on their location, type of business, and business scale.

The results indicate that both incubators and startups agree on the importance of the analyzed factors in achieving business success. These factors include product integration, processes, innovation management, communication, culture, experience, information technology, innovation skills, functional skills, and implementation skills. However, the prioritization of these factors varies between incubators and startups.

Another study conducted by (Freire et al. 2022) aims to examine the impact of technology-based business incubators (TBIs) on the resources of technology startups in Brazil by identifying the resources provided by these incubators and exploring their significance for startups.

The study adopted a descriptive approach through a multiple case study and a survey. Data was collected through interviews with three managers of TBIs, in addition to distributing questionnaires to 30 startup founders. The results showed that resources serve as the primary link between startups and TBIs, playing a crucial role in fostering their growth and sustainability. Among the resources provided by incubators, physical resources emerged as the most significant due to the early stage of startups. Additionally, the study found that incubators do not provide financial resources directly but facilitate access to them through their networks with various stakeholders.

The study highlights the importance of resources as a connecting factor between TBIs and startups and underscores the vital role of these incubators in supporting entrepreneurship and innovation, particularly in emerging economies such as Brazil.

Because of the significant digital development in Indonesia, a large number of startups have emerged, contributing to the country's gross domestic product (GDP). Therefore, a research paper titled *STARTUP CHARACTERISTICS AND THE ROLE OF BUSINESS INCUBATORS IN INDONESIA* by (Wahyuni & Noviaristanti, 2022) investigates startup models and business incubator services in Indonesia. The study covered 992 startups and 23 business incubators.

A descriptive analysis technique was employed by examining the websites of startups and business incubators. The samples were collected using a non-probability sampling method with a saturation sampling approach (census method). The study relied on available data from the 2018 Indonesia Startup Planning and Database and business incubators in Indonesia.

The findings revealed that independently operated startups dominate the business landscape in Indonesia, being privately owned and managed by local individuals. Regarding business incubator services in Indonesia, the study found that they provide essential services to ensure the sustainability of technological entrepreneurship.

A recent comparative study conducted by (Hassan, 2024) aims to analyze the relationship between universities and business incubators (BIs) and explore how students, researchers, and entrepreneurs benefit from this connection. The study seeks to clarify how university business incubators (UBIs) contribute to linking scientific research with economic development.

This study adopts a descriptive-analytical approach to outline the key characteristics of the data using a descriptive research design. It is based on a proposed model by the researcher to enhance entrepreneurship through UBIs. Additionally, a structural-functional approach is employed to analyze the relationship between the study variables, considering UBIs as new entities with specific functions and structures that add value to universities and society. The study's findings highlight the importance of an educational system that fosters a supportive environment, enabling young individuals to shift their mindset from employees to entrepreneurs by developing the necessary skills and knowledge for job creation. UBIs are identified as an advanced model of traditional business incubators, facilitating the connection between scientific research, industry, and development, ultimately enhancing success opportunities for relevant stakeholders.

Another study by researcher (Ben Oudina, 2024) focuses on the roles that university business incubators play in stimulating innovative projects and establishing enterprises. A field study was conducted at the business incubator of the University of Ghardaïa, where the results revealed that business incubators play a significant role in encouraging students toward entrepreneurship. The study recorded the achievement of six projects awarded the "Label" certification, four registered patents, and the establishment of 114 startups during the 2022-2023 academic year.

recent study by (Harraq & Bouhbila, 2024) explored the importance of university business incubators in guiding students toward establishing startups after graduation. The study examined the case of the business incubator at the University of Jijel using a questionnaire as the research tool. The findings revealed that incubators aim to support creative students in transforming their scientific ideas into practical projects. Moreover, the study confirmed a statistically significant relationship between the services provided by incubators and students' creation of startups after graduation.

3. Concepts of Startups

Amid the rapid advancements in information and communication technology, along with the ongoing digital revolution and the emergence of new variables across various fields, the concept of startups has gained significant prominence. Although the term "startup" is not new—having emerged right after World War II with the rise of venture capital—this type of enterprise has evolved tremendously. Its characteristics have expanded, especially in contrast to traditional businesses, driven by accelerated technological developments and artificial intelligence.

In this section, we will explore the essence of startups by defining the concept, providing relevant definitions, discussing their key characteristics and objectives, and examining the major challenges they face.

3.1 Definition of Startups:

Before delving into the definition of a startup, it is important to note that prior to the significant evolution in the world of startups, many related concepts emerged that overlap or intertwine with the concept of startups. These concepts refer to different types, stages, or models of businesses. Although they are similar to startups, they differ in terms of concept or purpose. One of the most prominent concepts is that of **small businesses**, which can be defined as "a venture that creates work with a high degree of risk or uncertainty, aiming to achieve profitability and growth by identifying available opportunities and gathering the necessary resources to establish the business" (Al-Atiya, 2009, p. 51).

Additionally, we find entrepreneurial enterprises, which are projects born from independent and creative ideas. Individuals involved in these projects are characterized by high initiative and keen insight, enabling them to identify available opportunities in the market to activate their ideas and establish their ventures (Jawad, 2000, p. 644). We also encounter high-technology companies, which primarily rely on development and innovation in advanced technological fields such as computing, artificial intelligence, telecommunications, electronics, and software. These companies are distinguished by their focus on research and development, offering advanced products and services with added value.

