

WORKING PAPER

Nascent and Innovative Entrepreneurship, the Emergence of Startups in Tunisia: Evidence from a Qualitative Survey

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Abstract

The purpose of this work is to understand the emergence and evolution process of nascent and innovative entrepreneurship, the constraints and challenges faced by Tunisian startups, the success factors and, finally, how to support the emergence, sustainability and growth of nascent entrepreneurs. This is done via a questionnaire and interviews with 30 nascent startups housed in incubators or accelerators. The survey results confirm the ability and the capacity of startups to scale up, to generate growth and to create good jobs, especially for young adults and graduates. According to the survey results, Tunisian startups are facing a number of obstacles which hamper their development, especially access to financial resources in the early stages, but also skills shortage, cumbersome administration, lack of raw materials etc....

Empirical results also highlight the importance of training, incubation and all support actions for startups. This support is especially useful at an early stage, where the survival rate of startups is generally low.

INTRODUCTION

Although a growing number of studies in recent years have tried to identify the main characteristics of startups, there is still no general agreement as to what a startup is (Breschi, Lassebie, and Menon, 2018). This paper refers to a number of studies to define the concept of startup. Skala (2019) considered that the concept of startup is undoubtedly associated with running a business in its initial phases and with implementing innovation. According to Krejcí, Strielkowski and Čabelková (2015) and Cho and McLean (2009), a startup is a new and temporary company that has a business model based on innovation and technology.

Moreover, startups are characterised by a repeatable and scalable business model and a high potential for rapid growth. "Repeatable" means that the way in which a company creates, delivers and captures value has to be sustainable with recurring profit and "Scalable" refers to new businesses that intend to grow "large" (Thomas, Passaro, and Quinto, 2019). Startups are also known to be subject to uncertain and risky scenarios, which is confirmed by their high mortality rate (Preisendörfer, Bitz, and Bezuidenhout, 2012).

In this study, we will refer to the Tunisian definition of startup. In fact, in 2018 the Tunisian government approved a law, the "Startup Act", which aims to provide administrative facilities, fiscal and financial incentives to support the creation and the growth of innovative startups. According to this law, a startup is basically a nascent and early-stage entrepreneurial venture, scalable, based essentially on innovation and driven by technology. Innovation covers various fields, including technological, managerial, organisational, productive and technical aspects. The Startup Act presents the criteria that the business must meet to be qualified as a startup and to be eligible for incentives, as follows: a business created within less than 8 years, with less than 100 workers and revenues that are lower than 30MDT, innovative and technology focused and with high growth potential.

Through these initiatives and reforms, Tunisian policy makers aim at creating an ecosystem conducive to the emergence and development of innovative startup businesses, in order to adapt to the technological and digital revolution, to upgrade and to move to a higher growth path and to turn Tunisia into a vibrant entrepreneurship hub. The focus of industrial policies has changed from SME policies to innovative entrepreneurship.

A number of studies have shown the crucial role played by innovative startups in terms of economic development (Kelley and Nakosteen, 2005), innovation processes, digitalisation, high value added generation, higher growth and job creation (Sulayman et al., 2014; Thomas, Passaro, and Quinto, 2019; Kelley and Nakosteen,

2005; (Colombo and Piva, 2008; Davila, Foster, and Gupta, 2003; Mustar, Wright, and Clarysse, 2008).

However, there is very little understanding of how these innovative startups emerge, what makes them grow and achieve sustainability, how they drive productivity and employment and what prevents them from evolving and growing.

This study aims at providing a literature review on the contribution of startups to the economy and an empirical view on innovative nascent entrepreneurship and the emergence of startups in Tunisia. The purpose of this work is to understand the process of emergence and evolution of nascent and innovative entrepreneurship, the constraints and challenges faced by Tunisian startups, the success factors and, finally, how to support the emergence, sustainability and growth of nascent entrepreneurs.

This will be done via a questionnaire and interviews with a number of nascent startups housed in incubators or accelerators.

The paper is structured as follows: Section 2 presents a literature review; Section 3 provides some stylised facts about entrepreneurship and startups in Tunisia; Section 4 reports the survey results; and Section 5 presents a conclusion and recommendations.

LITERATURE REVIEW: INNOVATIVE ENTREPRENEURSHIP AND STARTUPS AS A CHANNEL FOR HIGHER VALUE ADDED

It is widely acknowledged that entrepreneurship plays an important role in stimulating competitiveness, economic growth, job creation and poverty alleviation (Braunerhjelm et al., 2010; Fölster, 2000; Acs and Armington, 2004).

Theoretical and empirical economic analysis has proven that entrepreneurship is a prime catalyst for job creation, starting with Schumpeter (1934) who argued that entrepreneurs are the main drivers of creative destruction by stimulating the development of new ideas, firms and products affecting demand and supply in the market. Entrepreneurs help to meet social needs which remained unaddressed by existing structures and contribute in the fight against social exclusion, creating businesses and, thus, new avenues for engagement in the labour market and more broadly in the economy. In short, entrepreneurship is central to the social dynamics of a country (Fayolle, 2011). The agendas of the major international institutions share this view and advocate in favour of measures supporting entrepreneurship.

