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Descriptive Analysis of the Entrepreneurship Ecosystem in Egypt from a Start-up Perspective: Challenges and Opportunities

Heba M. Zaki and Nahed T. Zeini

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Abstract

The purpose of this paper is to present a descriptive analysis of start-ups in Egypt and the related ecosystem, relying on a unique survey. This is the first survey that aims to provide useful and insightful data specifically about Egyptian start-ups. The study aims to explore success factors, opportunities and challenges that they face. This, in turn, has led us to suggesting recommendations for policy makers that may encourage this significant socio-economic segment to become a steering wheel in economic growth.

Keywords: Entrepreneurship, MSMEs, Start-ups, Innovation, Business Model, Business Incubators, Egypt

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Introduction

This paper defines a start-up as an entrepreneurial venture which is typically a newly emerged, fast-growing business that aims to meet needs or/and solve problems in society by developing a feasible, desirable and viable business model around an innovative product, service, process or a platform (Haaker et al. 2017; Trimi & Berbegal-Mirabent 2012). In addition to the previous criteria, it also depends on human capital traits (tacit and explicit knowledge) (Price et al. 2013), risk and uncertainty management, seizing opportunities and cost reduction beyond limited resources (Bosman & Fernhaber 2018).

Beforehand, it is crucial to distinguish between the concept of micro and small enterprises (MSEs) and specifically start-ups. The difference lies in the definition of start-ups. Both are widely recognised as playing a significant role in the growth of the local and global economy, especially in developing countries. They are traditionally known to be responsible for job creation and poverty alleviation (Ensari & Karabay 2014). Yet, this paper uses a definition that focuses mainly on the innovation aspect of start-ups: a new venture in its early stage of development, which is based on an innovative product, service or process. From this point of view, start-ups are defined in this study as ventures that satisfy the following features: (i) They are innovative, driven by the technology and/or business model; (ii) They are younger than 3.5 years (i.e. 42 months); and (iii) They have or (are targeting) significant employee and/or revenue growth.

According to literature, innovation creates a competitive edge for the start-up, in terms of entrance and existence in the market (Richter et al., 2018; Van Praag & Versloot, 2007), as well as creating a substantial role in industrial development (UNCTAD 2015). Moreover, a large segment of literature defines start-ups as ventures based on a novel business idea (i.e. an innovative product or service) (Dahlqvist & Wiklund, 2012). Therefore, start-ups are key and unique contributors to socio-economic development, as they generate new and high value jobs and socio-economic value (Acs et al. 2008).

Accordingly, this paper aims to give a descriptive analysis of the start-ups ecosystem in Egypt, focussing on the ventures that satisfy the three main features mentioned earlier, based on the data extracted from a unique survey.

The survey highlights four main pillars: (a) start-up profile; (b) business model; (c) the challenges and success factors the start-up has encountered; and finally, (d) future trends in entrepreneurship ecosystem from the start-up perspective.

This paper is divided into four sections as follows: literature review, research methodology, research findings, and discussion and recommendations.

Literature Review

In 1934, Schumpeter was the first to coin the term “entrepreneurs” in economic theory. He highlights the important role of entrepreneurship in the economy and society as a whole. He defines entrepreneurs as individuals who are making new combinations of existing resources and forces, who produce something innovative through pursuing opportunities, risk-taking, leadership, motivation and innovation, which all plays a central role within the context of an environment of uncertainty (Schumpeter 1934; Schumpeter 1947; Tülüce & Yurtkur 2015). The terms “entrepreneurship”, “risk-taking”, “innovation”, and “uncertainty” are the core of the field (Shane & Venkataraman 2000). Since then, many attempts to define micro and small enterprises, and start-ups in particular, have been conducted by a number of researchers and agencies (Friar & Meyer, 2003; Luger & Koo, 2005; McCann & Ortega-Argilés, 2016).

There is a debate in the literature on the cut-off point between micro and small enterprises on one hand, and small and medium enterprises on the other hand. The difference in definitions depends on the needs and objectives of the research concerning the segment of enterprise it intends to target, investigate, and analyse - such as employment, size of capital, type of enterprise or technology used, age of the enterprise, etc. (El-Said et al. 2013; OAMDI 2013; OAMDI 2016).

In February 2017, the Central Bank of Egypt (CBE) modified its 2015 definition for SMEs (**Table 1**) due to the successive Initiatives for financing micro and small enterprises undertaken since January 2016, as they believe that improving the access to finance for SMEs in general is significantly important in promoting entrepreneurship and innovation.

According to CBE’s new definition for MSMEs, existing micro-enterprises are those with sales of less than EGP 1 million (\$57,000), and less than 10 employees, while new micro-enterprises are the ones with capital of less than EGP 50,000 (\$2,850). The CBE added that existing small-sized enterprises are those with sales ranging from EGP 1 million to 50 million (\$57,000-\$2,850,000), and with less than 200 employees, whilst new small enterprises are those whose capital ranges from EGP 50,000 to less than EGP 5 million (\$2,850-\$285,000) for industrial enterprises and less than EGP 3 million (\$171,000) for non-industrial enterprises with less than 200 working individuals. Finally, the CBE defined medium enterprises as those whose sales range from EGP 50 million to EGP 200 million (\$2,850,000-\$11,400,000), with less than 200 employees, whilst new medium-sized enterprises are those with capital ranging from EGP 5 million to EGP 10 million (\$285,000 -\$570,000) for industrial enterprises and from EGP 3 million to EGP 5 million (\$171,000-\$285,000) for non-industrial enterprises and also less than 200 employees.

Table 1 Comparison between Micro, Small and Medium-Sized Enterprises

Type of Enterprises	New Entry Enterprises		Existing Enterprises	
	Paid Capital (First Year)	Number of Employees	Businesses Size (Revenues, Sales)	Number of Employees
Micro-Enterprises	Less than 50,000 (\$2,850)	Less than 10	Less than 1,000,000 (\$57,000)	Less than 10
Small Enterprises	50,000-5,000,000 \$2,850-\$285,000 (Industrial Enterprises) 50,000-3,000,000 (\$2,850-\$171,000) (non-Industrial Enterprises)	Less than 200	1,000,000-50,000,000 (\$57,000-\$2,850,000)	Less than 200
Medium Enterprises	5,000,000-10,000,000 (\$285,000-\$570,000) (Industrial Enterprises) 3,000,000-5,000,000 (\$171,000-\$285,000) (non-Industrial Enterprises)	Less than 200	50,000,000-200,000,000 (\$2,850,000-\$11,400,000)	Less than 200

Source: Central Bank of Egypt (CBE)

In April 2017, the Egyptian Micro, Small and Medium Enterprise Development Agency (MSME) was established according to a decree issued by the prime minister. MSME classified the enterprises under the following four categories according to the turnover, capital and employment size: micro-sized enterprises, small-sized enterprises, medium-sized enterprises and entrepreneurship (innovative enterprises). The 2018 MSME's national strategy, as a part of the sustainable development strategy, aims to improve the legislative and regulatory environment, reducing administrative burdens, simplifying the regulatory environment for projects and creating a range of financial and non-financial incentives to encourage the informal sector to join the formal sector. In addition, it aims to promote entrepreneurship and to develop a culture of entrepreneurship - including risk tolerance – as well as to provide all

the training and incubation programmes to help start new ventures and improve skills, through establishing business incubators and innovation hubs all over Egypt (Egypt Vision 2030).

Previously conducted surveys have mainly concentrated on micro, small and medium enterprises (MSMEs) in Egypt and the constraints that faced the development of such traditional enterprises. Each has defined them from different angles. In 2000, the Economic Research Forum (ERF), initiated a project on “Promoting Competitiveness in Micro and Small Enterprises (MSEs)”, with the aim of designing relevant policies and specific programmes to help this sector fulfil its enormous growth potential. In the context of this project, the 2003 Egypt sample survey was designed to provide estimates for key indicators related to the activities, manpower structure and financial characteristics of MSEs. A follow-up survey was then conducted in 2004 to study the dynamics of MSEs in 2004 (OAMDI 2013).