Returning to the concept of a startup, we find that it lacks a unified definition. According to the English dictionary, a startup is defined as a small project in its early stages. The term "Startup" consists of two parts: "Start," which refers to the idea of launching, and "Up," which signifies strong growth. The French dictionary *Larousse* defines it as young, innovative companies in the modern technology sector. Some believe that the origin of the term comes from the English word "Startups," which expresses the launch and growth of a company. This has led many to consider startups as only those that are newly established. This type of organization first appeared in the United States in the early 1970s, primarily associated with the venture capital industry, particularly in the technology sector, especially information and communication technology (Meziane & Amarouche, 2023, p. 31).

Eric Ries, one of the theorists of this concept, defines a startup in his book *The Lean Startup* as "a human institution designed to create a new product or service under conditions of extreme uncertainty" (Ries, 2001, p. 37). Neil Blumenthal offers a simple and concise definition, stating that a startup is an organization working to find a solution to a problem that has not yet been solved, with no guarantee of the solution's success (Talaat, 2024).

On the other hand, the renowned entrepreneur Steve Blank defines it as "a temporary organization designed to search for a repeatable and scalable business model." In other words, a startup must work to achieve its success quickly and have an impact on the market it aims to enter and operate in immediately. Paul Graham, in his article on growth, defines it as "a company designed to grow rapidly," emphasizing that being newly established does not inherently make it a startup company.

3.2 Types of Startups

Startups have taken on various forms due to significant advancements in technology and innovation. Among the most prominent types are (Samir & Jedali, 2020, p. 07):

1. **Small Business Startups:** These target freelancers and craftspeople who seek to achieve a stable income that allows them to live a dignified life. Examples include handicraft shops or simple service providers.
2. **Lifestyle Startups:** These emerge from the passion and interests of their founders, created to fulfill personal hobbies or interests. For instance, a music school for music enthusiasts or an art workshop for painting lovers.
3. **Scalable Startups:** Established with the intention of being sold later by securing the best offers, this type represents an investment in ideas. A notable example is Instagram.
4. **Social Startups:** These provide various social services with the aim of making the world a better place. As such, they do not primarily seek to generate profits.
5. **Innovative Startups:** Their founders are convinced that they are working to introduce a specific idea to the world, contributing to making the world a better place through their work.

3.3 Characteristics of Startups

In a previous section, we discussed some definitions related to startups, which accurately describe them. However, to fully understand the nature of this type of organization, we may need to delve into their characteristics in detail, as outlined below (Talaat, 2024):

1. **A Mission, Not Just a Job:** Startups operate on the concept of work as a mission, not as a traditional job with fixed hours and immediate financial rewards. As a result, you may find that everyone in a startup, including its founders, works around the clock without adhering to specific working hours. The primary goal is achievement, rapid results, and growth.
2. **Staying Away from Politics:** If you examine the history of most giant companies that started as startups, you will find that the majority, if not all, avoided engaging in political battles or siding with any party in conflicts. When these companies do address politics, it is usually to align with their audience's views. This is for two reasons: first, the audience is the source of profit, and no company wants to lose its audience due to political differences. Second, it helps avoid clashes with political parties or governments. Companies that have followed this approach have endured and gained significant public popularity.
3. **Precise Financial Control:** Startup founders closely monitor the financial flows within their companies, treating them with great care as if they were personal savings (which they often are, as personal savings can be a funding source). Simply put, losing money means certain failure.
4. **Strong Leadership and Efficient Organizational Structure:** Startup managers are characterized by their strength and positive work ethics. They strive to boost their team's morale and encourage them, believing that a motivated team is the foundation of efficiency and success. The work environment in startups is also marked by a general atmosphere of encouragement and positive energy to drive motivation and productivity. These companies understand that without this energy, the work environment would shift from being dynamic and active to becoming routine, focused solely on wages and working hours. Additionally, while startups have a hierarchical structure with managers

and employees, every individual is treated with equal respect, and successes are celebrated collectively, regardless of who contributed to them.

5. **Customer-Centric Approach:** Successful startups view the customer as their most valuable asset. Therefore, they prioritize customer satisfaction, seek feedback on their products, and provide after-sales services to ensure customer retention and loyalty. Successful startups also maintain a high level of honesty and transparency with their customers. They strive to be truthful because they understand that without these qualities, they cannot gain the trust needed to sustain and grow.

3.4 Objectives of Startups:

Startups aim to achieve a set of goals that enhance their role in economic and social development. Among the most prominent of these objectives are (Gwasmiya, 2022, p. 101):

1. **Promoting Individual and Collective Initiative:** They work to foster a culture of innovation and initiative by creating new economic activities that did not exist before, as well as reviving traditional economic activities that were abandoned for various reasons. This revitalizes these sectors and restores their role in the economy.
2. **Creating New Job Opportunities:** Whether directly by generating job opportunities for their founders or indirectly by employing additional labor or creating jobs through supply chains and related services.
3. **An Effective Tool for Localizing Activities in Remote Areas:** They serve as an effective means of transferring economic activities to distant and marginalized areas. This makes them an important tool for enhancing the valuation of local wealth and a means of integration and cohesion between regions.
4. **A Link in the Economic Fabric:** Through the various relationships, they establish with surrounding and interacting institutions, which share the use of the same inputs. They play an integrative role by building relationships with other institutions and contribute to strengthening cooperation through the sharing of inputs and resources, thereby improving the efficiency of the local economy.

