

## **Study of the top ten incubators and accelerators worldwide: The function of business incubators in fostering the expansion and viability of startups**

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### **Abstract:**

Business incubators play a vital role in supporting startups and providing the appropriate environment for startups and growth by providing the necessary resources, guidance and services. Through this study, comprehensive and comparative insights can be provided that contribute to a better understanding of the role of business incubators in supporting the growth and sustainability of startups, thus enhancing the effectiveness of these incubators in promoting innovation and economic and social growth across different economic contexts. The importance of this research lies in providing a comprehensive understanding of the role of business incubators in supporting the growth and sustainability of startups, and providing practical and theoretical insights that contribute to enhancing the effectiveness of these incubators in different economic contexts, by studying the experience and contributions of the top ten business incubators and accelerators in the world in supporting the growth and sustainability of startups during the period from 2020 to 2022. To study this topic, the descriptive analytical approach was used. Through the research, we concluded that business incubators play a major role in enhancing the expansion and continuity of startups.

**Keywords:** Business Incubations ; Business Accelerators ; Startups; Sustainability; Growth and Continuity.

**Jel Classification Codes :** L26 ; M13 ; O31.

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## **Introduction:**

In light of globalization and rapid technological development, entrepreneurship has become one of the primary drivers of contemporary economies' expansion, where business incubators play a vital role in supporting startups, and provide the appropriate environment for start-up and growth by providing the necessary resources, mentorship and services, with the growing interest in startups as a locomotive of economic growth, the role of business incubators is emerging as an effective tool to transform ideas into successful and sustainable projects, this study aims to investigate the impact of business incubators on businesses' expansion and viability.

Given the increasing significance of entrepreneurship as a catalyst for economic growth and innovation, business incubators are emerging as a pivotal tool to support and develop startups. However, the impact of these incubators on growth and sustainability remains significantly different between advanced and emerging economies, and this is what we will try to identify by examining the role of the top ten incubators and accelerators globally in fostering the expansion and long-term viability of businesses.

### **A. Search problem:**

One of the most significant periods in the global development of business incubators was the 1980s, the same period that witnessed the launch towards the era of globalization, and business incubators were known at this stage as third-generation incubators, where reliance was made at this stage on the establishment of business incubators that aim to achieve profit by utilizing all of the terms associated with global modernity and growth, particularly in the information and communications, which resulted in the creation of a new type of incubators that depend on Knowledge, which resulted in an increase in the contribution of incubators to achieving economic growth by a very large percentage, and the transformation of most global economies towards working on the development of business incubators significantly, and these developments also led to the emergence of what is known as virtual incubators without borders. In order to study the above, the following is the research problem:

**What effect do business incubators have on startups' growth and sustainability? and what distinguishes the ten largest incubators and accelerators globally during the period from 2020 to 2022?**

Many of the following **questions** arise from this problem:

- What is the role of business incubators in supporting emerging projects during the period from 2020 to 2022?
- Why are business incubators being established?
- What are the elements that business incubators rely on to support emerging institutions?

To answer these questions, we propose the following **hypotheses**:

- Business incubators played a major role in supporting emerging companies during the period 2020 to 2022;
- Business incubators were established to help emerging companies start and continue their projects;
- Business incubators rely on several elements to support emerging companies, such as: providing financial services, assistance with planning, providing office services, etc.

**B. Importance of the study:**

- The anticipated outcomes of this research aid in the advancement of ideas and theories about business incubators and entrepreneurship, enhancing academic understanding of the role of incubators in diverse economic environments;
- The results of this study could contribute to improving the policies and practices that support this type of startup in various economic contexts;
- Governments, donors, and international institutions can use the results of the study to develop support programs for business incubators, considering the unique requirements and difficulties of every kind of economy.

### **C. Objectives of the study:**

- Examine how startup accelerators and business incubators aid in the expansion and viability of startups;
- Examine the world's ten leading incubators and accelerators;
- Examine the methods and define business accelerators and incubators;
- Reaching a set of conclusions and recommendations to be submitted to individuals in charge of general business accelerators and incubators.