Then, in 2014, the ERF conducted a sample survey on the constraints facing the development of micro and small enterprises (MSEs). This survey mainly highlights the lack of access to adequate finance as the most striking constraint facing MSEs. The collected dataset includes quantitative and qualitative characteristics of each economic unit, such as demographic information of the project owner, project description, sources of project financing, technical support for the project, project labour, project expenditures, marketing, project revenues, constraints facing the project, and other information on the owner/employer and his/her opinions, as well as future expectations. The findings of this survey show that the lack of adequate financing limits the ability of existing MSEs to expand, and thus create jobs (OAMDI 2016; Achy & Selim 2016).

The three surveys above tackled the traditional definition of micro-enterprises - not the innovative ones. In addition, the 2014 survey covered a sample of MSEs that were located in two Egyptian governorates: Gharbiya and Bani-Suef, which cannot be considered as a representative sample of MSEs in Egypt: it neglects the role of the environment as a part of the start-ups ecosystem.

In 2008, the Central Bank of Egypt (CBE) also launched an initiative, as an integral part of the Second Phase of the Banking Sector Reform Programme (2008-2011), to enhance SMEs access to finance and banking services. In this respect and due to the importance of the availability of timely and accurate data and information, the Central Bank of Egypt (CBE) and the Egyptian Banking Institute (EBI) commissioned the Central Agency for Public Mobilisation and Statistics (CAPMAS) to design and conduct a nationwide census on SMEs, fully focussing on value-added, formal economic activities on a full census basis. The Centre of Surveys and Statistical Applications (CSSA) at the Faculty of Economics and Political Science (FEPS), Cairo University undertook the project's on-site quality control (El-Said et al. 2013).

This extensive census covered all SMEs operating that had formally registered. Three filters were considered, to include only registered enterprises with more than five employees and having a significant value-add. Based on these criteria, the census ended-up including around 36,492 enterprises. It included quantitative and qualitative characteristics of each company or economic unit, such as the number of employees, legal status, economic activity, level of exports, sales turnover, invested capital and the problems facing each company in dealing with banks, etc. This census mainly tried to examine the determinants of the access to finance of SMEs in Egypt, as well as the determinants of banking problems. The main findings showed that legal form, economic activity, labour, capital, and sales turnover have a significant effect on having banking facilities. In addition, the findings revealed that the smaller the enterprise, the higher the probability of having financing problems (El-Said et al. 2013).

This census excluded informal enterprises which represented more than 20% in Egypt at that time and the activities of those organisations limited economic value-add. In addition,

it did not highlight the innovative aspect, if at all. El-Said et.al (2013) states that some issues should be considered in future surveys especially, such as whether the enterprise is a start-up or not, as it is an important determinant of access to finance. In addition, the enterprise may actually be working in the informal sector and only register several years later. They also suggest that future surveys must include questions about the source of finance (e.g. own savings, formal loans, informal loans, inheritance, etc.) to see how these financing forms affect the performance of enterprises. In addition, they suggest reference to the gender of the owner, in order to examine gender inequity and discrimination within SMEs.

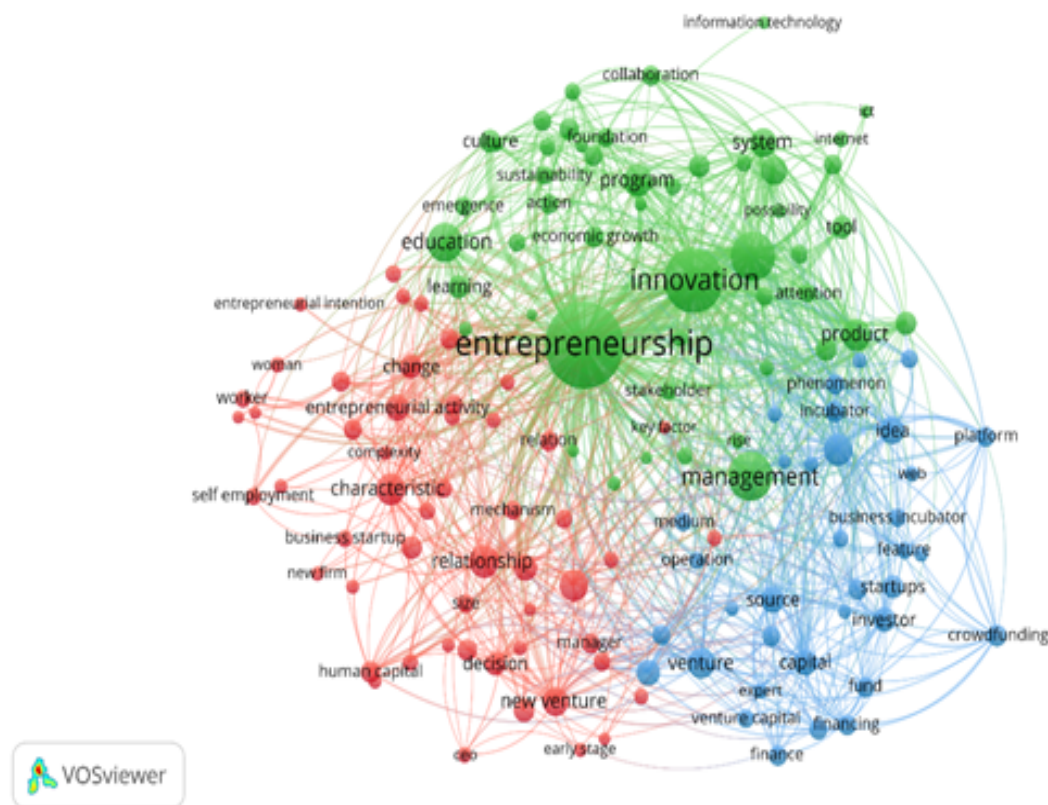
At the global level, the World Bank Enterprise Survey (ES) focusses on many aspects of the business environment. It is a firm-level survey of a representative sample of firms in the non-agricultural, formal, private economy. It is conducted by the World Bank Group and its partners across all geographic regions. It covers a broad range of business environment topics including access to finance, corruption, infrastructure, crime, competition, and performance measures. A distinguishing feature of this survey is its coverage of small, medium and large firms. The size of the firms is determined by the number of employees. Where small firms are defined as those that have 5-19 employees; medium-size firms employ 20-99 employees, and large firms employ 100 or more employees. This survey is repeated approximately every four years for a particular economy or region. By tracking changes in the business environment, policymakers and researchers can look at the effects of policy and regulatory reforms on firm performance. The most recent survey for Egypt was conducted in 2016 and interviewed business owners and top managers in 1,814 firms from October 2016 to April 2017 (World Bank 2017).

In addition to the indicators of SE, the Global Entrepreneurship Monitor (GEM) is the world's foremost study of entrepreneurship that was first conceptualised in 1997 by two academics: Michael Hay of the London Business School and Bill Bygrave of Babson College in the United States. Their aim is to measure and interpret country differences in entrepreneurial tendencies and attitudes. The first published reports came out in 1999 covering just 10 countries, including eight from the OECD, Japan and the USA. The consortium of GEM countries has grown substantially since then, to include over 100 countries across all levels of economic development and in almost every geographic region. What differentiates GEM from most current studies on entrepreneurship is the fact that it does not merely look at businesses; it studies a demographically representative sample of adult individuals (aged 18-64) of a given population. GEM looks at an individual's attributes, aspirations, attitudes, perceptions and intentions. Such indicators play an integral role in the entrepreneurial pipeline, moving from potential entrepreneurs, to intentional entrepreneurs, and onto entrepreneurs who truly manage to start a growing, established business (GEM 2019).

Egypt participated in GEM cycles, along with many other countries, to monitor its entrepreneurial performance. The first GEM report for Egypt was developed in 2008 and published in 2009, and the most recent one, the 2017/2018 report, was published in March 2019. The 2016/17 and 2017/18 reports were the fifth and sixth reports covering Egypt. In addition to providing an overview of entrepreneurship in Egypt, they examine how the entrepreneurship ecosystem supports women entrepreneurs. They are valuable resources for guiding policies and programmes, aimed at improving conditions for risk-taking innovators looking to start a business, as well as micro-entrepreneurs trying to support their families (Ismail et al. 2019; Ismail et al. 2018).