Furthermore, many scholars stress the importance of entrepreneurship for sustainable development (Hall, Daneke, and Lenox, 2010). McClelland (1965) stated

that developing countries do not require a hundred outstanding politicians or economists, but a hundred outstanding entrepreneurs instead. Gibb and Li (2003) further stressed this idea, indicating that entrepreneurship and MSMEs played a key role in the growth and development of the Chinese economy in past decades. Many scholars believe that entrepreneurship should be referred to as the entrepreneurial capital, arguing that it represents one of the main factors of production, along with labour and capital.

In recent decades, entrepreneurship and innovation have become one of the main concerns of public development policies. Entrepreneurship has been recognised as a driver of innovation and economic growth (Szabo and Herman, 2012).

The contribution of innovation to economic development has been well established in the economic literature, both theoretically and empirically (Solow, 1956; Romer, 1986; Child and Mansfield, 1972; Nadiri, 1993). Thus innovation provides the foundation for productivity growth, economic growth and job creation (Wennekers and Thurik, 1999; Audretsch and Roy, 2001; Acs, 2006; Audretsch, Keilbach, and Lehmann, 2006)).

The effects of entrepreneurship and innovation on economic development are constructed in two models. One is based on horizontal innovation growth models and an increasing product range (Romer, 1989). The other relies on vertical innovation growth models and increasing quality (Schumpeter, 1934; Aghion and Howitt, 1992). Schumpeter (1934) analysed the relationship between entrepreneurship and innovation and their impact on economic growth and development. He conceptually established the «entrepreneur as innovator" and considered it as an essential driver of competitiveness and economic dynamics. He considered that, when an entrepreneur introduces a new product onto the market or a technological innovation, it removes the less productive firms from the market, and, therefore, creates a more competitive environment that leads to higher productivity and economic growth.

Acs et al. (2009) and Braunerhjelm et al. (2010) have completed the economic literature with the knowledge spill over theory of entrepreneurship. The authors induce the idea that economically relevant knowledge is the one that matters the most, with entrepreneurship playing the role of nexus between the knowledge, commercialisation and economic growth.

Dahlstrand and Stevenson (2010) differentiated innovative entrepreneurship from ordinary entrepreneurship. Job creation is considered as the main contribution of ordinary entrepreneurship. Innovative entrepreneurship is more likely to lead to higher value-added, high-quality jobs and wealth.

Levine and Rubinstein (2013), Shane (2009) and Lerner (1994) performed analysis on the impact of entrepreneurship on economic growth using data on firms.

The results suggest that innovative firms and those that use venture capital are the ones with the highest growth.

Wong, Ho, and Autio (2005) assessed the impact of technological innovation and firms' creation on growth. They used an augmented Cobb-Douglas function to show that entrepreneurship and innovation are key determinants of growth. Their results suggest that, in the case of developed countries, new firms generate more jobs and have a higher potential to grow than old firms.

Galindo and Méndez-Picazo (2013) investigated the relationship between innovation and economic growth, following the Schumpeterian approach. They found that innovation plays a crucial role in economic growth and firms' profit improvement. Fritsch and Wyrwich (2017) found that the impact of startup creation on regional development and on overall employment is positive in the medium and long term. This positive impact is more pronounced in areas with a higher degree of urbanisation and from manufacturing start-ups.

Ben Ayed Mouelhi and Ghazali (2018) showed empirically that innovation is a key factor for firms' growth in MENA countries. Innovative firms are more likely to grow. As noted above, the adoption of new technologies and processes allows the emergence of high value added products with new market perspectives. As a result, most countries adopted policies and formulated strategies favouring innovative entrepreneurship and startups (Atherton, 2004).

ENTREPRENEURSHIP AND STARTUPS IN TUNISIA

Every year, the Global Entrepreneurship Development Institute publishes the Global Entrepreneurship Index (GEI)1 which is an annual index that measures the quality and the dynamics of the entrepreneurship ecosystems at a national level in 137 countries2. « The GEI measures both the quality of entrepreneurship (entrepreneurial

¹ The GEDI (global entrepreneurship and development Institute) methodology collects data on entrepreneurial attitudes, abilities and aspirations of the local population and then weights these against the prevailing social and economic 'infrastructure' – this includes aspects such as broadband connectivity and transport links to external markets. This process creates 14 'pillars' which GEDI uses to measure the health of the regional ecosystem.

 $^{^2}$ In this report, 'Entrepreneur' is defined as « a person with the vision to see an innovation and the ability to bring it to market, someone who innovate and deliver a product or service ». This definition excludes « small business owners and traders who replicate what others are doing ».

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qualities of the people in the ecosystem) and the extent and depth of the supporting entrepreneurial ecosystem (the quality of institutions that support entrepreneurship)».

In 2019, Tunisia ranked 53rd worldwide and amongst the best in the MENA region (see Figure 1). The GEI report (2019) concludes that the quality of human capital, both in business and STEM (Science, Technology, Engineering and Mathematics) in Tunisia, exceeds the average. However, according to this report, Tunisian entrepreneurs have a strong risk aversion which is mainly fuelled by political instability. In the box of counter-performance factors that undermine the quality of entrepreneurial initiative in Tunisia, competitiveness, and the ability of the private sector to compete with the international market, holds a preponderant place.