### **I- Conceptual structure:**

#### **I.1. business incubators:**

Incubator management is used to oversee business incubators, which assist entrepreneurs by giving them the tools and services they require, where they provide services to startups directly or through a network of their relationships.

##### **I.1.1. Business incubator definition:**

The concept of incubators originated from the belief that nurseries in which small plants and seeds are grown so that they are followed up to be able to grow and adapt to the environment, and then they are converted to larger farms, and his in the case of business nurseries, the former require assistance, and the latter are still in the early stages of their establishment, and care, as they lack the ingredients to grow on their own, so many institutions fail in their early stages due to the lack of support mechanisms that provide them with the viability and growth (AL-Shabrawi, 2005), it is also defined as a comprehensive group of organizations that form or create a supportive environment for the development of new companies (Lee et al., 2005).

It is also defined as an integrated work system that offers all the resources needed to host a project for a little time, develop it further, and provide a legitimate, encouraging work atmosphere, it also includes a location to incubate the project and offer all services. and

management (Hassan, 2011), the U.S. National Society defines business incubators as: 'Bodies that aim to help start-ups and innovators, and multiple means of support are provided, including financial support, various expertise, locations, as well as all means' (Ali, 2020).

Through the above, it can be concluded that a definition of business incubators is that it is the first base for launching institutions by incubating the project for a certain period with the aim of developing and developing it, and providing all services.

### **I.1.2. Characteristics of business incubators:**

From the previous definitions of business incubators, we find that they share a set of characteristics, which we mention below (Gojil, 2008):

- Considered a small management team, it has the ability to guarantee early risk diagnosis and prompt treatment through a broad network of connections for the incubator with experts, professionals, and financial, marketing, and technical institutions that are present in the marketing environment;
- A careful selection process for the projects entering the incubator and their requirements that is acceptable ;
- A space where incubating institutions can engage and exchange experiences, as well as a workspace with shared and consulting services, at a reasonable cost and rental;
- The network of incubators that connects the projects being incubated to a variety of services and expertise, including research institutions, universities, workshops, industrial facilities, and many more;
- Developing a strategy for the company's graduation following three or four years of incubator residency.

### **I.1.3. Objectives of Business Incubators:**

- Providing financial and administrative support: assisting startups in obtaining funding and providing the necessary administrative support for their growth (Allen & Mccluskey, 1991) ;

- Providing training and mentoring: providing training and mentoring programs to develop managerial and technical skills for entrepreneurs (Hackett & Dilts, 2004) ;
- Provision of infrastructure and facilities: Provide fully equipped workspaces for startups to facilitate the process of establishment and growth; (Phan, 2005) ;
- Building networks and relationships: facilitating communication between startups, investors and potential partners (Callegati et al., 2005) ;
- Stimulating innovation and growth: Encouraging startups to innovate by providing a stimulating and supportive environment for growth (Özdemir, 2013) ;
- Supporting Local Economic Development: Promoting local economic development by supporting startups that contribute to job creation and economic growth. (Kim & Ames, 2006).

These objectives reflect the overall role of business incubators in supporting startups and promoting economic growth by providing financial, administrative, training, and mentoring support, in addition to providing strong infrastructure and building strong networks.

### **I. 2. Business incubator types include:**

- Business incubators are divided into the following categories by the National Association of Business Incubators of the United States (NBIA) (Al-Shamimri& Sorour, 2020);
- Private business incubators, which are privately owned and profit-seeking and represent 8% of the total incubators in North America;
- Public business incubators, and this type is owned by the state, and it does not primarily seek to achieve profits, and it also supports and sponsors the government or local agencies, civil bodies and institutions and seeks to achieve economic development at the national level;
- Mixed business incubators, which are jointly owned by the public and private sectors, and their percentage is estimated at (16%);

- Business incubators related to universities, and these incubators represent about (27%) of the total number of incubators in North America, and these incubators emanate from universities and higher institutes and have the same goals that public and private incubators seek to achieve;
- Other incubators, representing (5%) of the total incubators in North America, are usually sponsored and supported by various non-traditional bodies such as art institutions (cinema, for example), chambers of commerce, ports and others.