In this paper, to be able to determine the main concepts related to start-up growth, VOSviewer¹ has been used to investigate the literature, by inspecting around 400 scientific articles in the field of start-ups and their related concepts. In the visual presented in (Figure 1), each circle represents a term. The size of a circle indicates the number of publications that have the corresponding term in their title or abstract. Terms that co-occur frequently tend to be located close to each other. The terms have been grouped into three clusters. The green cluster covers terms related to entrepreneurship and innovation. In the right area in the visual, the blue cluster consists of terms related to funding and financial aspects of start-ups. In the left area, the red cluster consists of terms related to human capital and the entrepreneur characteristics.

Figure 1 Co-Occurrence Map of Start-ups' Related Terms



Source: Developed by the Authors

The term “entrepreneurship”, “innovation”, “technology” and “management” have the highest occurrence in their cluster and the network as a whole. In the red cluster, the “relationships”, “human capital”, characteristics” and “performance” terms have the highest occurrence. Whilst, in the blue cluster, the terms “project”, “idea”, “investor”, “finance”, “fund” and “capital” have the highest occurrence. These findings have been taken into consideration in the process of constructing the survey questions and defining possible responses.

¹ VOSviewer helps us to visualize and map the co-occurrence network of important terms extracted from a body of scientific literature about the research under study (Van Eck & Waltman 2010).

Research Methodology

In this study, a survey has been constructed and conducted from a random sample of 200 start-ups that operate in Egypt who were identified and invited to participate, of which a total of 156 start-ups consented, completed and returned the questionnaire (response rate = 78%).

The random sample has been constructed, based on data from the last Egyptian population census conducted by CAPMAS (CAPMAS' 2017/18 Census). The Census stated that the total adult population (aged 20-65) is 50 million 600 thousand citizens. And, according to the GEM report for Egypt (2016/17), the rate of total early stage entrepreneurial activity is 14.3%, which is equivalent to 7 million 250 thousand individuals. Therefore, and by assuming that each start-up has on average of three founders, the total number of start-ups can be estimated to be around 2 million and 420 thousand start-ups. However, this study mainly focusses on the specific category of early stage entrepreneurial activity, which is innovative entrepreneurial activity. Unfortunately, the percentage of this category is not well known in Egypt. For that reason, an approximation has been calculated, based on the GEM report, where the percentage of innovation-driven Economies is 9% (GEM 2016/17). The approximated population size is, therefore, around 220 thousand of innovated start-ups, including both the formal and informal sectors across Egypt. And since there is no specific framework for the overall target population, it was collected by contacting a random sample of 9 business incubators and innovation hubs in Egypt, taking into consideration their geographic distribution. The 9 hubs are: Nahdet El Mahrousa, Flat 6 Labs, Venture lab at the American University in Cairo, the Greek campus, FEPS Business incubator, and El Rehla (Cairo), IceAlex (Alexandria), Hmma (Assuit) and MSME Development Agency. These selected hubs provided us with a list of 2000 start-ups within their network, of which only 200 of them match the study's definition of innovative start-ups.

The questionnaire has been designed to include seven categories of questions: (1) basic information of the start-up's owner; (2) start-up details; (3) training, guidance and guidance obtained by the entrepreneur; (4) business model; (5) challenges, success factors and mistakes; (6) start-up's future; and (7) entrepreneur's personal views and trends that emphasise four main pillars: (a) start-up's profile, (b) business model, (c) the challenges and success factors the start-up has encountered, and finally, (d) future trends in the entrepreneurship ecosystem from the start-up perspective. (Figure 2) shows sample of questionnaire's questions.

Start-up Profile

- What is your gender?
- How old are you?
- What is the highest degree of education that you completed?
- What is your field of experience?
- What is the year of the start-up's foundation?
- Is it a high-tech start-up?
- Is it registered?
- How many people has your start-up employed?
- How much capital you have invested to start this business?
- What is the primary source(s) of funding?

Business Model

- Have you done a SWOT analysis to give you a better idea of the overall likelihood of success?
- Does your business focus on customers or target markets that other businesses have totally neglected?
- What is the status of the target market (i.e. market size)?
- Have there been any changes in the business model since you started? What are the reasons for changing or updating it?
- Do you plan to scale up your business?

Challenges, Success Factors and Mistakes

- What are the challenges that your start-up face?
- What are the mistakes you have made in your business?
- What are the main factors that have contributed to your success story?
- What lessons have you learned when starting your business?

Future Trends in the Entrepreneurship Ecosystem

- To what extent do you believe the company will achieve its objectives in 2018?
- Do you intend to sell the company in the near future?
- To what extent do you think your company is successful?
- How satisfied are you with current investment in Egypt?

Figure 2 Sample of questionnaire's questions

The questionnaire has been disseminated to 156 start-ups operating all around Egypt, as mentioned before. 125 applications have been conducted through a face-to-face interview.

31 applications have been filled in online. The survey covered most geographic areas in Egypt which have entrepreneurial activities, yet North and South Sinai area have not been represented in the survey, due to the non-response of start-ups in these areas.

The survey has taken into consideration the shortcomings of other surveys on start-ups and SMEs in general in Egypt, including unregistered start-ups, the gender representation of start-up founders and team members, source of finance, and determining the challenges and success factors from the entrepreneur's perspective (El-Said et al. 2013; OAMDI 2013; OAMDI 2016; Achy & Selim 2016).

The study has applied a unique approach in defining the meaning of start-ups. In addition to the conventional MSEs' definition set by the Central Bank of Egypt, the study's definition for start-ups focusses on one or several criteria comprising innovative components (i.e. novelty of the product, process, or the market) or the size of enterprise, or the size of the starting capital, or finally, the innovation in the business model (Gardetti & Muthu, 2015).

Research Findings

This section represents the main results of the survey findings and it consists of four main sub-sections.

(a) Start-ups Profile

There is a significant increasing trend in the number of operating start-ups since 2015. We should note here that there are a small number of start-ups who were officially registered before 2015, but they started operating on the ground in 2015, due to the political and economic situation in Egypt after the uprising of January 2011. More than 40% of the interviewed start-ups were founded in 2017 (**Figure 3**). This peak was due to the releasing of the new investment law and its regulations. This law was issued under law No. 72 of 2017 to support entrepreneurship, attract foreign investment and facilitate procedures and regulation and that, in turn, has had a positive impact on the investment climate. It also encourages nascent start-ups to officially register their business. (**Figure 4**) shows that the 73% of the surveyed start-ups have been officially registered, in turn reflecting their success on the ground.

The survey shows that the top three sectoral activities are as follows: technology, services, and agri-business. As shown in (**Figure 5**), one third of the start-ups are technology-based, followed by 16% which are services-based and 10% are agri-business start-ups. In addition, most of the technology and service-based start-ups are located in Greater Cairo and Alexandria, whilst the agri-business start-ups are located in the Upper Egypt Governorates. In addition, (**Figure 6**) shows that 68% of the interviewed start-ups classified themselves as high-tech start-ups.

Concerning the highest level of education attained by the interviewed entrepreneurs and their specialties, findings revealed that 74.8% have a bachelor's degree, followed by 13% with a master's degree and 7% of the respondents have attained high school education (**Figure 7**).

Furthermore, about 39% of the respondents are from the engineering sector, followed by 21% whose specialty is commerce and business administration and 11% from the computer science arena (**Figure 8**). In addition, the results show that 87% of the respondents have attended training sessions, workshops or/and special incubation programmes related to their own business (**Figure 9**).

The survey shows that 70% of the interviewed start-ups are located in Greater Cairo including Cairo, Giza, and Qalyubia, followed by 19.4% in Upper Egypt Governorates including Assuit, Luxor, Qena, Aswan, and 10% in Alexandria, as shown in (**Figure 10**). The entrepreneurial activities are spatially distributed and concentrated in particular regions (hotspots) such as Downtown Cairo, Greek Campus, New Cairo, etc. That reflects the significant association between the distribution of the entrepreneurial activities and the start-up's sector and the education background and specialty of the founder(s). We should note here that the survey has been conducted with either the CEO or founder/co-founder of the start-ups. In addition, the CEO of the interviewed start-ups is sometimes one of the founders or co-founders.

