

## National Innovation System Mechanisms for strengthening institutional-university cooperation



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### ***Abstract:***

The university plays a key role in the dissemination of scientific and technological knowledge, and in recent years, it has focused on the development of entrepreneurship and the development of skills and projects related to it, with the aim of creating new entrepreneurs who contribute to the development of the national economy through their entrepreneurial projects.

According to the country's Minister of the Knowledge Economy and Emerging Enterprises, Yassine Walid, the country has completed the creation of 60 business incubators specialized in incubating and accelerating the growth of startups in the country.

In this sense, this article aims to shed light on the concepts of start-ups, their features and characteristics, their importance, reality and prospects with reference to Algeria in this field, and one of our findings is that Algeria has taken several measures to facilitate the process for innovative youth in order to introduce this new concept in the economic arena.

***Key words:*** National Innovation System, university, business incubators, Start-ups.

### ***Introduction:***

North African countries have recently witnessed a significant rise in the field of entrepreneurship lately, especially in the movement to establish

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business incubators in Algeria, which is one of the most important countries working to transform itself into a startup economy.

University business incubators are one of the most appropriate mechanisms to embrace students' creative entrepreneurial ideas, which contribute significantly to the success of their innovative projects by sensitizing and accompanying students in order to transform their innovative ideas into startup projects.

The Algerian state has also attached great importance to startups, as it has allocated a full ministry called the Ministry of Knowledge Economy and Emerging and Micro Enterprises. It has harnessed all the conditions and capabilities that would support these institutions and open the way for young people to access the world of investment through the new investment law, after a number of amendments to its contents, including facilities that would stimulate those wishing to establish small and medium enterprises. The state did not stop at this limit but went much further by hosting the first African conference for startups, which is an opportunity to discuss the most effective mechanisms for.

Based on the above, we ask the following question:

**What role do business incubators play in supporting innovation and developing startups in Algeria?**

To answer this question, we decided to divide this study into 4 main axes:

The first axis: What are business incubators?

The second axis: What are startups?

The third axis: Startups and innovation.

The fourth axis: Incubators and support for innovative startups in Algeria.

**1. Conceptual framework:**

**1.1 Business incubators:**

The term business incubators emerged and began to be promoted in America in the 1950s, then spread significantly in Europe and the rest of the world, as business incubators have become a model for incubating small enterprises at the beginning of their activity and thus minimizing the risk of discontinuity and facing obstacles.

A business incubator is a structure that works to provide the ingredients for success for startups and helps them overcome the early stages of establishment<sup>1</sup>.

It provides an integrated set of services, mainly consisting of equipped offices. And the presence of specialists to accompany the entrepreneur,

for a period ranging from one to three years, so that the entrepreneur can enter the business field after graduating from the incubator.

### **1.2 Start-ups:**

The English dictionary concept: The name of startups goes back to the English term startup, which expresses the launch and growth of the company, and perhaps this is what makes many consider that startups are only modern ones. Moreover, this type of company that first appeared in America in the early 1970s was associated with the spread of the venture capital industry, which was mainly concerned with the technology sector. Especially information and communication technology, which makes many associate startups with the technology sector, and therefore a startup, is a term according to the English dictionary as "a small project that started in the neighborhood"<sup>2</sup>.

Neil Blumenthal, who co-founded and managed the sunglasses company WARBY PARKER<sup>3</sup>, defined a startup as a company that works to find a solution to an issue that is not clear how it can be solved and is not guaranteed to succeed<sup>4</sup>.

**Startups:** It is every young and dynamic organization based on technology and innovation, whose founders try to take advantage of the development of an unknown product or service in order to create new markets. These organizations are characterized by innovation in their processes and results, and have a great ability to grow and expand in markets, because they rely on the internet and technology to deliver their new products and services<sup>5</sup>.

In conclusion, it can be concluded that startups are young companies that are founded by an entrepreneur or a group, with the aim of developing a unique product or service to be launched in the market. By their nature, traditional startups tend to have a limited business at inception and start with an initial investment amount placed by the founders or one of their relatives, and are based on a viable business that grows very quickly and efficiently<sup>6</sup>.