3.5 Challenges Facing the Development of Startups:

Like other institutions, startups may face challenges due to their nature and uniqueness, especially since they are relatively new. This may require some time to create and prepare a suitable environment for their development and support. Below, we have outlined the most significant obstacles:

1. **Funding:** Financing is one of the most critical problems or obstacles facing startups. Therefore, it is necessary to develop diverse and innovative financing tools that align with the evolving and varied financial needs. Fortunately, new financing models have emerged, differing from traditional ones (Ben Ayad, 2022, p. 164). Gradually, initiatives, venture capital firms, and even growth accelerators have begun to appear to encourage and facilitate access to funding. However, this is still insufficient, as there remains a gap between startups ready for growth and investors willing to inject capital into them (Ould Essafi & Mustapha, 2020, p. 472).
2. **Small Market Size:** The limited size of the local market is a significant obstacle for startups, as weak local demand reduces opportunities for expansion and growth. This makes it difficult to achieve sustainable profits or build a broad customer base. As a result,

startups need to expand into foreign markets or adopt innovative marketing strategies targeting new customer segments. Additionally, fostering collaboration between institutions and developing supply chains can help expand the available market.

3. **Lack of Experience Among Startup Founders:** Establishing a startup requires diverse expertise, as well as a high level of technical and academic knowledge. Startup founders must be familiar with the basics of management, such as organizational structure, team building, marketing, and strategy. If the founder lacks this experience, they may need to acquire it by accepting funding from an experienced investor with a network of public relations. In such cases, the founder must give the investor a share of the company (Ben Ayad, 2022, p. 164).
4. **Team Building:** Building a competent team is a significant challenge for startups, as success often begins with the collaboration of a cohesive team. However, the problem arises from the absence of a specialized human resources department to attract talent. This forces founders to rely on their personal networks to recommend employees, which can lead to favoritism in hiring and a lack of focus on selecting the right competencies. Additionally, startups struggle to attract suitable employees quickly when urgent projects arise. Even with job postings, these small and often unknown companies may fail to reach qualified candidates, negatively affecting workflow and execution efficiency.

4. Concepts of Business Incubators

Business incubators are a fundamental pillar in promoting entrepreneurship and economic and social development. They play a pivotal role in enabling individuals and startups to access resources and infrastructure that help them achieve their goals effectively. The emergence of business incubators was driven by the need to bridge the gap faced by young and ambitious entrepreneurs who possess creative ideas but lack the resources and expertise to turn those ideas into successful ventures. They support and motivate entrepreneurs to utilize modern technological tools and mechanisms effectively, ensuring a positive impact on the economic development of society.

4.1 Definition of Business Incubators

Although there is no unified definition of business incubators, many individuals have attempted to define them. Before exploring some of these definitions, it is important to discuss the origin of the term. The term "incubator" is derived from the basic meaning of "nurturing," which refers to developing startups in a protected environment. Incubators are managed by industry specialists, government or private organizations, and sometimes universities. The history of business incubators dates back to 1959, with the first project established in New York, USA, at the Batavia Industrial Center. This initiative began when a family converted their defunct company's premises into rental units for individuals looking to start businesses, providing them with advice and consultations (Zgai & Miloudi, 2020, p. 249).

One of the simplest definitions of business incubators is: "Programs designed to support, develop, and assist startups in succeeding by providing them with a set of support resources and services, managed by the incubator's administration. These resources are either provided directly to the startups or through the incubator's network of relationships" (Hashem, 2020, p. 258).

The National Business Incubation Association (NBIA) defines them as entities aimed at assisting innovative startups and new entrepreneurs by providing them with the necessary means

and support (expertise, spaces, and financial support) to overcome the challenges of launching and establishing their businesses. They also engage in marketing and promoting the products of these startups.

Hackett & Dilts cited several definitions derived from literature reviews and fieldwork in Asia and North America, offering the following definition of a business incubator: "A shared office space established to provide a mix of essential resources for nurturing new and/or growing businesses to a certain level of maturity as locally established institutions aimed at encouraging and supporting the development of new businesses." They also referenced other definitions that focus on the entrepreneurial aspects of incubators, explaining that the motivation behind creating incubators is the desire to encourage entrepreneurship and, consequently, contribute to economic development. They emphasized the role of incubators in assisting technical entrepreneurs in developing new companies (Bouadla, 2022, p. 133).

In summary, business incubators are essential in promoting entrepreneurship and economic and social development. They play a central role in enabling individuals and startups to access the resources and infrastructure needed to achieve their goals effectively.