The survey findings are aligned with the data from the Global Entrepreneurship Monitor (GEM) report, which asserted that the entrepreneurship ecosystem is globally male-dominated. Hence, this survey intended to identify the gender representation of entrepreneurial activities in Egypt. As shown in (**Figure 11**), 81% of the survey sample represents male entrepreneurs, compared to 19% females (i.e. female/male TEA ratio is equal to 0.24). According to the GEM report (GEM 2018), the overall female/male TEA ratio is equal

to 0.4. But, as mentioned before, this survey only focusses on a sub-category of TEA, i.e. innovative TEA, that is driven by the technology and/or business model.

In addition, about 89% belong to the 20 to 38 age group, as shown in (Figure 12). The male-dominance also exists on the level of team members, as per 60% of the interviewed start-ups (Figure 13). However, 64% of the total surveyed start-ups plan to promote diversity and inclusiveness in their future employment strategy (Figure 14).

Figure 3 Number of start-ups by year

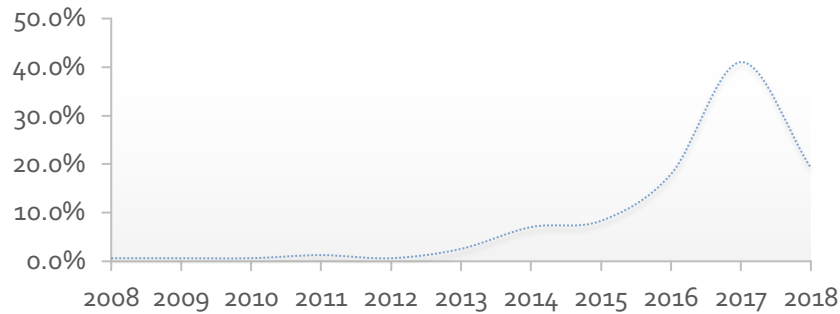


Figure 4 Is your start-up registered?

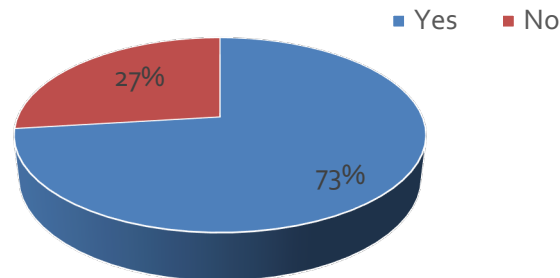


Figure 5 Start-up activity by sector

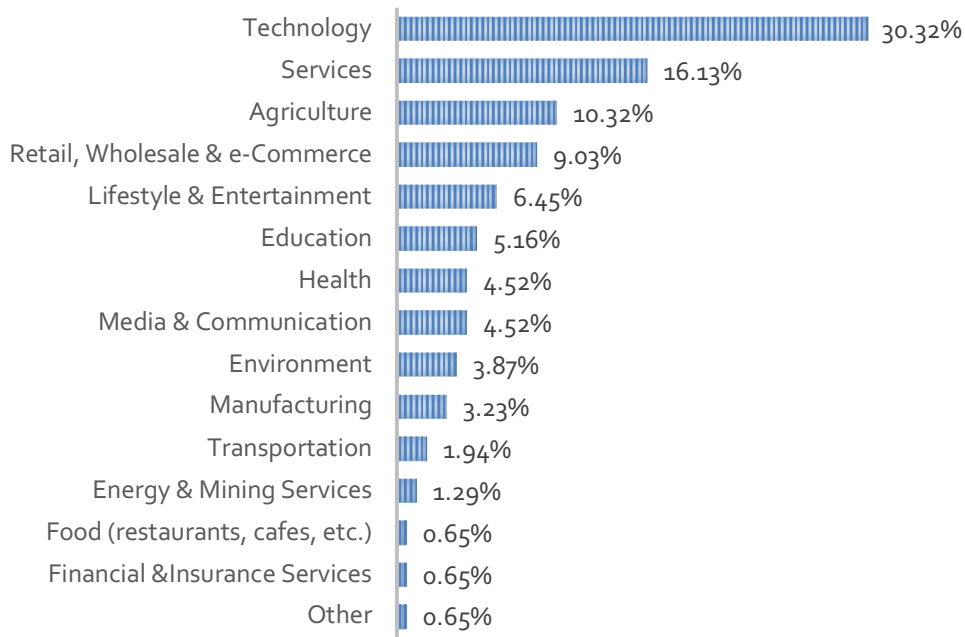


Figure 6 Is it a high-tech start-up?

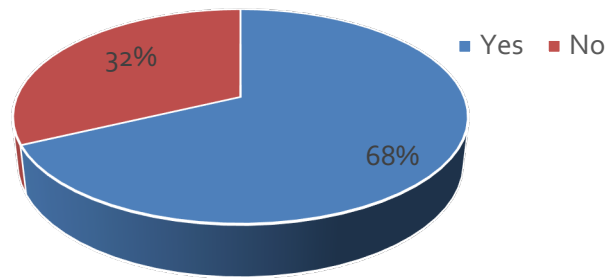


Figure 7 The highest level of education achieved by the respondents

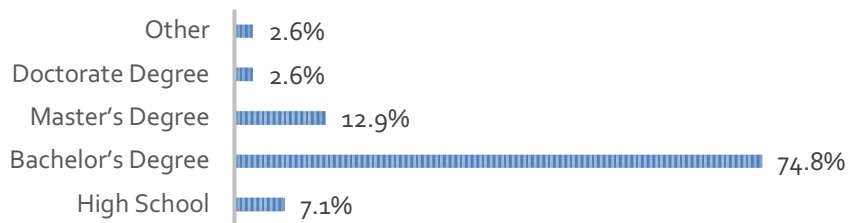


Figure 8 Field of study of the respondents

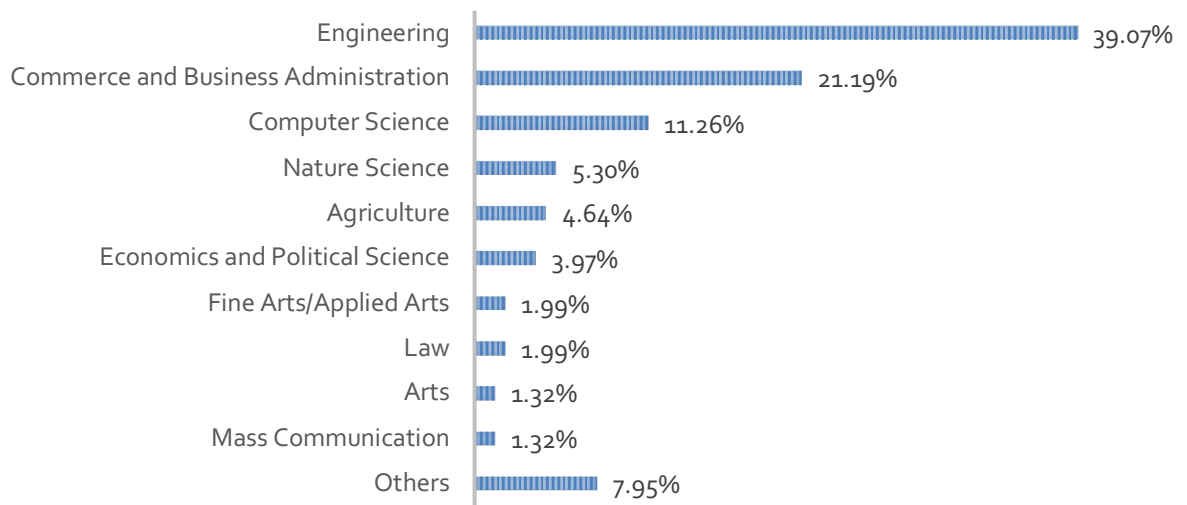


Figure 9 Have you participated in any training sessions, workshops, or special incubation programmes related to your own business?