Figure 1: Global Entrepreneurship Index, Ranking 2019, 137 countries

Source: Global Entrepreneurship Index database

The OECD report (2012) noted that Tunisia's higher education institutions provide several courses in entrepreneurial culture, as well as student business clubs, start-up support activities and stimulating competitions. The external support structures for entrepreneurship are also deemed "dense and well developed". However, many weaknesses remain to be addressed. These include the lack of experienced teachers and appropriate and suitable teaching content in entrepreneurship education, insufficient coordination between universities and external support systems (OECD Report, 2012), the insufficient role of the media in conveying a positive image of

entrepreneurs3 and a lack of finance causing over one quarter of exits in the development stages (GEM Report, 2015-2016).

In order to boost entrepreneurship, innovation and inclusive growth, the Tunisian government has launched an ambitious agenda. In April 2018, the government approved a law, the "Startup Act", which was launched in April 2019 after parliamentary approval. This law aims to provide administrative facilities, as well as fiscal and financial incentives to support the creation and growth of innovative startups (see Annexe 2 for key measures from "Startup Act"). The "Startup Act" presents the criteria that business must meet in order to qualify as a startup, as follows: a business created within less than 8 years, with less than 100 workers, with revenues below 30MDT, that is innovative and technology focussed with high growth potential (see Annexe 1).

At the same time, the government is gradually establishing an ambitious Digital Economy programme, which will provide a framework for implementing the "Startup Act", upgrading information and communication technology, developing online payment, mobilising risk capital for investment in innovative startups and SMEs and opening the market to digital financial services providers and financial technology (FinTech) companies

A crowdfunding law was also approved in 2020, to develop non-banking financial instruments and access to alternative financing instruments.

A year after the "Start-up Act", 248 new startups were created and approved (from March 2019 to March 2020). According to DISRUPTUNISIA4, the total number of startups in 2020 is 683, with only 17% founded by women and 60% being based in the capital, Tunis. The majority of founders are young with a high level of education (70% with a tertiary education level), often a technical and engineering degree. As shown in Figure 2, the sectors of art, culture, IT, and communication are dominant. The Gaming sector is in a very early stage of development with only 14 start-ups, yet it is a sector with a high capacity to create value added and jobs, especially for graduates.

³In Tunisia, according to the 2015-2016 GEM report, 71% of adults believe entrepreneurship is a good choice of career, despite the fact that only 48% see positive images of entrepreneurs in the media.

⁴ DISRUPTUNISIA is a platform dedicated to startups (providing data, information, news...) https://www.disruptunisia.com/



Figure 2: Startup numbers by sector in Tunisia, 2020



Startupblink is a research centre which calculates and publishes a "startup ecosystem ranking" of 100 countries and 1000 cities around the world. This ranking is based on three dimensions: quantity (number of startups and supporting organisations taking into account the population size), quality (how well are startups driving innovation, customer base, success stories, mass startup events, presence of brands and global influencers) and business environment (including the World Bank Doing Business index mixed with success of local startup indicators). This ranking is based on vast sets of data on the startup ecosystem. Compared to other countries, especially African countries, Tunisia ranks relatively low, especially due to the low quality of startups (Startupblink report 2020). Tunisia has a long way to go in improving the quality of its startups.



Figure 3: Global startup rankings, 2020, 100 countries



RESEARCH METHODOLOGY AND FINDINGS

For the purposes of this study, we have conducted in depth interviews between January and March 2020 with a non-random5 sample of 30 nascent and innovative entrepreneurs. We contacted them via incubators and accelerators. Most of them are in an early stage of development. The survey has been conducted with the founders and/or co-founders of the selected startups.

We have relied on a qualitative survey including different sections. The first subsection is devoted to identifying the startup profile, the second to training and guidance, the third to the business model, the fourth to challenges, success factors and mistakes, the fifth concerns a startup's future and the last focusses on future trends in the startup ecosystem (see Annexe 3).

It is worth mentioning that this paper used the same questionnaire as the one by Zaki and Zeini (2019).

Startup Profile

The sample consists of 30 Tunisian startup founders, 76% of them are male and 24% are female (**Figure 4**). The gender representation is in line with the overall female/male Total early-stage Entrepreneurial Activity (TEA)⁶ ratio, which is equal to 0.31 in Tunisia and confirms the low female entrepreneurial activity and the persistence of a gender gap. Several studies have shown that female entrepreneurship is hindered by financial dependence and limited access to funding, lack of experience, risk aversion, low social capital and an underdeveloped network to finance, as well as household responsibilities (Ayadi and Mouelhi 2018). In fact, according to a study by Naccache and Mouelhi (2015), the refusal rate for loans is twice as high for women as for men. The survey showed that only 29% of BTS credits⁷ are awarded to women and 9% for BFPME credits⁸.

Furthermore, 97% of founders are young people aged 20 to 38 years (**Figure 5**). 93% of them achieved a university education, 45% have an engineer or master's degree, 38% hold a PhD and 10% have a bachelor's degree (**Figure 6**). 30% of the respondents are from commerce and business administration specialties, followed by engineering (27% of respondents) and computer sciences (20% of respondents) (**Figure 7**).

⁵ Given the absence of a survey frame, i.e., an exhaustive list of startups.

⁶ According to the Global Entrepreneurial Monitoring report (GEM) available until 2015 for Tunisia.

⁷ BTS: Banque Tunisienne de Solidarité

⁸ BFPME: Banque de Financement des Petites et Moyennes Entreprises

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Figure 4: Gender representation

Figure 5: Age groups



Figure 6: Level of education





Figure 7: Field of study

The results show that 55% of the founders have attended training sessions, workshops, and/or special incubation programmes related to their own business. 56% are not satisfied with these programmes and suggest more specific programmes to develop practical and technical skills.