### **I. 3. The impact of business incubators on promoting the expansion and survival of emerging businesses:**

Prior to discussing how business incubators might improve the growth and continuity of startups, we will go over the idea of startups as well as the requirements and steps involved in earning the designation of startup.

#### **I.3.1. Definition of startups:**

In the English dictionary, a startup is defined idiomatically as: A small project that recently emerged, the term "Start-up" was coined after World War II and is made up of the words "Start" (which means to launch) and "up" (which means to grow strongly), after the beginning of the emergence of venture capital companies, to be commonly used after that to this day and defined by the French dictionary as young innovative enterprises in the new technology sector (Amamra & Mallah, 2020).

According to Ries (2011), it may also be described as a human organization created to develop a novel good or service in the face of great uncertainty, Cherifa (2018) shows that a startup is a company that aims to market and launch a novel service or new product that targets a large market, regardless of the size of the business, sector or area of endeavor, and it is distinguished by a high degree of risk and uncertainty in return for robust development and, if successful, the potential for enormous rewards.

The conditions and procedures for obtaining the mark of an established institution vary from one country to another according to the legislation regulating this in every one of them, as well as the stipulations of Article (12) at the Algerian state level, and following of the Algerian Executive Decree No. 20-254 of 15/9/2020, which requires the institution to submit an electronic application through a specialized portal attached to a digital copy of the following documents (Suwaiki, 2021):

- A copy of the business's articles of association, the tax and statistical identity card, and the commercial registry; Certificate of enrollment in the National Social Insurance Fund for non-wage earners, with a nominal list of employees;
- A copy of the current year's financial statements and a certificate of registration in the National Social Insurance Fund for non-wage earners. a thorough business plan for the organization;
- Every intellectual property document, award, and honor received, as well as the technical and scientific training and expertise of the institution's staff.

### **I.3.2. Business incubators and startups:**

Taking into account how the incubator sector has grown globally, the figures indicate that there are (3500) business incubators operating in various countries of the world, consisting of over 1000 incubators in the United States alone, with the expansion of roughly (1700) incubators for each of South Korea and Brazil, while the Arab countries have a number of incubators, including (70) for Egypt and Algeria, (2) in Morocco, and one each in Bahrain and Tunisia (Al-Ghoul & Al-Ahmar, 2021).

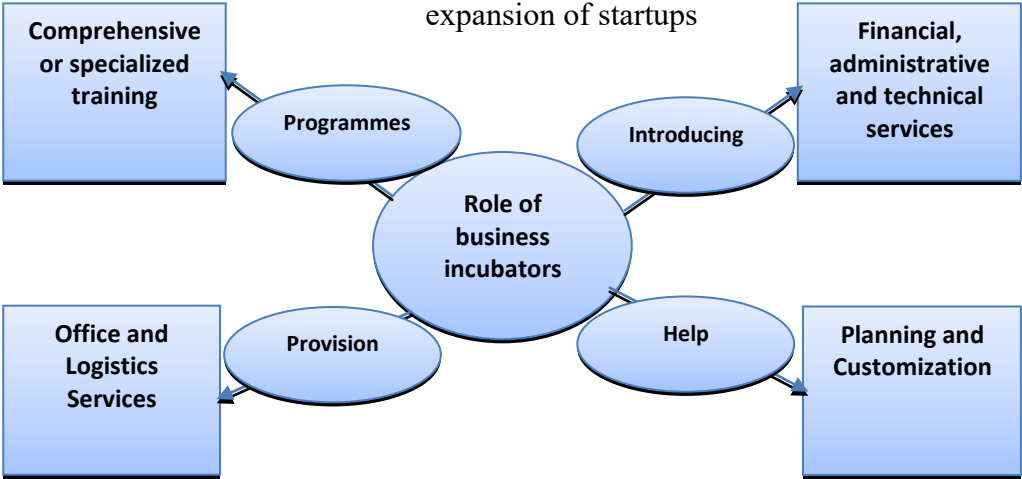
The following are the most important impacts related to business incubators and their role in promoting the growth and continuity of startups (The National Fund, 2023):