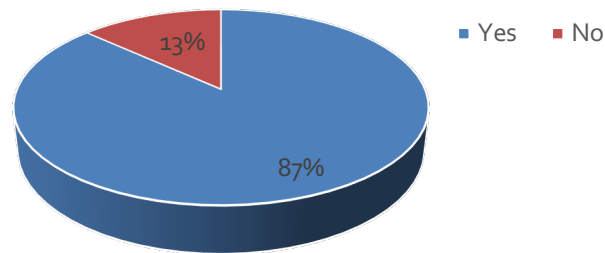


Figure 10 Geographical distribution of entrepreneurial activities

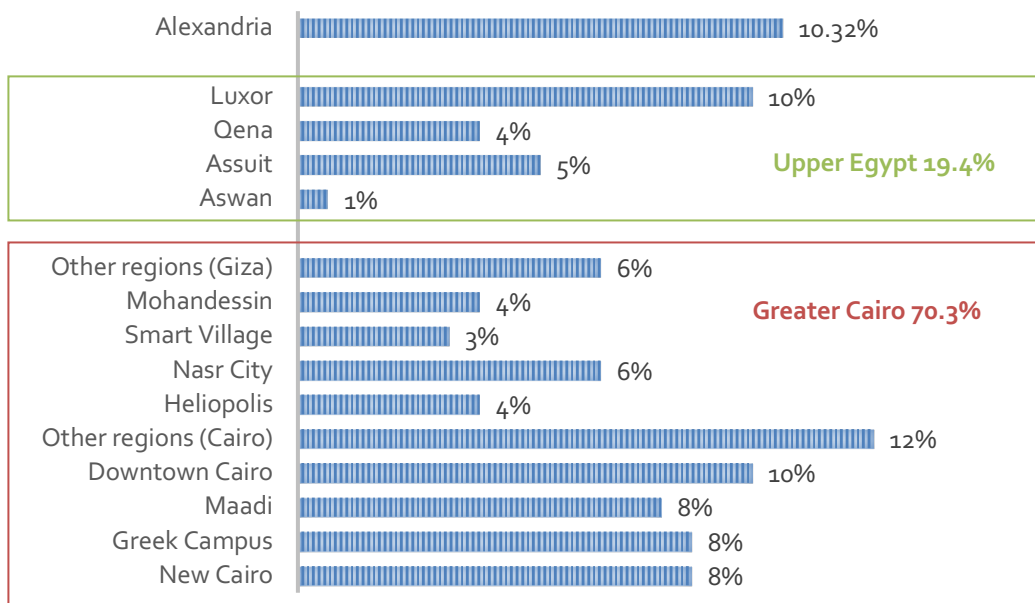


Figure 11 Gender Representation

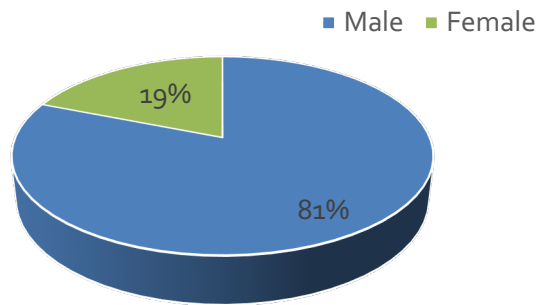


Figure 12 Age Group of the Respondents

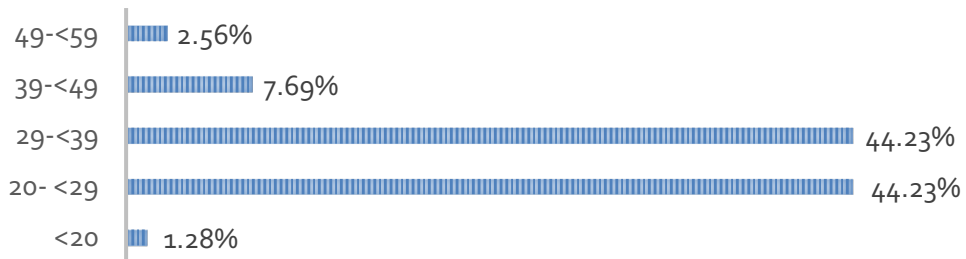


Figure 13 Male to female ratio amongst start-up members

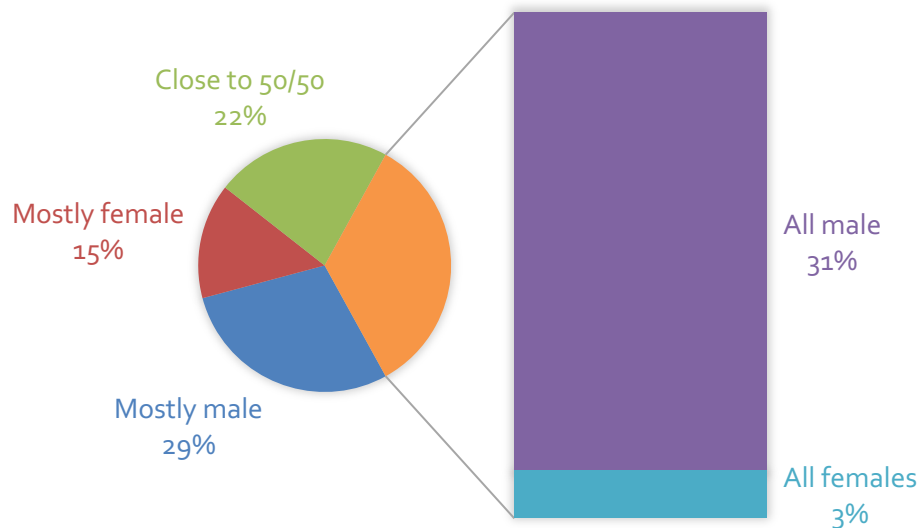
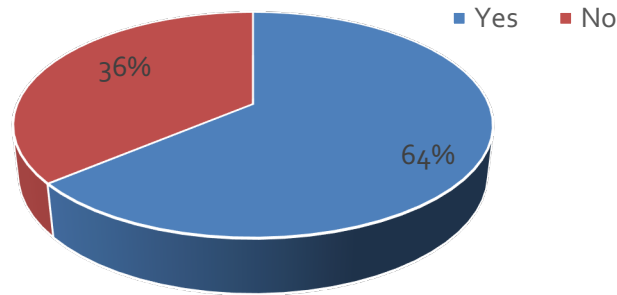


Figure 14 Does your start-up have a strategy to promote diversity and inclusiveness?



(b) Business Model

A business model can be defined as a description of the value an enterprise offers to one or several segments of customers, and of the architecture of the business and its network of partners for creating, marketing, and delivering this value and relationship capital, in order to generate profitable and sustainable, viable revenue streams (Osterwalder et al. 2005; Osterwalder & Pigneur 2010). It is simply the logic of the enterprise that reflects its business strategy to achieve its goals. (Figure 15) shows the business model canvas (BMC) of Osterwalder & Pigneur 2010.

Figure 15 Business model canvas (BMC) (Osterwalder and Pigneur, 2010)



Consequently, this survey has intended to investigate the business model of the interviewed start-ups. As shown in (Figure 16), 87% have conducted pre-market research before going into business, to truly understand the target market and the trends therein. Particularly, they aim to understand their potential customers and their preferences (customers' profile) and conduct market (customer) segmentation, analyse market needs (product-market fit), identify opportunities to grow and increase profits, recognise and plan for shifts in business, monitor the competition in the target market, and mitigate risk and uncertainty in their business decisions.

In addition, and due to the current information and communication revolution, conducting research market on a regular basis is more imperative than ever in order to keep up with current market trends and to maintain a competitive edge. About 73% of those surveyed, as shown in (Figure 17), claim to have talked to their prospective customers, to detect their potential customer segment and build their profiles and realise the product-market fit. While 54% of the total have talked to business professional or experts in the field to guide and support them, and only 39% have talked to prospective suppliers.

Figure 16 Did you conduct pre-market research?