77% of observed startups were founded and owned by 2 or more partners, whereas 23% had only one founder and owner. Thus, we hereby find a similarity with the findings of the Jordan Survey (Sandri, Ashayeb, and Azzioui 2019) where a full 71% of considered ventures are founded by teams.

In the startup ecosystem, mentorship is considered vital for building a successful startup. Findings confirm how important mentors are to startups. In fact, 59% of respondents say that they have had at least one business mentor, either formally or informally.

Startups are active in a wide variety of sectors, with a concentration in the following top 4 sectors: technology, education, E-commerce, and health which combined cover more than 70% of the total number of startups (**Figure 8**). In addition, 93% of the interviewed startups considered themselves as high-tech startups.



Figure 8: Start-up distribution by sector

With regards to motivation, 62% of respondents considered that finding a solution to a problem is the main reason behind launching their startups. Two reasons are stated with the same percentage (34% of the surveyed startups). The first motivation is related to the fact that startups are the best avenue for ideas. The need to work for oneself is the second one. There are many other reasons for starting a business, such as opportunity for greater income, need for change, balance work and family life, flexible hours, and difficulty in finding a job **(figure 9)**.

Figure 9: What are the reasons for starting your own business?



Results in Figure 10 show that 62% of startups have been officially registered. Moreover, 48% claimed that they have registered their startups to obtain temporary exemption from taxes, and 45% considered that operating in the formal market could facilitate the acquisition of financing from banks. Other facilities are the reduction of both the employer's and the employee's share in social insurance and the temporary

exemption from social insurance costs for a number of employees, with 21% and 14% respectively **(Figure 11)**.



Figure 10: Did your Startup register?

Figure 11: What facilities would encourage issuing a licence for the project and making it formal?



Business Model

Around 90% of the surveyed startups have conducted market research before starting their business in order to analyse their targeted markets, to understand their customer profiles and needs, to perform market segmentation, to identify opportunities and to track their competitors. In addition, 63% of startups consider that talking to business professionals and experts is the most important source of information they used to conduct pre-market research, whilst 57% of them have talked to prospective customers and only 27% have talked to prospective suppliers **(Figure 12)**.





In terms of strategic planning, 76% of startups say that they have done a SWOT analysis (strengths, weaknesses, opportunities and threats). Examining strengths and weaknesses allows a startup to take stock of its present situation, to identify the internal resources, skills, talents, capabilities and weaknesses. Examining opportunities and threats allows startups to prepare for future changes, challenges, barriers and to identify new opportunities **(Figure 13)**.

Figure 13: Have you done a SWOT analysis?



The survey results suggest that 59% of startups started their business with very limited financial resources (less than 10.000 Tunisian dinars) but they were able to increase their capital to more than 100.000 dinars rapidly (Figure 14) and (Figure 15).



Figure 14: Initial capital value





Concerning sources of funding, founders rely primarily on their personal savings (90%) and on family support (24%) in the early-stage phase; only 3% of entrepreneurs had access to business loans **(Figure 16)**. This could be explained by the lack of financing instruments for early-stage startups in Tunisia. For instance, we have a few business angels in Tunisia, only 11% of Tunisian startups are supported by business angels (Smart Capital 2020), which are adapted and essential to the process of financing startups. The scarcity of financial resources could affect the startup launch process. The Startup Act, adopted by the Tunisian government in 2018, aims to address some of these financing challenges.



According to the survey results, 79% of interviewed startups employed 5 or fewer people when they launched their operation **(Figure 17).** At the time of the interviews, 55% of them employ between 6 and 49 people (**Figure 18)** and over 68% of them reported plans to hire at least 50% of new employees in the next three years. Moreover, 53% of startups considered that they are on track regarding their hiring plans. These results support evidence about the scaling up and the potential growth and job creation capacity of such ventures.

Figure 17: How many people did your startup employ at the beginning?









Although male dominance exists at the ownership level, women are well represented amongst team members. On average, 41% of the workforce is made up of mixed teams (male and female) **(Figure 19)**.



Figure 19: Male to Female Ratio

Furthermore, 66% of the startups managed to generate revenue for more than six months out of the last twelve, thereby covering a proportion of their expenses. This is in line with the potential scaling up of startups.

With regard to innovation, the results highlighted that Tunisian startups are more focused on product innovation, which is defined as the creation of new products and/or services through technological development. In general, startups have implemented three main types of innovation: product innovation (38%), marketing innovation (27%) and organizational innovation (14%) (**Figure 20**). However, only 33% consider that their product is completely new in the world. 69% of startups considered that they were operating in an expanding market and 21% perceive that the market is stable (**Figure 21**). Similarly, 66% of startups believed that their business is growing, while 34 percent felt that it was stable (**Figure 22**).



Figure 20: Type of innovation

Figure 21: What is the status of the target market?



Figure 22: What is the status of your business?



Competitor analysis is an important pillar of market research analysis. It enables competitors to be identified and their strengths and weaknesses to be

understood. It helps enterprises to position themselves in relation to their competitors. 72% of founders say they have potential competitors in their target market, 68% of them claimed that their products or services are of better quality and 45% reported that their products or services are cheaper **(Figure 23)**.