- **Providing financial, administrative and technical services:**

- Accounting, marketing and legal services, commercial connectivity and communication services with suppliers in the market;
- Assist in communication with investors;
- Communication and activities that foster relationships in the market.
- **Support for customization and planning:**
  - Help with the action plan's creation and execution, support for market testing;
  - Support for financial planning;
  - Help with the development of prototypes or prototyping.
- **Comprehensive or specialized training programs:**
  - Provision of advisory staff. Provision of general and specialized training programmes;
  - Providing incubation and business development programmes;
  - Services related to business growth.
- **Offering administrative and logistical support:**
  - They have licensed offices that are private and well-equipped;
  - Co-working spaces that encourage cooperation between entrepreneurs;
  - Equipped meeting rooms.

The following figure (1) illustrates business incubators and their role in promoting the growth and continuity of startups:

**Figure (1):** Business incubators' contribution to the expansion of startups



**The Source:** Prepared by researchers based on (The National Fund, 2023)

**II. Results and Discussion:**

The study's analytical component, the top ten business incubators worldwide are identified, and their contributions to the growth and sustainability of companies are examined.

**II.1. The top 10 business incubators' experiences and accelerators in the world during the period 2020-2022 and their average investments:**

The world's best business incubators serve as a symbol of excellence in terms of helping newly established companies as well as those in the process of growth stay in the market for the top ten global incubators and accelerators for the years 2020–2022 are listed here, as long as feasible, and their average deals per year:

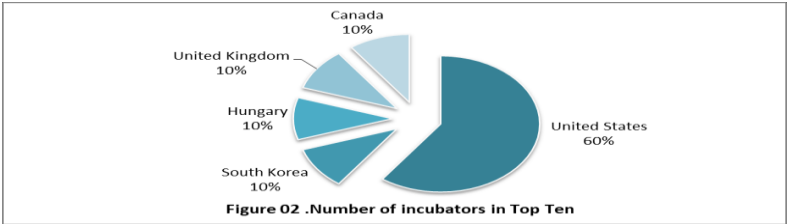
**Table (1) : The average yearly investments made by the top ten global business incubators at 2020-2022**

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| Rank | Accelerator                                     | HQ country     | Average deals per year (2020-2022) |
|------|-------------------------------------------------|----------------|------------------------------------|
| 01   | Plug and Play                                   | United States  | 929                                |
| 02   | Y Combinator                                    | United States  | 820                                |
| 03   | Techstars                                       | United States  | 542                                |
| 04   | TIPS Program                                    | South Korea    | 419                                |
| 05   | Alphabet                                        | United States  | 408                                |
| 06   | MassChallenge                                   | United States  | 336                                |
| 07   | European Institute of Innovation and Technology | Hungary        | 232                                |
| 08   | SOSV                                            | United States  | 205                                |
| 09   | Founders Forum                                  | United Kingdom | 195                                |
| 10   | Creative Destruction Lab                        | Canada         | 193                                |