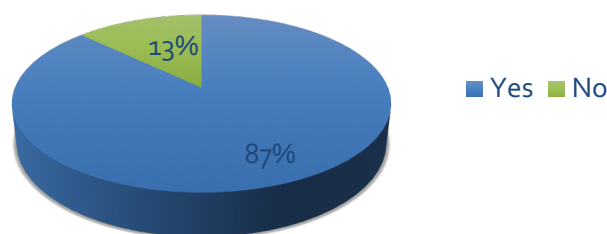
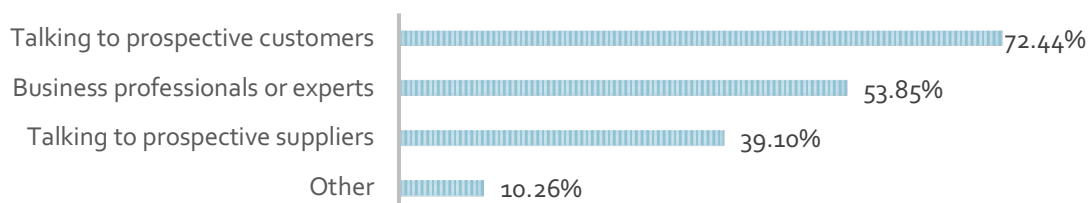


Figure 17 Resources for conducting market research



On the other hand, 96%, as shown in (Figure 18), claim to have conducted strengths, weaknesses, opportunities, and threats (SWOT) analysis to give them a better view of the overall likelihood of success, which could be an indicator that they have mainly concentrated on strategic planning techniques (such as SWOT analysis) rather than customer development to overcome the potential risks, where customer development is a formal methodology for building start-ups. It is one of the main parts to building a lean start-up (Raatikainen et al., 2016; Ripsas et al. 2016). Using lean methodology, the start-up tries to diminish the risk

because they first start talking to the customer and validating their idea and concepts by building a minimum viable product (MVP), before actually building and offering the product itself.

89% claim that they have been conducting changes in their business model in one or more of the following: products or service, target customers, promoting or selling methods, producing or sourcing methods, and revenue model (**Figure 19**). This reflects the flexibility of their structures to apply lean methodology in order to be more resilient to shocks.

In addition, there are four main reasons for changing or updating the business model, according to the start-ups interviewed: to launch a new product or service due to their goal to scale-up or target new customers - this represents 24% of the total interviewed start-ups, followed by 23% who claim they have made the modification due to changes in their target customers, and 22.5% who said it was due to their need for refinancing or fundraising. There are many other reasons for modifying the model, including the aim to keep pace with changes in market requirements, change of target suppliers, dealing with new competitors and increasing profit or revenue (**Figure 20**).

The survey findings also show that most of the interviewed start-ups began their business with very limited personal financial resources (i.e. less than 10,000 Egyptian pounds (LE), which is equivalent to \$570). However, they were able to multiply their capital to more than 100,000 (\$5,700) within a few years.

(**Figure 21**) depicts that about 94% of the total interviewed start-ups are bootstrapping businesses. They claim to have started their business with their personal savings, family and/or friends support, whilst 17% claim that they started with non-government grants, and only 6% with government grants. It is also noted that they have started their business by their personal savings, family and/or friends support. Whereas the percentage of start-ups that began their business by receiving business loans is very modest (3.2%). That asserts that the banks criteria and procedures to give business loans are hard to attain. They are not appealing for nascent businesses until now.

(**Figures 22**) and (**Figure 23**) show that the percentage of start-ups that begun with less than 10,000 (\$570) decreased from 31% to 11% and the percentage of start-ups begun with more than 100,000 (\$5,700) increased from 19% to 43%, which reflects the existence of major opportunity in the market, encouraging nascent start-ups to integrate in the global value chain (GVC) and to gain more openings into new markets.

Due to the limited initial starting capital for most of the start-ups, as shown in (**Figure 24**), 60% of the interviewed start-ups claim that they operated their business primarily from home. In addition, 79% asserted that they launched their business online initially through the internet and social media (**Figure 25**). On the other hand, 68% of the offline start-ups say that they plan to extend their business by offering their products or services online during the coming three years (**Figure 26**) as a means of targeting more customers.

Figure 18 Have you done a SWOT analysis?

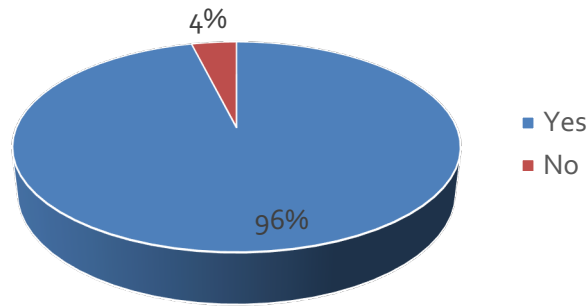


Figure 19 Have there been any changes in your business model since you started?

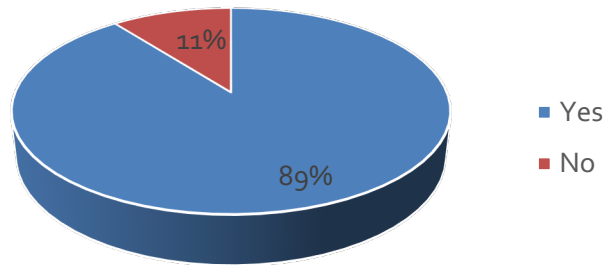


Figure 20 The main reasons for changing or updating the business model

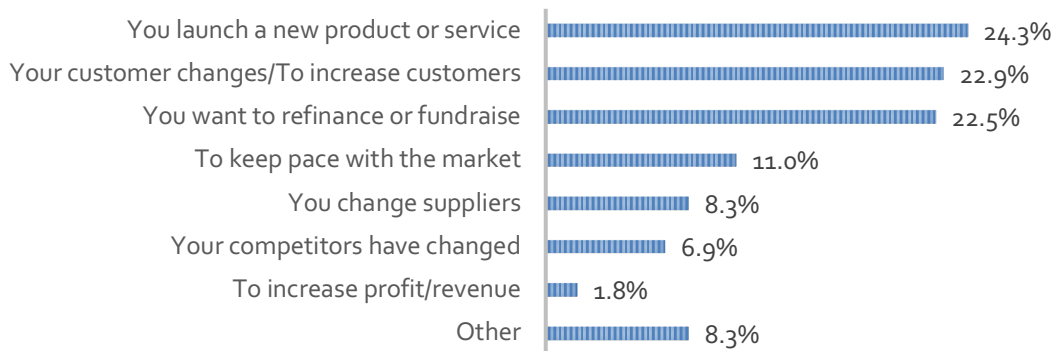


Figure 21 Primary source(s) of funding

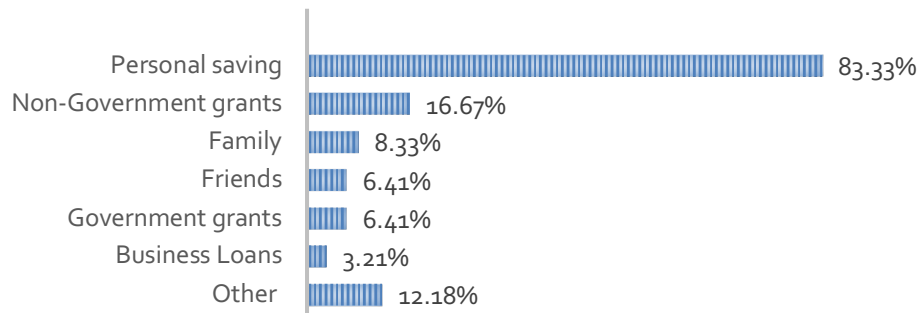


Figure 22 Initial capital value you invested to start the business

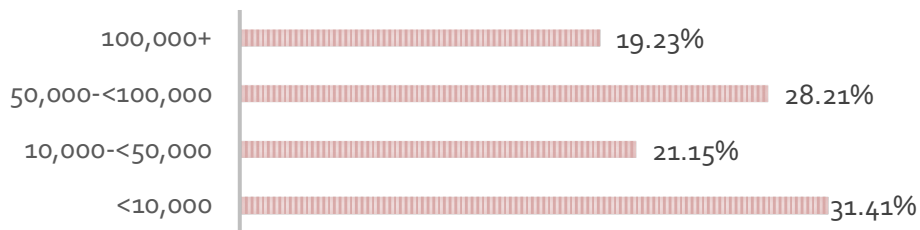


Figure 23 Current capital value

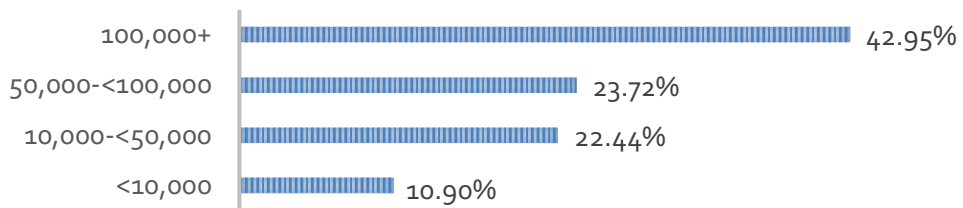


Figure 24 Did this business operate primarily from somebody's home?