About 59% of startups stated that their business model had been changed at least once. This provides evidence of the flexibility of startup organisations that makes them more resilient to shocks. The survey findings show that there are at least three main reasons for changing and updating the business model: first, a change of supplier or technologies and this argument is advanced by 38% of startups. Second, the launch of a new product or service (38% of startups). Third, expansion into new markets (34% of startups). There are many other reasons explaining changes of a business model, such as a change of customers, the need for refinancing and fundraising or new competitors **(Figure 24)**.





Challenges and Success Factors

66% of founders report that lack of funding remains one of the main challenges facing startups. Finding workers suitable for specific jobs is also a difficult issue for 55% of startups. About 34% of startups consider competition, market conditions and government regulation as being restrictive. There are other challenges, such as lack of required raw materials, difficulty in finding an affordable facility in a preferred location and marketing problems **(Figure 25)**.





When looking at the mistakes made by founders, 31% of them thinks that "not hiring the right people" is the biggest mistake they have made. 24% of them think that they made poor financial decisions. About 21% of respondents mentioned a lack of investment in marketing as a source of mistake, as well as trusting others too much. Setting unrealistic goals, poor location choice, and poor organisation were cited amongst the other pitfalls **(Figure 26)**.



Figure 26: Which of the following mistakes have you made?

As per the main factors that have contributed to the success of startups, the results are as follows: 83% of the respondents believe that startup success depends, to a large extent, on factors related to the entrepreneur's personality and talents, such as confidence, creative thinking, risk-taking, networking, knowledge-seeking, passion, energy and determination. 69% of founders consider a previous entrepreneurial experience to have been an important success factor. Furthermore, 55% consider that focussing on customer needs plays a significant role in their success story. A developed network is also a key success factor according to 41% of the respondents. Support of family and friends, a good business plan, training and workshops, and good location for the business are further important elements to ensure success (**Figure 27**).

Figure 27: Which of the following factors have contributed to your success story?



The respondents mentioned that their experiences had taught them a lot of valuable lessons. Almost two-thirds of them believe that one of the most important lessons learned is to never hesitate, because waiting too long may mean someone else beats you to market. Another valuable lesson, highlighted by 48% of startups, is taking

bigger risks early on. 45% emphasised the importance of listening to an audience, whilst 34% advocated the relevance of checking the business model (Figure 28).



Figure 28: What lessons have you learned when starting your business?

Future Trends and prospects

Despite the obstacles they face, Tunisian startups have optimistic expectations and good prospects for their businesses. 52% of respondents believe that their business would achieve its objectives in 2020. About 90% consider their business to be successful and 76% believe they are a successful entrepreneur.

When it comes to scalability, 72% plan to expand their business in order to increase their market share and their profitability, whilst 14% have already scaled up **(Figure 29)**. 41% of respondents considered an increase in revenue to be the most important objective followed by market share (38%) and cash flow (31%) (**Figure 30**). In addition, 63% declared that their own business is their primary source of income-Almost half of all startups are satisfied with their achievement. However, 41% are neutral with regards to startup returns and 62% are unsatisfied with the business environment in Tunisia **(Figure 31)**.



Figure 29: Do you plan to scale up your business?

Figure 30: What is the most important aim for your startup?



Figure 31: How satisfied are you with investment in Tunisia?



CONCLUSION AND RECOMMENDATIONS

In a context of crisis and sluggish growth, start-ups are one of the levers that can enable Tunisia to expand towards activities that create a higher value added and a return to growth.

The survey results confirm the ability and the capacity of startups to scale up, to generate growth and to create good jobs, especially for young people and graduates. The majority of surveyed startups are created by young adults and graduates with higher education. This is particularly important in the context of Tunisia, where the youth unemployment rate is very high - more than 30% in 2019 - and the unemployment rate amongst graduates is around 28% in 2019. Startups are active in sectors with a high technological content and a high value added; they are a strong driving force for innovation and growth.

Empirical results highlight the importance of training, incubation and all support actions for startups. Guiding and coaching entrepreneurs in the different development phases - from the initial idea to the launch and growth of the business – are key success factors. This support is especially useful and important in the early stages of development, where the survival rate of startups is generally low.

According to the survey results, Tunisian startups are facing a number of obstacles hampering their development, such as skills shortage, regulations and cumbersome administration, lack of raw materials etc. **But the crucial challenge** facing startups in Tunisia remains access to financial resources, especially at the early stage. Startups rely heavily on their personal resources and the majority of them remain underfunded. Banks, for example, are almost non-existent as a source of funding for startups.

In order to accelerate the pace of startup development, Tunisia should build a more conducive environment for innovation, an active innovation system and a developed digital infrastructure.

- An enabling environment for startups, with less bureaucracy and a short timeframe, is needed; this could be achieved by the digitalisation of administrative services. More cooperation between universities, research centres and startups is also needed.
- Development of incubators and support structures is also necessary for the proliferation of innovative start-ups.
- New funding instruments should be more accessible and timely for startups, such as private equity, venture capital investment, crowdfunding, innovation funding, business angels etc. A regulatory framework making it easier to access these new equity instruments is necessary.

• Reform of the educational system and more importance on vocational training are necessary, in order to increase the quality of labour resources and skills, to improve their technological capabilities and to adapt to the needs of the private sector. It is also important to adapt to new activities and jobs by anticipating the future of work. A mix between training and practice is needed.