4.2 Types of Business Incubators

There are many different classifications of business incubators based on the purpose for which they were established. These include the following types (Shalaby, 2002, p. 05):

1. **Regional Incubator:** This type serves a specific geographical area with the aim of developing it. It utilizes local resources, raw materials, and services, and invests in the untapped potential of youth in the region. It may also target specific minorities or segments of society, such as women.
2. **International Incubator:** This incubator promotes attracting foreign capital while facilitating technology transfer, emphasizing high quality and export-oriented activities.
3. **Industrial Incubator:** Established within an industrial zone, this type identifies the needs of the area for complementary industries and support services. It fosters mutual benefits between large factories and small projects affiliated with the incubator, with a focus on knowledge and technical support from large factories.
4. **Sector-Specific Incubator:** This incubator aims to serve a specific sector or activity, such as software or engineering industries, for example. It is managed by experts specialized in the targeted activity.
5. **Technology Incubator:** Small projects within this incubator are characterized by advanced technology, innovative designs for non-traditional products, and access to advanced equipment and tools.
6. **Research Incubator:** Typically located within a university campus or research center, this incubator develops ideas, research, and designs by faculty members while utilizing available workshops and laboratories.
7. **Virtual Incubator:** This is a "wall-less" incubator that provides standard incubator services except for physical space. An example of this is the small and medium enterprise development centers in industrial and commercial chambers.
8. **Internet Incubator:** In principle, this is an institution that helps internet and software startups grow until they reach maturity.

4.3 Factors for the Success of Business Incubators

There are several factors that must be adhered to in order to ensure the sustainability of incubators and the achievement of their goals in promoting entrepreneurship. Among the most important factors for the success of business incubators are the following (Miloudi et al, 2018, p. 601):

1. **Continuous Evaluation and Improvement:** Incubators need to regularly evaluate their processes and performance by defining the main objective they seek to achieve, whether it is profit-making or serving the community by helping to develop new projects to create jobs and reduce unemployment.
2. **Selecting the Type of Institutions to Host:** This requires setting acceptance criteria, whether financial or technical.
3. **Availability of Skills:** Since the incubator manager plays a key role in the success of the incubator, they must possess skills in business planning, management, and marketing.
4. **Providing Necessary Funding:** The incubator must have the ability to provide the necessary funding sources for the new institutions it hosts.

4.4 Services and Tasks Provided by Business Incubators

Based on the previous discussion and the definitions of business incubators, we can outline some of the tasks and services they provide, which undoubtedly contribute to enhancing the success of startups. This, in turn, positively affects the local and global economy by creating new job opportunities and stimulating innovation. These services include:

1. **Comprehensive Services:** Business incubators offer a range of services, including mentoring, training, and support, helping startups launch steadily. They also provide support through experts and consultants specialized in various fields such as finance, marketing, management, and business development.
2. **Targeting SMEs and Entrepreneurs:** Incubators primarily target small and medium enterprises (SMEs) and entrepreneurs with innovative ideas or new solutions to existing problems.
3. **Facilitating Access to Networks:** Incubators facilitate access to networks of investors, suppliers, and strategic partners, offering their services at symbolic or no cost, thereby reducing the financial burden on entrepreneurs.
4. **Fostering Creativity and Innovation:** Incubators create an environment that encourages creativity and innovation through interaction with other entrepreneurs and the exchange of ideas and experiences.
5. **Funding and Financial Guidance:** Incubators help startups access funding sources such as loans, grants, or venture capital investments.
6. **Performance Monitoring and Progress Tracking:** Incubators monitor the performance of startups and provide continuous reports to improve performance and achieve goals.

5. Business Incubators in Algeria - Programs and Outcomes:-

In the following section, we will present some successful models of business incubators by introducing them, outlining their activities and programs, and highlighting the key results achieved. This includes their role in supporting startups, patent registrations, and entrepreneurial projects.

5.1 The Contribution of M'sila University Business Incubator in Supporting and Mentoring Startups (Bissar, 2022, pp. 392-399):

The University of M'sila Business Incubator is one of the incubators affiliated with the higher education and scientific research sector. It aims to support entrepreneurs among students and university researchers who have the ability to leverage modern technologies to develop innovative projects and startups. These projects span various fields such as services, products, business models, or inventions in vital sectors like technology, artificial intelligence, industry, commerce, pharmacy, health, telecommunications, information technology, renewable energy, recycling, and the environment. The incubator seeks to utilize available resources to ensure the sustainability of startups and their success in alignment with sustainable development goals, under the slogan: "You have the idea, and we have the support and mentorship."

The University of M'sila Business Incubator was established under Ministerial Decree No. 191 issued on May 27, 2019. It is the first university incubator at the national level, which encouraged other universities such as Blida, Ouargla, Guelma, and others to establish similar incubators. Administratively, the incubator falls under the National Agency for the Valorization of Research Results and Technological Development (ANVREDET), which is part of the Research Directorate of the Ministry of Higher Education and Scientific Research. The incubator is managed by a director appointed by the university administration, and his/her credentials are submitted to the National Agency for the Valorization of Research and Technological Development.

The incubator director has the authority to form a project selection committee, composed of a group of specialized professors who work on selecting and mentoring entrepreneurial projects. Additionally, the incubator management oversees the formation of a board of directors consisting of the incubator director, the university vice-rector for external relations, representatives from the National Agency for the Valorization of Research Results (ANVREDET), the Directorate of Industry and Mines, the National Employment Agency, as well as representatives from the university's partner economic institutions.