**The Source: (Research Report, CBINSIGHTS, 2023)**

**Figure (2): shows the countries where the world's best works are concentrated during the period (2020-2022).**



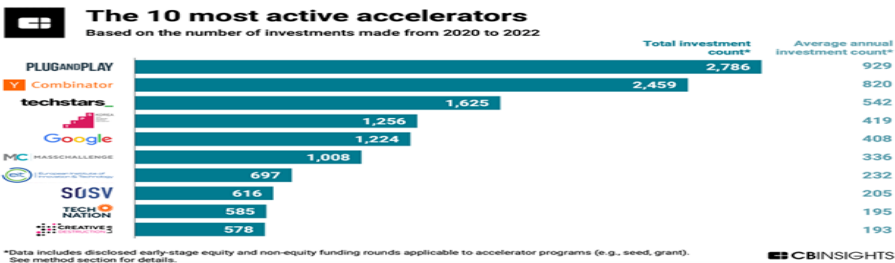
**The source : Prepared by researchers based on the previous table**

Figure (2) shows that 60% of the top ten business incubators worldwide are located in the United States alone, with the remaining

40% being split between the UK, Hungary, South Korea, and Canada (10%) each.

And Figure (3) shows the average annual investments of the top ten incubators and accelerators in the world during the period (2020-2022).

Figure (3): Average annual investments of the top ten global incubators and accelerators during 2020-2022



The source: (Research Report, CBINSIGHTS, 2023)

According (Research Report, CBINSIGHTS, 2023), the ten accelerators funded more than 10,000 companies around the world, with Plug and when it comes to the quantity of deals, Play and Y Combinator are far ahead, each with more than 2,000 acceleration deals between 2020 and 2022. Techstars comes in third place with more than 1,600 deals, and these three companies are among the oldest accelerators, with Y Combinator first introducing this model in 2005.

Based on CBINSIGHTS data, to identify the most active accelerators, we examined these programs, and the areas on which their efforts are focused. Here are six key points from our analysis of the Research Report, CBINSIGHTS, 2023:

- Top (50) accelerators supported (7,794) financing transactions in 2022, an increase of (14%) compared to the previous year and (34%) compared to 2020;

- The average number of annual deals for top accelerators increased by (41%) year-on-year to (83) in 2022, this figure has risen thanks to increasing investments from internet behemoths like Google, Microsoft, and Amazon;
- Since 2020, Plug & Play, Y Combinator (YC), and Techstars have been at the top of the list of the busiest accelerators, Techstars was the only one of the three to increase its deals between 2021 and 2022;
- Of the accelerators that reveal funding amounts, (63%) typically provided less than (100,000\$) per deal between 2020 and 2022;
- The United States is the most active region in terms of accelerator activity, accounting for about a third (32%) of deals in 2022, but that percentage fell compared to 2020, when U.S. startups accounted for (39%) of deals;
- On the sector front, digital health led the number of transactions, with (3,380) transactions recorded between 2020 and 2022, while fintech excelled in 2022 with a total of (1,261) transactions. Energy and clean technology saw the largest year-on-year increase in the number of deals at (+30%).

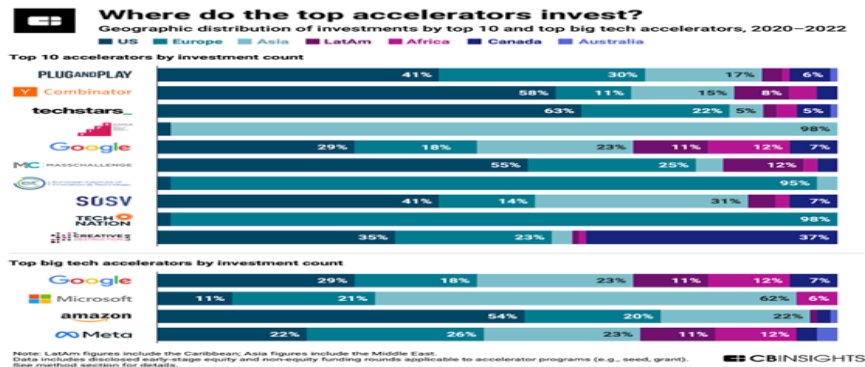
For example, YC reduced its summer 2022 group by 40% to better concentrate its resources, which resulted in a little drop in transaction activity that year. Plug and Play is also focusing its investment activity, seeing a (4%) drop in the number of its investments in accelerators from 2021 to 2022, By contrast, Techstars activity jumped (18%) year-on-year in 2022, supported by the launch of the Techstars Powered by J.P. Morgan, an initiative aimed at supporting diverse entrepreneurs across the United States, Six out of the ten most active accelerators are based in the United States. However, accelerators' activity has gradually expanded beyond the borders of U.S. investors to include global investors as well as a range of companies, trade associations, nonprofits, and government agencies.