The startup act law and the crowdfunding law, approved by the Tunisian government and the parliament in order to foster the role of startups and entrepreneurship, are very ambitious and are already beginning to yield promising results. However, more progress in the implementation of certain provisions is necessary. For instance, the use of E-payments for online transactions is a prerequisite to startups scaling up and internationalisation.

REFERENCES

- 1. Acs, Zoltan. 2006. "How Is Entrepreneurship Good for Economic Growth?" Innovations: Technology, Governance, Globalisation 1 (1): 97–107.
- 2. Acs, Zoltan, and Catherine Armington. 2004. "Employment Growth and Entrepreneurial Activity in Cities." Regional Studies 38 (8): 911–27.
- Acs, Zoltan J., Pontus Braunerhjelm, David B. Audretsch, and Bo Carlsson. 2009. "The Knowledge Spillover Theory of Entrepreneurship." Small Business Economics 32 (1): 15–30.
- 4. Aghion, Philippe, and Peter Howitt. 1992. "A Model of Growth Through Creative Destruction." Econometrica 60 (2): 323.
- 5. Atherton, Andrew. 2004. "Unbundling Enterprise and Entrepreneurship: From Perceptions and Preconceptions to Concept and Practice." The International Journal of Entrepreneurship and Innovation 5 (2): 121–27.
- 6. Audretsch, David B., Max C. Keilbach, and Erik Lehmann. 2006. Entrepreneurship and Economic Growth. Oxford; New York: Oxford University Press.
- 7. Ayadi, Rym, and Rim Mouelhi. 2018. "Female Labour Force Participation and Entrepreneurship: The Missing Pillar for Inclusive and Sustainable Economic Development in MENA?" EMNES Policy Paper 002.
- 8. Ben Ayed Mouelhi, Rim, and Rim GHazali. 2018. "Growth of Micro, Small and Medium Enterprises (MSMEs) in MENA Countries: Constraints and Success Factors." EMNES Working Paper 05.
- 9. Braunerhjelm, Pontus, Zoltan J. Acs, David B. Audretsch, and Bo Carlsson. 2010a. "The Missing Link: Knowledge Diffusion and Entrepreneurship in Endogenous Growth." Small Business Economics 34 (2): 105–25.
- 10. ———. 2010b. "The Missing Link: Knowledge Diffusion and Entrepreneurship in Endogenous Growth." Small Business Economics 34 (2): 105–25.
- 11. Breschi, Stefano, Julie Lassebie, and Carlo Menon. 2018. "A Portrait of Innovative Start-Ups across Countries." OECD Science, Technology, and Industry Working Papers 2018/02.
- 12. Child, John, and Roger Mansfield. 1972. "Technology, Size, and Organisation Structure." Sociology 6 (3): 369–93.
- 13. Cho, Yonjoo, and Gary N. McLean. 2009. "Leading Asian Countries' HRD Practices in the IT Industry: A Comparative Study of South Korea and India." Human Resource Development International 12 (3): 313–31.
- 14. Colombo, Massimo G., and Evila Piva. 2008. "Strengths and Weaknesses of Academic Startups: A Conceptual Model." IEEE Transactions on Engineering Management 55 (1): 37–49.

- 15. Dahlstrand, Asa Lindholm, and Lois Stevenson. 2010. "Innovative Entrepreneurship Policy: Linking Innovation and Entrepreneurship in a European Context." Annals of Innovation & Entrepreneurship 1 (1): 5602.
- 16. Davila, Antonio, George Foster, and Mahendra Gupta. 2003. "Venture Capital Financing and the Growth of Startup Firms." Journal of Business Venturing 18 (6): 689–708.
- 17. Fayolle, Alain. 2011. "Enseignez, enseignez l'entrepreneuriat, il en restera toujours quelque chose !" Entreprendre & Innover 11–12 (3): 147. https://doi.org/10.3917/entin.011.0147.
- 18. Fölster, Stefan. 2000. "Do Entrepreneurs Create Jobs?" Small Business Economics 14 (2): 137–48.
- 19. Fritsch, Michael, and Michael Wyrwich. 2017. "The Effect of Entrepreneurship on Economic Development an Empirical Analysis Using Regional Entrepreneurship Culture." Journal of Economic Geography 17 (1): 157–89.
- 20. Galindo, Miguel-Ángel, and María-Teresa Méndez-Picazo. 2013. "Innovation, Entrepreneurship and Economic Growth." Management Decision 51 (3): 501–14.
- 21. Gibb, Allan, and Jun Li. 2003. "Organising for Enterprise in China: What Can We Learn from the Chinese Micro, Small, and Medium Enterprise Development Experience." Futures 35 (4): 403–21.
- 22. Hall, Jeremy K., Gregory A. Daneke, and Michael J. Lenox. 2010. "Sustainable Development and Entrepreneurship: Past Contributions and Future Directions." Journal of Business Venturing 25 (5): 439–48.
- 23. Kelley, D.J., and R.A. Nakosteen. 2005. "Technology Resources, Alliances, and Sustained Growth in New, Technology-Based Firms." IEEE Transactions on Engineering Management 52 (3): 292–300.
- 24. Krejcí, Martin, Wadim Strielkowski, and Inna Čabelková. 2015. "Factors That Influence the Success of Small and Medium Enterprises in ICT: A Case Study from the Czech Republic." Verslas: Teorija Ir Praktika 16 (3): 304–15.
- 25. McClelland, David. 1965. "N Achievement and Entrepreneurship: A Longitudinal Study." Journal of Personality and Social Psychology 1 (4): 389–92.
- 26. Mustar, Philippe, Mike Wright, and Bart Clarysse. 2008. "University Spin-off Firms: Lessons from Ten Years of Experience in Europe." Science and Public Policy 35 (2): 67–80.
- 27. Naccache, Sonia, and Rim Mouelhi. 2015. "La Finance à La Rescousse de l'entrepreneuriat Féminin.", Policy Brief n°22, NABES Lab, North Africa Bureau of Economic Studies.
- 28. Nadiri, M. Ishaq. 1993. "Innovations and Technological Spillovers." w4423. Cambridge, MA: National Bureau of Economic Research.