5.1.1 Roles and Responsibilities of M'sila University Business Incubator

- **Promoting Entrepreneurship and Innovation:**
 - Encourages a culture of entrepreneurship among young people.
 - Supports the creation of startups by providing necessary resources.
- **Providing Training and Consultancy Services:**
 - Offers training programs and expert consultations.
 - Helps entrepreneurs develop and refine their ideas into viable projects.
- **Supporting Business Development:**
 - Assists in marketing innovative ideas.
 - Provides mentorship, technical expertise, and essential equipment.
 - Conducts feasibility studies for economic and technical viability.
 - Offers administrative and technical guidance for project development.
- **Facilitating Partnerships and Networking:**
 - Establishes agreements with support organizations to connect entrepreneurs with relevant stakeholders.
 - Nominates incubated projects for local, regional, and international competitions.
- **Financial and Logistical Support:**
 - Provides financial aid to idea holders and innovative projects.

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- Acts as a mediator between entrepreneurs and economic/social partners to turn ideas into real solutions.
- **Overcoming Bureaucratic Challenges:**
 - Helps navigate administrative barriers that may hinder startup establishment.
 - Accelerates the process of transforming ideas into successful businesses

5.1.2 Programs Offered by the Incubator to Foster Entrepreneurship and Startups

The incubator provides several programs aimed at enhancing entrepreneurial awareness, patent registration, and startup creation. These include:

- **Ambassador Student Program:**
 - Targets students and researchers with entrepreneurial potential.
 - Selects outstanding students to raise awareness about the incubator's role.
 - Offers incubation opportunities for students with viable innovative ideas.
- **Discovery Program:**
 - Supports students aspiring to establish startups.
 - Provides training in business creation, market studies, customer targeting, website development, and smart applications.
- **Startup Launch Program:**
 - Assists projects that have moved from ideation to market competition.
 - Offers intensive training in management, marketing, and innovative solutions to enhance competitiveness.

5.1.3 Incubator Results in Launching and Supporting Innovative Projects

The university incubator ranks first in the number of innovative projects awarded the "Labeled Innovative Project" designation, with over 52 projects recognized so far. Additionally, it hosts 7 projects under Decision 1275 and 5 projects outside its framework.

The following table presents statistics on the activities of the University of M'sila Business Incubator from 2019 to 2023

Table 1: Statistics on the Activities of the University of M'sila Business Incubator (2019-2023)

Year	Patent Applications Filed with INAPI	Graduated Startups	Labeled Innovative Projects
2019	2	0	0
2020	13	1	0
2021	29	4	28
2022	65	9	12
2023	93	3	7 (under Decision 1275) + 5 (outside Decision 1275)
Total	202 (including 10 fully granted patents)	17	52

Source: University Business Incubator – University of Mohamed Boudiaf M'sila, 2025

The University of M'sila, through its incubator, is among the first national universities to establish a partnership with the National Institute of Intellectual and Industrial Property (INAPI) to register the highest number of patents for incubated projects. By the first half of 2022, the

university had registered and filed 44 patent applications, securing the top national ranking for the third consecutive year.

From 2019 to 2023, a total of 202 patent applications were filed, 10 of which were officially granted. This achievement reflects the incubator's professionalism in supporting innovative ideas from the conceptual stage to implementation and business creation.

In collaboration with INAPI, the university aims to protect the innovations of its researchers and students. These patents play a crucial role in introducing new products in the future, particularly in digitalization, renewable energy, the food and healthcare industries, and advanced technology, which together account for more than 51% of all projects and patent applications (Bissar, 2022, p. 399).

5.1.4 Incubator Results in Startup Creation

The University of M'sila launched the "Graduation Project – Startup" initiative during the 2021-2022 academic year, aiming to attract a large number of innovative ideas and projects and support them through the incubator. The initiative also seeks to help approximately 20% of the university's graduates establish startups and small businesses. This initiative was later generalized by the Ministry of Higher Education at the beginning of the 2022-2023 academic year, expanding its application to all higher education institutions. The objective is to transform universities into hubs of innovation and creativity, contributing to economic transformation by creating and supporting a larger number of startups.

The following table presents statistics on the implementation of Decision No. 1275 at the university's faculties and institutes:

Table 2: Statistics on the Implementation of Decision No. 1275 at the University's Faculties and Institutes

Faculty	Number of Projects Registered under Decision 1275	Number of Students Registered under Decision 1275	Number of Projects Defended under Decision 1275	Number of Students Who Defended Their Projects under Decision 1275
Mathematics and Computer Science	27	55	20	45
Sciences	76	133	33	56
Technology	109	222	43	81
Humanities and Social Sciences	34	64	20	30
Economic, Commercial, and Management Sciences	30	50	20	28
Institute of Urban Technology Management	3	6	3	6

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Institute of Physical Activity and Sports Sciences	3	6	3	6
Law	2	6	6	6
Total	287	548	151	264

Source: University Business Incubator – University of Mohamed Boudiaf M'sila ,2025

The data indicates that the incubated projects under Decision No. 1275 are distributed across nearly all faculties and institutes, except for the Faculty of Letters and Languages, which did not incubate any projects. This distribution reflects the diversity of disciplines and the variety of innovative projects at the university and its incubator.