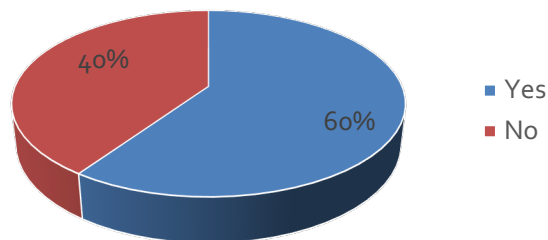


Figure 25 Did you launch this start-up through the internet and social media first?

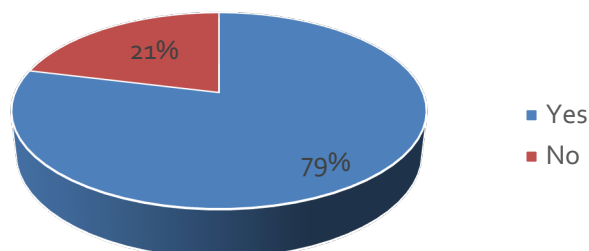
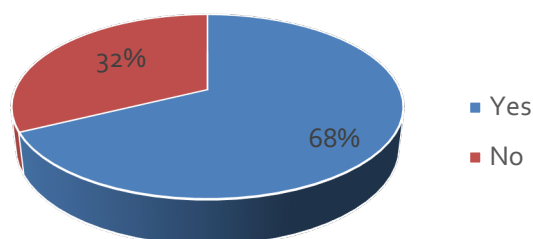


Figure 26 Do you expect or plan to extend the start-up to offer your products and services online during the coming three years?



The nature of such nascent businesses leads them to recruit a small number of employees at the outset. As shown in (Figure 27), about 89% recruited 5 or less employees when they launched their business. Currently, as shown in (Figure 28), this percentage has decreased to 50%. It is worth mentioning, that there is a decrease in the percentage of start-ups who employ 5 or less employees, towards start-ups that employed 6 to 24 staff. This reveals the growth potential for such businesses. In addition, about 42% of the interviewed start-ups tend to increase or recruit more team members by 25% (Figure 29).

The survey findings also show that 71% of the start-ups generated revenue for more than six months out of the past twelve months, whilst almost 45% of the total generated profits (Figure 30) and (Figure 31). This reflects the potential that exists in the market and the potential for start-ups to scale up and target more market segments.

Concerning the innovation aspect, the survey results show that innovation is embedded mainly in the product or service the start-ups offer (Figure 32). In general, innovation could be separated into three main types: product innovation (51%), organisational innovation (27%), and marketing innovation (10%). In addition, about 67% see that their product or service is entirely new to the target market, with about two-thirds of such start-ups providing a totally new product to the world (Figure 33) and (Figure 34). 61% also said that they are focussing on customer or target markets that other businesses have totally neglected, which emphasises the strong potential for the scalability of these start-ups, because they are targeting a growing market (Figure 35) and (Figure 36). 69% of the interviewed start-ups claim that they are operating in a growing market, whilst only 9% perceive that they are working in a shrinking market.

As the competitor analysis represents a vital part of the market research analysis, (Figure 37) shows that 76% of interviewed start-ups have competitors in their target market and about 71% claim that their products or services are of a higher quality but with lower prices, compared to their competitors (Figure 38) and (Figure 39) and that 78% of them claim the price which they offer is also profitable (Figure 40).

Figure 27 How many people did your start-up employ at the beginning?

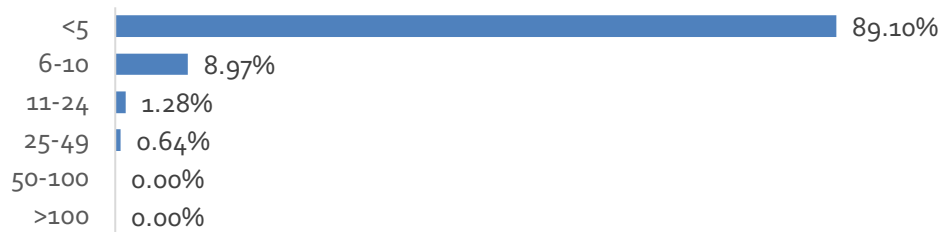


Figure 28 How many people does your start-up employ?

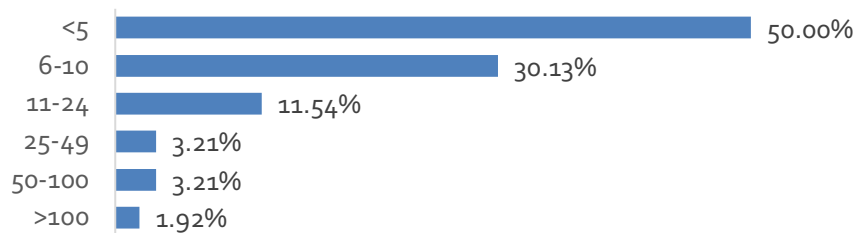


Figure 29 Expected percentage of hired employees in the next 12 months

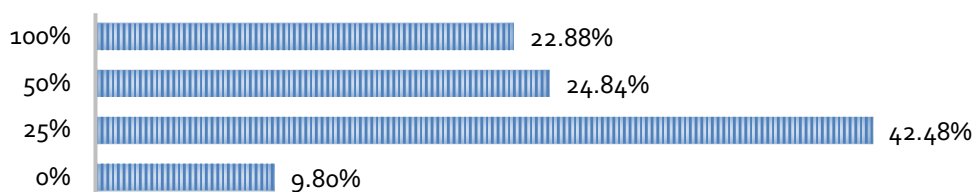


Figure 30 Has this business received any sales revenue, income, or fees for more than six of the past twelve months?

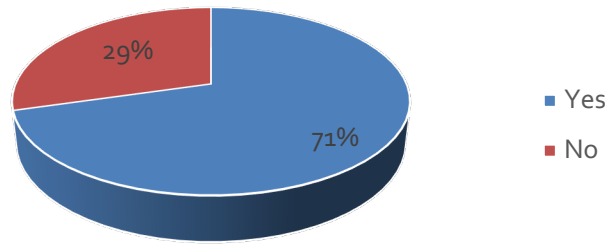


Figure 31 Has your monthly revenue been greater than monthly expenses for more than 6 of the past 12 months?

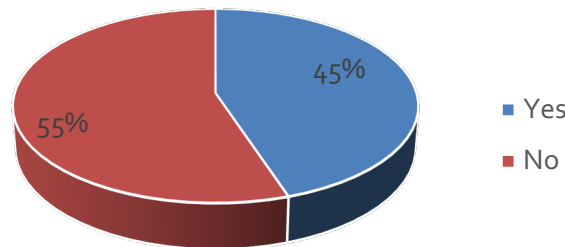


Figure 32 Type of innovation

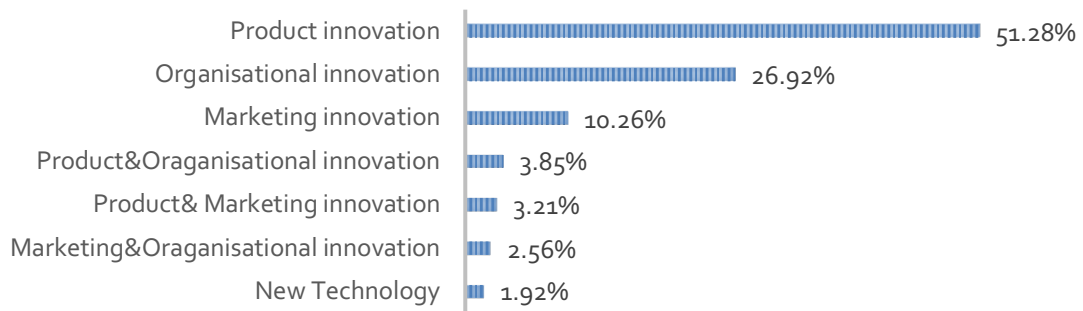


Figure 33 Does your start-up offer a product or service that is entirely new to the target market?