- 29. Preisendörfer, Peter, Ansgar Bitz, and Frans J. Bezuidenhout. 2012. "Business Start-Ups and Their Prospects of Success in South African Townships." South African Review of Sociology 43 (3): 3–23.
- **30.** Romer, Paul. 1989. "Endogenous Technological Change." w3210. Cambridge, MA: National Bureau of Economic Research.
- 31. Romer, Paul M. 1986. "Increasing Returns and Long-Run Growth." Journal of Political Economy 94 (5): 1002–37.
- 32. Sandri, Serena, Nooh Ashayeb, and Elyas Azzioui. 2019. "Innovative Nascent and Early Stage Entrepreneurship in the Southern Mediterranean Evidence on Jordan and Morocco." EMNES Working Paper 23.
- 33. Schumpeter, Joseph. 1934. The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle.
- 34. Skala, Agnieszka. 2019. Digital Startups in Transition Economies: Challenges for Management, Entrepreneurship and Education. Cham: Springer International Publishing.
- 35. Smart Capital. 2020. "Startup Act: One Year After 2019-2020." Smart Capital.
- 36. Solow, Robert M. 1956. "A Contribution to the Theory of Economic Growth." The Quarterly Journal of Economics 70 (1): 65.
- Sulayman, Muhammad, Emilia Mendes, Cathy Urquhart, Mehwish Riaz, and Ewan Tempero. 2014. "Towards a Theoretical Framework of SPI Success Factors for Small and Medium Web Companies." Information and Software Technology 56 (7): 807– 20.
- 38. Szabo, Zsuzsanna K., and Emilia Herman. 2012. "Innovative Entrepreneurship for Economic Development in EU." Procedia Economics and Finance 3: 268–75.
- 39. Thomas, Antonio, Renato Passaro, and Ivana Quinto. 2019. "Developing Entrepreneurship in Digital Economy: The Ecosystem Strategy for Startups Growth." In Strategy and Behaviors in the Digital Economy [Working Title]. IntechOpen.
- 40. Wennekers, Sander, and Roy Thurik. 1999. "Linking Entrepreneurship and Economic Growth." Small Business Economics 13 (1): 27–56.
- 41. Wong, Poh Kam, Yuen Ping Ho, and Erkko Autio. 2005. "Entrepreneurship, Innovation and Economic Growth: Evidence from GEM Data." Small Business Economics 24 (3): 335–50.
- 42. Zaki, Heba, and Nahed Zeini. 2019. "Descriptive Analysis of the Entrepreneurship Ecosystem in Egypt from a Startup Perspective: Challanges and Opportunities." EMNES Working Paper 24.

ANNEXES

Annexe 1: Tunisia's Startup Act



Annexe 2: Key provisions under Startup Act

Pillars	Measures
Entrepreneurship Culture	Startup leave: a one year leave, extendable to two years, granted to any employee who leaves his job for the purpose of launching a startup
	Startup stipend: establishment of a living stipend granted up to 3 founders of a startup during its first year of experience.
	Patents: management and payment of patenting fees for startups locally and internationally.
Facilitated procedures for	Startup portal: the point of contact for startups with regards to administrative and regulatory processes related to creation, development and the liquidation of startups.
creation,	SAS and financial instrument: reforming the commercial companies' code to include, amongst others,

development and exit	the Simplified Share Company (SSA), preferred shares, free shares and warrants (BSA).
Financing startups	Tax relief for individuals and entities that invest directly in startups or that subscribe into Venture Capital funds dedicated to startups, with the limits of income or profits subject to taxation.
	Tax relief on capital gain: investment in startups are exempt from capital gain taxation.
	Valuating contributions in-kind: Startups making use of an in-kind contribution are authorised to designate their own contributing auditors.
	Guarantee for Startups : it guarantees venture capital fund investments in startups. It intervenes only in case of voluntary liquidation.
Access to	Technological card: an increase of the technological card ceiling for startups up to 100k DT per year.
international markets	Startup Account: Every startup has the right to open a special foreign exchange account in Tunisia, which it freely supplies through capital contributions, quasi-capital and revenues in foreign currencies.
	Facilitating customs procedures: Startups are considered as "Authorised Economic Operators" as per the customs code.