However, technology-related fields remain the most developed and innovative, with the Faculty of Technology leading the way with 109 projects, 43 of which were defended under Decision No. 1275, involving 81 students. It is followed by the Faculty of Sciences, which recorded 76 projects, with 33 defended as startups. The Faculty of Mathematics and Computer Science had 27 projects, 20 of which were defended as startups.

Other faculties and institutes reported lower figures in terms of innovative ideas, mainly due to the nature of their specializations. However, the Faculties of Economic Sciences, Humanities, and Social Sciences demonstrated significant numbers of projects, with 30 and 34 startups registered under Decision 1275, respectively.

These results highlight the effective role played by the incubator, which has organized awareness and training sessions that contributed to the increase in the number of startup graduates at the university.

In general, the incubator recorded a notable number of projects defended under Decision No. 1275, totaling 151 projects, with 264 students successfully defending their projects as startups.

5.2 The Contribution of the University of Boumerdes Business Incubator in Supporting and Assisting Startups

On July 4, 2020 (Dhul-Qi'dah 12, 1441 AH), Professor Dr. Abdelbaki Benziane, the Minister of Higher Education and Scientific Research, inaugurated the Technological Incubator at the University of M'Hamed Bougara Boumerdes. The incubator is located within the university premises, near the University Directorate, and was officially established by ministerial decree on October 8, 2020, which created a common research service named the University of Boumerdes Incubator (Boukhal & Yahiaoui, 2023, p. 440).

5.2.1 The Missions of the University of Boumerdes Business Incubator

The University of Boumerdes Business Incubator plays a crucial role in providing support and guidance to students with innovative projects, bridging the gap between scientific research and economic startups. The incubator offers investment services, including feasibility studies, technical, financial, and logistical support for small enterprises.

Additionally, the incubator provides administrative and technical training for startup employees, along with financial, managerial, and marketing consultancy. It also aims to strengthen its connection with the economic and social environment, linking innovative entrepreneurs with the economic and social sectors. The incubator organizes awareness days for

entrepreneurs with creative ideas and hosts practical events and media activities to raise awareness of its role. Furthermore, it welcomes individuals with innovative ideas, offering guidance and support to help them establish and develop startups.

5.2.2 Programs Offered by the Incubator to Promote Entrepreneurship and Startup Creation (Salhi, 2021, pp. 121-122):

The University of Boumerdes Business Incubator has implemented a series of programs and activities to promote entrepreneurship and startup creation. One of the key events was the "Open Doors on the Incubator" initiative, held on February 18, 2020, which introduced participants to competitive strategies in startup creation and explained the step-by-step process of establishing a startup, from the idea phase to execution.

The incubator also hosted online workshops, offering guidance and solutions to entrepreneurial challenges, particularly in entrepreneurship, innovation, and project management. Additionally, it organized specialized training programs in entrepreneurship and innovation, featuring in-person workshops from December 20, 2020, to January 17, 2021. These workshops aimed to teach students how to develop entrepreneurial ideas, navigate challenges, and manage project growth.

The programs concluded with the launch of the IDTOUR 2021 competition, which was open to aspiring entrepreneurs, including university students, graduates, and even non-degree holders across the country.

5.2.3 Incubator Results in Supporting and Assisting Innovative Projects

The University of Boumerdes Business Incubator has undertaken numerous initiatives to support innovative projects. One of the most notable activities was the "Best Project Idea" competition (ID TOUR 2021), held in collaboration with the National Agency for the Promotion of Research Results and Technological Development and the General Directorate of Scientific Research and Technological Development. The competition aimed to instill an entrepreneurial culture among university students, identify future entrepreneurs, and transform promising projects into reality through funding and support.

The competition was conducted in four phases:

- Online Registration: Project applications were submitted.
- Initial Selection: 20 projects were shortlisted from 84 submitted proposals.
- Training Sessions: Selected candidates received training in marketing, financial management, communication, and more, led by specialized professors.
- Final Stage: The top projects were presented before a jury panel, where five projects were awarded. Notable winners included:
 - An eco-friendly enzyme production project for the detergent industry
 - An innovative smart ventilator device

Additionally, the incubator organized the "Fikratech 2022" Startup Challenge, aimed at selecting and supporting the most promising innovative projects. The top five winning projects included:

- multifunctional electric car project (1st place)
- smart agriculture management system based on the Internet of Things (IoT) (2nd place)
- startup focused on managing equipment and waste containing polychlorinated biphenyls (PCBs) (3rd place) (Boukhal & Yahiaoui, 2023, p. 446).

5.3 The Contribution of the University Center of Tipaza Business Incubator in Supporting and Assisting Startups (Boudib, 2024, pp. 123-127)

The Business Incubator of the Mersli Abdellah University Center was established by virtue of the joint ministerial decree issued on February 14, 2022, and published in Official Gazette No. 23 on April 6, 2022. The incubator director was officially appointed by the University Center Director on March 12, 2022, with the goal of fostering innovation and supporting entrepreneurial projects initiated by students and researchers in the framework of startup development.