## **2. The objectives of business incubators and how they contribute to the creation of microenterprises:**

The objectives of business incubators in Algeria are to gather the ideas and creativity of young entrepreneurs, and help them transform them into investment projects on the ground, as well as to support the skills and creativity of micro-entrepreneurs and develop practical and administrative skills. Additionally, they provide a suitable work environment for the launch of the emerging institution. Whether

interested in the technological aspect or working in the field of new innovations or that contribute to raising the rate of self-sufficiency, increasing local output, reducing imports and increasing exports in various sectors, and helping to decrease the establishment costs for new initiators to form a project<sup>7</sup>.

### **2.1. How incubators help startups survive in the market:**

The incubator provides furnished and equipped offices with shared facilities, in addition to a visitor reception hall, conference room, and support services under flexible contracts in line with the changing needs of the type of use, space, and rental period. Also, it offers assistance in accessing funding sources through equity ownership.

Moreover, it provides legal services. Such as establishing and registering them, writing license contracts and everything related to intellectual property and patents. As well as technical and technological support and contributing to the development of human resources through educational and training activities in applied fields and increasing project management skills. In addition, try to develop skills through continuous training according to the needs of the project, such as the art of selling, negotiating, bidding, and others.

In addition to participating in the marketing of products locally and internationally by providing trade and technology information and technical development to increase efficiency.

The incubator also provides consultancy services, which include the economic feasibility study for projects, which most SMEs suffer from, as well as the implementation of comprehensive quality consultations<sup>8</sup>.

## **3. Features and characteristics of start-ups:**

### **3.1 Advantages of Startups: Startups are characterized by the following:**

**-Young companies:** These are young companies, that have two options: grow into successful organizations, or close their doors and lose money.

**-Fast-growing, companies with high revenues:** One of the defining characteristics of a startup, is its ability to grow rapidly and generate revenue, much faster than the costs it requires to operate.

As a startup has the ability to quickly scale up its business. i.e. increase production and sales without increasing costs, as a result, its profit margin grows surprisingly, which means that they are not necessarily limited to lower profits because they are small, on the contrary, they are organizations capable of generating very large profits<sup>9</sup>, as startups are designed to grow rapidly once, they find the most appropriate business model.<sup>10</sup>

**-Reliance on technology:** Startups are characterized as companies, whose business is based on disruptive ideas, satisfying market needs in a smart and modern way. Startups rely on technology and rely mainly on it to grow and progress, find funding through online platforms and by getting help and support from business incubators<sup>11</sup>.

**- Replicating a sustainable model:** All startups are often reproducible, as Airbnb and Uber are the best examples of the sustainability of reproducing a business model in a different environment and on a larger scale managed by a different team while completely maintaining the same rate of profitability. There may be minor and sometimes necessary adjustments to adapt the model to the local context, but the premise is the same, if a company meets a precisely defined need or provides a service geared to marketing on a specific scale, it is difficult to call it a startup<sup>12</sup>.

**-Businesses that require low costs:** A startup is a company that requires very low costs compared to the profits it makes, and those profits usually come quickly and somewhat suddenly, such as Microsoft, Apple, Google, and Amazon, whose costs are almost non-existent and whose profits are maximized.<sup>13</sup>

### **3.2. Startup characteristics:**

**-Unstable or emerging markets:** Startups operate in conditions of uncertainty and instability in markets that are difficult to estimate and therefore may not have a precise business plan. Since they will be introducing new products, that are unknown and undesirable, which requires them to face the challenge of finding potential customers, and determining how to reach them and the possibility of convincing them to consume the product.

**- Focus on creativity and innovation:** It means the ability to generate new ideas to solve problems in a positive and beneficial way for the individual and society, as it expresses the individual's competence, confidence, readiness, willingness, focus, and organization of his skills, will, imagination, experiences, and information.

Creativity is one of the strategic pillars of startups, which work to attract creative competencies, and spread the creative culture in the company. While giving space and freedom for creativity and risk to everyone in order to find new products very quickly that give them the advantage of precedence, this creativity and innovation is not necessarily in the technological sector for example the success of Impossible Foods, which was able to innovate a recipe for making meat<sup>14</sup>.

**- Strategy and Development:** By relying on the strategy of specialization and continuous development in terms of customers,

products and markets, which is only possible with a continuous and open innovation policy.

- **Financing:** Support the rapid growth and high costs associated with starting a business, especially in terms of spending on research and development and the costs of implementing innovations, these companies typically resort to opening their capital to external financiers, especially venture capital, entrepreneurs, crowd funding, and loan guarantees.