Similarly, accelerator programs are increasingly focusing on specific goals and narrow markets. For instance, SAP introduced the business-to-business Future of Shopping initiative (B2B) startups, while Startupbootcamp last year launched its "Inclusive Fintech and Decentralized Finance" program.

II.2. Locations where the world's top accelerators concentrate their investments:

Usually, the accelerator business's headquarters reflects (though not always) the areas in which it focuses its investment efforts, and these areas can be illustrated in the following figure (4):

Figure (4): Where to invest the best accelerators in the world



The source: (Research Report, CBINSIGHTS, 2023)

Through the analysis related to business incubators and accelerators contained in data (Research Report, CBINSIGHTS, 2023), we find that from 2020 to 2022, about (58%) of accelerator deals went to YC and (63%) to Techstars to US-based startups, while Plug and Play scored (41%) lower, this is partly due to Plug and Play's global expansion, including its activities in Japan and Indonesia, big tech companies saw similar trends: Amazon directed (54%) of acceleration deals to U.S. startups over the same period, while (22%) went to companies in Asia, which is in line with Amazon's limited presence in Asia compared to North America.

By contrast, Microsoft took a different approach, investing (62%) of its deals in Asian startups during that period, while the share of US companies was only (11%), Microsoft runs several programs outside the United States, As an example, the Abu Dhabi Investment Office and Microsoft for Startups Middle East GrowthX Accelerator were announced together.

### **II.3. The top business incubators' successful experiences assisting startups:**

The strategic direction given by business incubators is largely responsible for the success, which goes beyond simply guiding business strategies to include providing insights into market dynamics, opening up networking opportunities, and providing valuable advice from experienced entrepreneurs. Securing funding is a key element in the success of startups, and incubators play a big role by connecting these companies with investors and facilitating presentation sessions that support growth during sensitive stages, Successful startups benefit from the extensive networks provided by incubators, where connecting with industry experts and other entrepreneurs enhances their visibility and opens new horizons for strategic partnerships. Incubators that offer customized support programs, such as workshops, training, and one-on-one consultations, accelerate the learning process and strategic development.

Incubators that promote a culture of innovation enhance the chances of startup success by encouraging experimentation, risk-taking, and a mindset of continuous improvement. Successful startups often form strategic alliances with mentors and investors, requiring future entrepreneurs to focus on building important relationships, the success stories and case studies of startups sponsored by incubators in the United States are conclusive evidence of the transformative impact these platforms can have on entrepreneurial ventures. This review reviews prominent startups, analyzes the factors that contribute to their success, and draws valuable lessons for future projects, we review some of these successful experiences as follows:

- Airbnb, a travel and accommodation platform, was founded through the Y Combinator Accelerator, revolutionizing the hospitality industry by connecting travelers to unique accommodations, the guidance and financial support of Y Combinator played a pivotal role in the company's early growth and market penetration;
- Dropbox, another successful example of Y Combinator, is the cloud storage and file sharing service, as it contributed a user-friendly design, Y Combinator provided strategic guidance and connected Dropbox to influential networks, which greatly helped in its success;
- Y Combinator has embraced Stripe, an online payment processing company, which has relied extensively on its innovative approach to simplifying transactions. Supporting Y Combinator through mentoring and investor familiarization has had a huge impact on Stripe's trajectory;
- DoorDash, the leading food delivery platform, also has its roots in Y Combinator, disrupting the food delivery industry by connecting users to local restaurants. DoorDash's support helped Y Combinator overcome challenges and secure seed funding during its early stages.