5.3.1 Objectives and Missions of the University Center of Tipaza Business Incubator

The incubator aims to support students' creative ideas and projects by achieving a set of strategic objectives, including:

- Providing a suitable environment that facilitates the implementation of projects and ensures all necessary resources for their success.
- Connecting projects within the incubator to encourage the exchange of experiences and linking them to the market for maximum benefit.
- Transforming scientific research outcomes into economically viable projects.

To achieve these objectives, the incubator undertakes several key tasks, including:

- Identifying and selecting innovative ideas that can be developed into viable projects.
- Providing mentorship and moral support to entrepreneurs, encouraging them to establish successful startups.
- Offering specialized training programs in various entrepreneurship-related fields.
- Providing scientific, technical, and logistical support to ensure the growth and sustainability of projects.

By serving as a hub for creativity and innovation, the incubator enhances the growth of startups and creates real opportunities for economic development.

5.3.2 Activities and Programs of the University Center of Tipaza Business Incubator

The Tipaza Business Incubator has implemented a range of activities aimed at enhancing students' skills and supporting their projects. Among these activities were orientation and training visits, including two visits to the business incubators of the Universities of M'sila and Boumerdes, to learn from their successful experiences. The incubator also organized training days to explain the implementation mechanisms of Ministerial Decree No. 1275, which concerns graduation projects as startups or patents.

Additionally, training workshops were held between March and May 2023, covering crucial topics such as:

- Startup creation and management
- Digital marketing
- Business plan development
- Prototyping

These workshops enhanced the capabilities of students with startup ideas. The incubator also launched the "Business Challenge" competition to select the best projects. Submitted projects were evaluated based on legal standards and feasibility, and were classified as either small enterprises or innovative startups for incubation.

As part of its efforts to strengthen cooperation and partnerships, the incubator signed collaboration agreements with supporting organizations, such as the Agency for the Promotion of Industrial Parks and Brenco Engineering. Additionally, a new incubator facility was inaugurated in February 2023 to provide an optimal working environment for startups.

To track students' progress, the incubator reviewed and discussed 22 projects from May to July 2023, in the presence of partners from the economic and social sectors. Moreover, it organized awareness days to educate students about the registration process for projects under Ministerial Decree 1275 and conducted training sessions for faculty members to enhance their ability to mentor students effectively.

6. CONCLUSION

Through the study of this topic and the analysis of its key components, it becomes clear that business incubators represent a comprehensive ecosystem of high-quality essential services. They serve as a mechanism to promote self-employment and private sector initiatives, thereby enhancing the success and growth rates of startups and enabling them to survive, develop, and adapt to external environmental changes, particularly in the evolving landscape of global competition. This, in turn, maximizes their impact on economic development, especially as such enterprises are increasingly relied upon to drive economic growth and development.

In response to the transition towards a market economy, improving institutional performance, increasing efficiency, and enhancing competitiveness, national authorities seek to adopt a new economic model that moves away from rent-based dependency. These shifts have led to the establishment of mechanisms to support small and startup businesses, which play a vital role in economic and social development. Among these mechanisms, business incubators stand out as one of the most important, as they facilitate the transformation of entrepreneurial ideas into promising economic projects by fostering collaboration between university research centers and the economic and social environment.

Key Findings

Based on both theoretical insights and practical observations of business incubators in supporting startups in Algeria, we can summarize the following findings:

- **Role of Business Incubators:** Support startups from idea to success, ensuring sustainability.
- **University Incubators:** Help students transform creative ideas into businesses, linking research with economic ventures.
- **Encouraging Innovation:** Provide a supportive environment to foster entrepreneurship and prevent brain drain.
- **Industry & Research Collaboration:** Bridge the gap between scientific research centers and industrial enterprises, leading to innovation.
- **Economic Diversification in Algeria:** Reduce reliance on rent-based revenues by promoting technology, creative industries, and digital services.
- **Enhancing the Entrepreneurial Ecosystem:** Offer technical support, mentorship, and training while encouraging a culture of innovation.

Recommendations and Proposals

To further enhance the role of business incubators, we propose the following recommendations:

- **Entrepreneur Awareness:** Inform young entrepreneurs about available opportunities and business incubator support through seminars and events.
- **Expanding Support Programs:** Enhance training, funding, and capacity-building initiatives to equip entrepreneurs with essential skills.
- **Encouraging Collaboration:** Promote local and international partnerships for knowledge exchange and experience-sharing.
- **Fostering Innovation:** Create a supportive environment for developing entrepreneurial ideas and projects.
- **Performance Assessment:** Regularly evaluate business incubators to improve services and strengthen stakeholder collaboration.
- **Supporting Research & Innovation:** Encourage startups to develop new solutions within their industries.

By implementing these recommendations, business incubators can play an even more significant role in driving economic growth, fostering innovation, and supporting sustainable development.