- **Partner and collaborate with stakeholders:** In order for a startup to focus on the development, and commercialization of its product, it resorts to building strategic alliances in order to strengthen efforts, and accelerate the materialization and exploitation of business opportunities and thus its growth. without giving the partners all the powers so that the startup does not become without influence and does not do everything alone, otherwise it will be deprived of more efficient partners.<sup>15</sup>

- **Human and intellectual capital:** According to Eric Ries, a startup is a human organization designed to create products or services under conditions of extreme uncertainty. A startup is a human organization designed to create products or services under conditions of extreme uncertainty<sup>16</sup>.

### **3.3. Importance of startups:**

Start-ups gain economic, social and scientific importance because they are based on the valorization of scientific research, which serves to well-being of modern societies and meets their new needs in line with the age of speed.

Startups are an economic model that responds to the characteristics of society and what it requires in terms of acceleration in achieving results, acceleration in meeting needs and acceleration in achieving profits.

Many startups have succeeded in creating wealth, and adding value and supporting the economies of several countries like the United States of America and East Asian countries like South Korea, thanks to the development of innovative products and services that allowed the creation of new job opportunities and providing solutions for communities that are easy to access and low-cost.

### **3.3. Features of startups:**

- Many people make the mistake of categorizing small businesses as startups, but that is not what we are talking about today.

- Startups are characterized by the fact that they are young, young companies that have two options: grow into successful companies, or close their doors and lose.

- Startups rely on modern technology to grow and develop by gaining help and support from incubators and by using websites.

- Innovation is what distinguishes startups from other classic organizations, and it is part of the organization's overall strategy, through which its competitive and technological priorities are determined.

A successful entrepreneur is characterized by the ability to exploit and create opportunities in his or her field, and is characterized by a spirit of initiative and innovation<sup>17</sup>.

#### **4. Incubators and startup support:**

There are several mechanisms for funding startups:

**4.1. Financing through venture capital organizations<sup>18</sup>:** Venture capital is an investment-financing tool and is a form of active investment based on equity participation. Venture capital institutions in contemporary economies are considered one of the most important means of financial and technical support for new and emerging projects, due to their high ability of these institutions to deal with risk in a proper and rapid manner mainly due to their experience and wide capabilities, as they are specialized institutions in the field of finance.

**4.2. Compulsory loan financing:** It is a financing technique used by banks or specialized financial institutions, whereby they acquire movable assets or real estate to lease them to another institution. The latter, in turn, repurchases them at a generally low residual value at the end of the contract period, and the payment is made in agreed installments called the lease price<sup>19</sup>.

**4.3. Financing through Islamic banks:** It is what is known as Islamic finance and is intended to provide wealth in kind or cash, either as an obligation, donation, cooperation or profit from its owner to another person who manages it and disposes of it in return for a moral or material return urged by Shariah provisions.

**4.4. Financing through non-banking institutions:** These institutions are characterized by the fact that they grant medium and long-term loans unlike commercial banks, which focus on short-term loans while taking into account adequate guarantees, profit and liquidity for various projects. These institutions may be governmental, semi-governmental or in the form of international non-governmental organizations.

#### **4.5. How to avoid crisis situations faced by startups:**

There are a set of characteristics to avoid crisis situations faced by startups:



- The human component is the first criterion for the success of any startup according to all the entrepreneurs who have gone through it as well as the investors who choose it.
- Create a dream team of founders from the beginning, then continue the momentum by recruiting a great team but also with experienced people from outside the company<sup>20</sup>.
- Correct mistakes quickly and don't let intolerable situations rot.
- Founder should have excellent communication skills in terms of business management as well as mastery of the company's product offering, because he will be one of the main promoters of the company, especially in various speaking opportunities.

### **5. Innovation in innovative startups:**

Higher education is a strong driver of innovation, whether through corporate behavior, such as the role of American Express in popularizing the use of electronic cards. Which has had a great impact on the development and facilitation of Higher education activity, or through state intervention and proposing a Higher education development policy at the macro level, such as the renovation of ancient cities and turning them into tourist hubs, which inevitably contributes to intensifying efforts and harnessing various innovations.

The success of institutions in general and the continuation of their activity does not depend only on maximizing profits and the return on investments. Institutions often build a development strategy, so that they work to know the nature of the transformations taking place in their surroundings, and the specificity of the environment in which they operate, and in this context, it becomes necessary to pay attention to creativity and innovation to improve performance in emerging institutions<sup>21</sup>.