The success stories and case studies of startups sponsored by incubators in the United States highlight the significant impact of these platforms in fostering innovation and entrepreneurial growth. Prominent companies such as Dropbox, Airbnb and Stripe are a model of the interrelationship between strategic mentorship, seed project funding, and networking opportunities. The lessons learned from these experiences also provide valuable guidance for future entrepreneurial projects, highlighting the importance of replication, mentorship, and effective communication in addressing the challenges of startup development. As incubators continue to foster an entrepreneurial ecosystem, these lessons pave the way for a new generation of innovative and successful startups (Awonuga et al., 2024).

## **Conclusion:**

Through our study, it was found that business incubators are not just platforms for financing projects, but rather interactive centers that combine strategic guidance, communication with investors, and access to the necessary resources, as they play a vital role in promoting the growth and sustainability of startups, by providing an appropriate environment full of support and mentoring. It also provides entrepreneurs with knowledge and experience, and helps incubators shape their ability to innovate and adapt to market challenges. It also fosters a culture of collaboration and partnership, which contributes to building strong networks that benefit startups and this is what we found by studying the best business incubators.

The pivotal role that business incubators play is not only to support the current generation of startups, but also to shape the future of entrepreneurship, paving the way for a new generation of innovative and successful companies that contribute to achieving sustainable development and strengthening the local and global economy.

Startups that go through incubators have higher opportunities and survival rates compared to those that do not benefit from this type of support, business incubators contribute to enhancing the sustainability of startups by supporting them in developing viable business models and providing strategies for sustainable growth in competitive environments, and business incubators play a key role in connecting startups with investors, by organizing presentation sessions and providing networking opportunities, and the capacity of business incubators to adjust to the changing requirements of startups and offer flexible assistance catered to their particular requirements is important to the success of startups, which is what the top ten incubators in the world have been able to achieve in their business with startups.

Incubators help startups secure funding to expand their businesses, and incubators provide personalized support by guiding entrepreneurs in developing their strategies; mentors have valuable industry experience, allowing startups to avoid common mistakes and identify potential opportunities; incubators help startups develop new ideas and improve their products or services, by fostering an innovative

culture and helping to establish an atmosphere that promotes experimentation and risk-taking, incubators offer workshops and training courses covering diverse areas such as marketing, financial management, and product development, these resources help entrepreneurs develop their skills and increase their efficiency.

Success stories of renowned startups such as Airbnb, Dropbox and Stripe have underscored the pivotal function of incubators in molding the entrepreneurial path, and the broader economic impact of incubators extends far beyond individual startups.

Through the study presented, we try to provide a number of recommendations that help business incubators develop their services provided to startups, which were taken from the study and analysis of the world's ten best incubators, which served as the basis for the current study, and we mention them as follows:

- Business incubators should develop comprehensive mentorship programs that include experienced mentors from different industry fields, helping startups benefit from a variety of expertise and knowledge;
- Incubators should work on partnerships with diversified investors and funding institutions to provide multiple funding options for startups, including grants, angel investors, and venture capital;
- Create environments conducive to experimentation in business incubators, where startups can test new ideas without significant financial risk, this can include organizing innovation competitions or dedicated workshops. Partnerships with universities, research centres and government institutions, providing further opportunities for collaboration and innovation;
- It is essential for incubators to provide support to startups even after the incubation period ends, by facilitating access to additional resources and mentors to ensure continued growth;
- Conduct further case studies to learn success stories and failures of incubator-backed startups, which can provide valuable insights into the factors at stake;

- Through the theoretical study and the results presented through the study of the top ten business incubators and accelerators in the world during the period from 2020 to 2022, we find that all the hypotheses put forward are correct, as business incubators have contributed to enhancing the sustainability of emerging companies, by encouraging the development of new ideas and improving their products or services, supporting them in developing applicable business models and providing strategies for sustainable growth in competitive environments... etc.

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