7. Bibliography List :

1. Books :

- Al-Atiya, M. (2009). Small Project Management (3rd ed.). Dar Al-Maysara for Publishing, Distribution, and Printing, Jordan.
- Jawad, S. N. (2000). Integrated Business Management: A Holistic Perspective. Dar Hamed for Publishing and Distribution, Egypt.
- Rise, E. (2011). The Lean Startup (1st ed.). The Crown Publishing.
- Meziane, A., & Amarouche, K. I. (2020). Startups in Algeria: Their Reality and Success Requirements. Publications of the Laboratory of Small and Medium Enterprises in Local Development, University of Bouira, Algeria.
- Samir, M., & Jedali, S. (2020). Analysis of Startup Funding Sources in Light of International Experiences: China, Croatia, and the United Kingdom. In The Problem of Startup Financing in Algeria Between Traditional and Innovative Methods, Algeria.

2. Journal article :

- Bissar, A. H. (2022). The Role of University Business Incubators in Supporting Innovative Projects and Creating Startups: A Case Study of the Business Incubator at Mohamed Boudiaf University in M'sila. Journal of Prospects and Sciences of Management and Economics, 6(2), 392-399.
- Bouadla, S. (2022). Business Incubators as a Mechanism for Supporting and Developing Startups: With Reference to the Experiences of Some Business Incubators in Algeria. Journal of Management, Organizations and Strategy (JMOS), 4 (1), 131-145 .
- Boukhal, F., & Yahiaoui, N. (2023). The Role of University Business Incubators in Creating and Supporting Startups: A Case Study of the Business Incubator at the University of Bumerdes. Economic Dimensions Journal, 13(1), 430-451.

- Hassan, N. A. (2024). University Business Incubators as a Tool for Accelerating Entrepreneurship: Theoretical Perspective. *Review of Economics and Political Science*, 9(5), 434-453.
- Saoud, W., Hani, M., & Louahab, O. (2024). Startups: An Initial Step for Algerian Entrepreneurial Universities. *European Journal of Management*, 32(4), 272-286.
- Freire, C. D., et al. (2023). Technology-Based Business Incubators: The Impacts on Resources of Startups in Brazil. *International Journal of Emerging Markets*, 18(12), 5778-5797.
- Wahyuni, A. I., & Noviaristanti, S. (2022). Startup Characteristics and the Role of Business Incubators in Indonesia. *Indonesian Journal of Business and Entrepreneurship*, 8(2), 251-262.
- Habiburrahman, et al. (2022). Determination of Critical Factors for Success in Business Incubators and Startups in East Java. *Sustainability Journal*, 14(21), 1-17.
- Gwasmiya, A. (2022). Startups: A Review of Concepts, Reality, Prospects, and Challenges in Algeria and Key Arab Experiences. *Ara'a Journal for Economic and Administrative Studies*, 4(1), 99-108.
- Ben Ayad, J. (2022). The Role of Startups in Economic Development. *Journal of Legal Studies*, 8(3), 157-174.
- Zgai, H., & Miloudi, A. (2020). Business Incubators as a Mechanism to Support Startups. *Annals of the University of Bechar in Economic Sciences*, 7(3), 247-261.
- Hashem, A. (2020). Business Incubators and Their Role in Supporting Entrepreneurs and Economic Development. *Scientific Journal of Commercial and Environmental Studies*, 11(1), 255-279.
- Salhi, S. (2021). The Role of University Business Incubators in Supporting Emerging Projects: A Case Study of Incubators at the Universities of M'sila and Boumerdes. *Journal of Economic Sciences, Management, and Commercial Sciences*, 14(1), 121-122.
- Boudib, D. (2024). The Role of University Business Incubators in Supporting Entrepreneurial Thinking: The Case of the Business Incubator at Tipaza University Center. *Scientific Research Notebooks*, 12(1), 115-127.
- Miloudi, A. K., et al. (2018). The Contribution of Business Incubators in the Development and Growth of Small and Medium Enterprises: A Case Study of the Technological Incubator in Sidi Abdallah. *Annals of the University of Algiers 1*, 32(4), 591-614.
- Ould Essafi, A., & Mustapha, A. (2020). Challenges Facing Startups in Algeria and Mechanisms for Their Support and Accompaniment. *Annals of the University of Bechar in Economic Sciences*, 7(3), 469-483.
- Ben Oudina, B. (2024). University Business Incubators as a Mechanism for Launching and Establishing Innovative Projects and Creating Enterprises: A Case Study of the Business Incubator at the University of Ghardaia. *Economic Additions Journal*, 8(2), 30-46.
- Harraq, A., & Bouhbila, I. (2024). The Role of University Business Incubators in Supporting and Guiding University Students to Establish Startups After Graduation: A Case Study of the Business Incubator at Jijel University. *Journal of Economic, Commercial, and Management Sciences*, 17(1), 1-18.

3. Seminar article:

- Shalaby, N. M. (2002). A Proposed Model for a Technology Incubator in Saudi Arabia. Paper presented at the symposium The Reality and Problems of Small and Medium Enterprises and Ways to Support and Develop Them, Riyadh Chamber of Commerce and Industry, 8-9/10/2002, Saudi Arabia

4. Internet websites:

- Talaat, O. (2024). What is a startup and its characteristics and how to finance it. Alrab7on. <https://www.alrab7on.com/what-is-a-startup/> (15/12/2024)