### **6. The reality and the prospects of business creation in Algeria:**

The creation of a new organization is a very difficult step, and it is even more complicated for start-ups, that need to achieve increasing growth rates in unknown or unstable markets. So it is necessary to provide a comprehensive and integrated framework, that allows a positive interaction between the individual characteristics of the entrepreneur and The socio-economic factors that characterize its environment, in order to overcome obstacles. Moreover, facilitate the process of creating a start-up making it possible and achievable.

The issue of start-ups in Algeria is one of the most highlighted topics in the Algerian business environment recently, but Algeria has experienced delays in the creation of this type of organization. Especially in light of



the technological backwardness recorded in several sectors, the absence of a culture of innovation and business creation, not to mention the weak government spending on scientific research and development, which does not exceed 01% of GDP, ranking 64th in the world.<sup>22</sup>

Despite, the existence of many initiatives in the creation of start-ups, there is no pioneering experience, and most of the existing start-ups are active in the field of e marketing. and they are just previous experiences in the world, so the reality of innovation in Algeria is very low, which reflects negatively on the activity of start-ups, which rely heavily on innovation and advanced technologies.

In recent years, Algeria has tried to catch up with its lag in this field of education by offering several specializations in this field at the university level, in addition to organizing several scientific events and initiatives, but they remain recent and their results will be observed only in the long term.

The socio-cultural system has failed to nurture a creative, innovative, effective, and entrepreneurial person in an unstable business climate. leaving most people, who want to start their own business without the necessary competencies and skills. Especially in terms of strategic vision, management style, organization, and network of business relationships that allow finding creative projects, conducting a successful market study, writing an effective business plan that allows in-depth analysis of the internal and external environment of the company, and diagnosing the expectations, requirements, and needs of the market in terms of quantity and capacity.

The business climate in Algeria is difficult for the creation and development of enterprises for several reasons related to bureaucracy, such as the multiplicity of administrative procedures without respecting the deadlines for their application, high taxes, difficulties in financing, providing information, obtaining industrial real estate, and the spread of the informal economy.

For example, the search for industrial real estate usually, takes an average of 5 years to find the appropriate property. Due to the lack of rational distribution and regional balance in addition to the complexity of administrative procedures, and multiple interveners, which leads to the dispersion of the decision-making authority to grant real estate among several bodies, so the problem of property is in its management and not in its availability.

Algeria has about 72 industrial zones and 450 activity zones, in addition to several initiatives taken by the State to solve the real estate problem, such as the creation of nurseries for companies and the establishment of 100 shops in each municipality<sup>23</sup>.

In Algeria, forms of financing are still the main obstacle to doing business, especially in terms of access to bank financing. Banks are still considered the weakest link in the development of business start-ups in Algeria, which is usually explained by the high level of risk and the unprofitability of the operation (as the amounts are relatively small), and venture capital firms that should finance SMEs.

They have focused on financing the public sector and accompanying the process of privatization, rehabilitation and restructuring, where their activity is still weak in terms of the volume of investment, the number of beneficiary enterprises and the economic sectors concerned, which remain far from being startups. On the other hand, modern financing tools are still weak, if they exist, such as financial markets, Islamic finance, entrepreneurship, and crowd funding.

Most people still rely on self-financing, funding from relatives and friends, or support from government agencies such as ANSEJ, CNAC, ANGEM, which are not necessarily compatible with the nature and needs of a startup.

### ***Conclusion:***

Through the findings of the study, business incubators have a major role in supporting and developing innovative start-ups. due to their great economic importance, as they are an economic model, that responds to the characteristics of society from accelerating the realization of profits and serving. The welfare of modern societies while meeting their needs in line with the era of technology and speed. as well as providing solutions at low cost unlike classic institutions, and they contribute to creating opportunities for creativity and innovation, which had a great credit in the development and facilitation of tourism activity.

The more innovation and modern technology are available within startups, the more it results in an increase in the national economy from promoting the tourism field to achieving sustainable development, and to ensure the promotion of the tourism field and to achieve sustainable development in startups, we came up with a series of suggestions, namely:

- Provide business incubators for start-ups to enable them to enter the competition and provide quality service.

- The founder of the company must have the best communication skills to manage the business and master the company's product offering.
- Create an experienced team to avoid the occurrence of crises within the company.
- Provide startups with modern technology for growth and development.
- Enrich startups with innovations from creative youth to create a positive impact for the organization and to raise the challenge of sustainable development.

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