Annexe 3: Structure of interviews9

I. Startup Profile

- 1. What is your gender?
- 2. How old are you?
- 3. What is the highest degree of education that you completed?
- 4. What is your role in the startup?
- 5. What is your startup location?
- 6. What is the year of foundation?
- 7. In what sector does the startup operate?
- 8. How many founders does your startup have?
- 9. Did you conduct market research before going into your business?
- 10. What resources did you use when conducting market research for your startup?
- 11. How much capital have you invested to start this business?
- 12. How much capital now?
- 13. What is the primary source(s) of funding?
- 14. In which currency were these sources of financing?
- 15. Is your startup registered?
- 16. Why you did not register your startup?
- 17. What facilities would encourage the issuing of a licence for the project and make it formal?
- 18. Did this business operate primarily from somebody's home?
- 19. Is it a high-tech startup?
- 20. Did you launch this startup through the internet and social media first (an online business)?
- 21. Do you expect or plan to extend the startup to offer its products and services online during the coming three years?
- 22. How many people did your startup employ at the beginning?
- 23. How many people does your startup employ?
- 24. What is the male to female ratio of your entire team?
- 25. Does your startup have a strategy to promote diversity and inclusiveness, i.e., gender and age?
- 26. What proportion of people do you think you'll hire in the next 12 months?
- 27. Are you ahead of or behind your hiring plan?
- 28. Has this business received any sales revenue, income, or fees for more than six of the past twelve months?
- 29. Has your monthly revenue been more than monthly expenses for more than six of the past twelve months?

⁹ It is worth mentioning that the same questionnaire was disseminated to a sample of Egyptian startups in 2019 (Zaki and Zeini 2019)

II. Training, Guidance and Guidance Obtained by the Entrepreneur

- 30. Have you participated in any training sessions, workshops, or special incubation programmes related to your own business?
- 31. On a scale of 1 to 5, how would you describe the relationship between your participation in these training sessions, workshops, and incubation programmes and your own business?
- 32. What areas of training do you want to receive in the future?
- 33. Would you say that you have had a business mentor(s), formally or informally?
- 34. How many mentors do you have access to?
- 35. How often do you meet or contact the mentor(s) in the first year of your business?
- 36. How often do you meet or contact the mentor(s) since the first year of incorporation?
- 37. How much equity did you give your mentors on average?
- 38. What are the (other) sources of advice?
- 39. How much equity do the (other) sources of advice get on average?
- 40. In which areas do you need their support and advice?
- 41. Are you an advisor or mentor for others?

III. Business Model

- 42. Have you done a SWOT analysis to give you a better idea of the overall likelihood of success?
- 43. Does your startup offer a product or service that is entirely new to the target market?
- 44. Is it entirely new to the world or just in its active location?
- 45. What makes your business unique and likely to be successful?
- 46. What are the benefits and added value of your product?
- 47. Which of the following represent the type of innovation?
- 48. Does your startup use a new method for promotion or selling that is entirely new to the target market?
- 49. Is it entirely new to the world or just in its active location?
- 50. Does it focus on customers or target markets that other businesses have totally neglected?
- 51. What is the status of the target market (i.e. market size)?
- 52. What is the status of your business?
- 53. Do you have competitors in the market?
- 54. What about your product or service compared to the competitors?
- 55. What about the price of the product or service compared to the competitors?
- 56. If your price is higher than your competition, what special advantage do you offer to justify the higher price?
- 57. If your price is lower than your competition, is your price profitable?
- 58. Have there been any changes in the business model since you started?
- 59. How many changes regarding the following have there been since the earliest days of this startup?
- 60. What are the main reasons for changing or updating the business model?

61. Challenges, Success Factors and Mistakes

- 62. What are the challenges that your startup faces?
- 63. What are the factors that have contributed to your success story?
- 64. What mistakes have you made in your business
- 65. How did you overcome these mistakes?
- 66. What lessons have you learned since starting your business?

IV. Startup's Future

- 67. To what extent do you believe the company will achieve its objectives in 2019?
- 68. Do you intend to sell the company in the near future (over the next 3 years)?
- 69. Do you plan to scale up your business?
- 70. Which factors helped you expand or develop your business?
- 71. How do you plan to scale up your business?
- 72. What factors will lead to the growth and scalability of your business?
- 73. What are the reasons and obstacles for not planning for expansion or development?
- 74. In the coming years, what is the most important aim for your startup?
- 75. Can you tell us which start-up companies you are dealing with or are networking with?

V. Entrepreneur's Personal Views and Trends

- 76. What are the reasons for starting your own business?
- 77. Is your own business(es) the primary source of your income?
- 78. How many hours do you work during the week?
- 79. Do you have specific vacation days during the week?
- 80. If you are offered a high-level position in a leading company or one of the top positions in the country, do you leave your company and join the job?
- 81. How you describe the relationship between your field of study and your own business?
- 82. Have you had work experience in the startup's sector before the foundation?
- 83. How many years of experience do you have in this sector?
- 84. Do you have a job besides your company?
- 85. How do you describe the relationship between your field of work and your own business sector?
- 86. To what extent do you think your company is successful?
- 87. Have you started any business before your current and most recent one?
- 88. How many businesses have you started before your current one?
- 89. How many continued startups do you have until now?
- 90. To what extent do you see yourself as a successful entrepreneur?
- 91. What are the key success elements of entrepreneurship in your opinion?



ABOUT EMNES

The Euro-Mediterranean Network for Economic Studies (EMNES) is a network of research institutions and think tanks working on socio-economics policy in the Euro-Mediterranean. EMNES is coordinated by the Euro-Mediterranean Economists Association (EMEA).

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