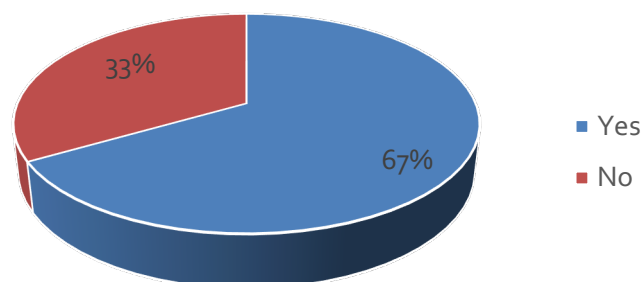


Figure 34 Is it entirely new to the world or just in its active location?

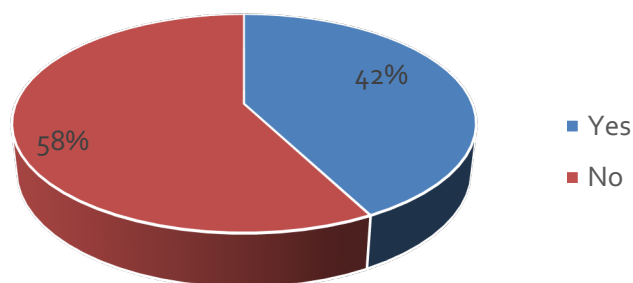


Figure 35 Does it focus on customers or target markets that other businesses have totally neglected?

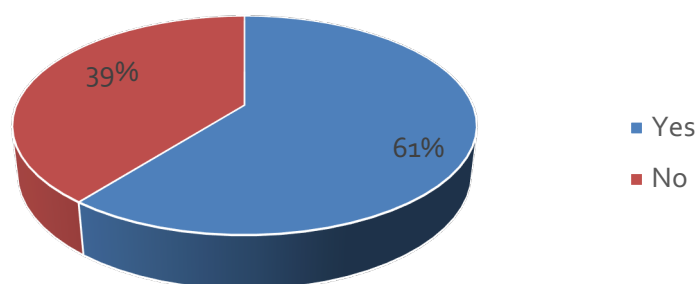


Figure 36 What is the status of the target market (i.e. market size)?

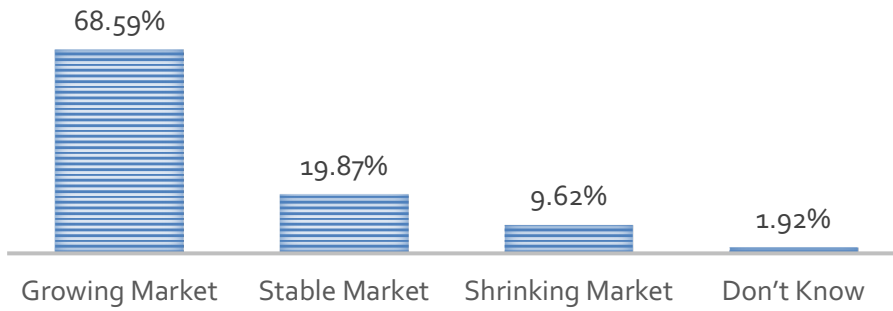


Figure 37 Do you have competitors in the market?

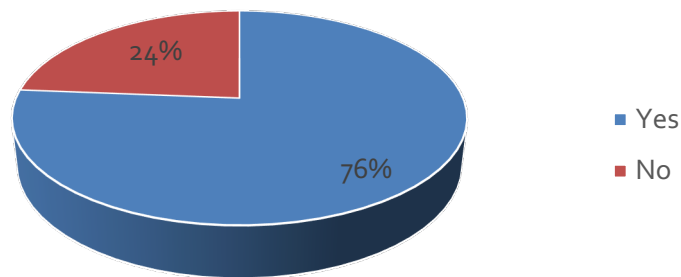


Figure 38 The quality of product or service compared to start-up competitors

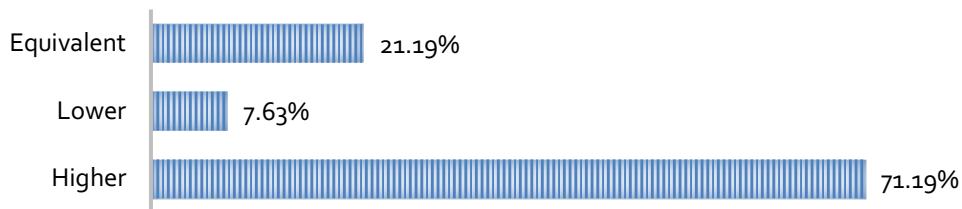


Figure 39 Price of the product or service compared to competitors

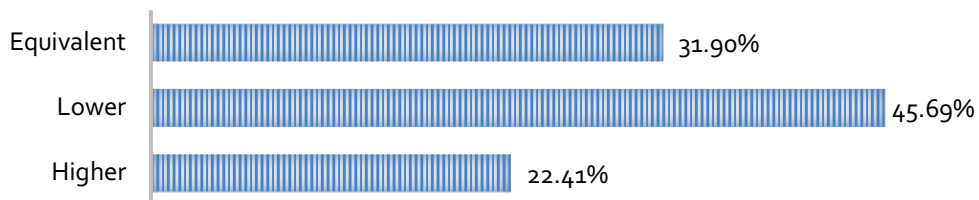
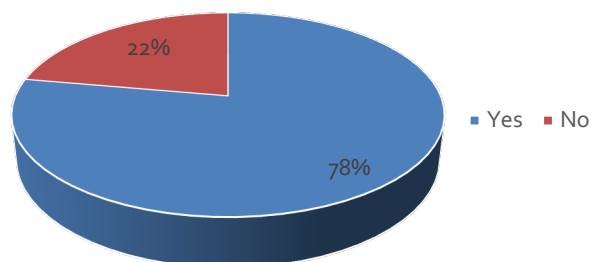


Figure 40 If your price is lower than your competition:
Is your price profitable?



(c) Challenges and Success Factors

This section presents the main challenges and success factors that the interviewed start-ups have highlighted in the survey.

22% of start-ups emphasised that the main challenges they faced is the lack of funding to start the business and the skill mismatch, as depicted in (Figure 41). Equally, the same percentage highlighted that the main challenge was to find qualified and suitable employees. There are many other challenges such as government regulations, marketing problems, competition and market condition, inexperience and inadequate knowledge about the business, difficulty in finding an affordable facility in a preferred location, lack of required raw materials and resources, and self-doubt. This justifies the continuous endeavour of start-ups to conduct changes in their business model, as stated previously.

(Figure 42) depicts the lack of skillful employees (skill-mismatch) as being a major pitfall for more than one third of interviewed start-ups. 18% perceived that poor organisation (including team structure) is one of their mistakes, followed by 12% who referred to their poor financing decisions, based on the co-founders lack of financial knowledge. Other pitfalls highlighted by the interviewed start-ups included trusting other people too much, poor location choice (may be due to limited source of finance), setting unrealistic goals, etc.

On the other hand, the interviewed start-ups determined some of the main factors that fuelled the success of their ventures were, as follows: 22% of the total respondents asserted that personality factors play a significant role in their success story (i.e. passion, energy, persistence, determination, etc.), whilst 15.8% mentioned networking as an important factor, where the start-up owner had access to finance, knowledge and experience. In other words, connecting with ecosystem partners may give them fresh potential in the market. In addition, 14% claim that training and workshops they received had a significant role in their success story. Other success factors include one or more of the following: having a business plan, customer relations, family and friends support, knowledge about the business and experience, finance, good location for the business, team management, etc. (Figure 43).

The interviewed start-ups highlighted many key lessons learned when starting their own business (Figure 44). One third of them claim that listening to their audience or customers is one of the pivotal lessons helping in the customer development process. 30% highlight that waiting too long to take a decision may allow other competitors to enter the market, 19% emphasised the importance of testing the model and its scalability, and 11% preferred taking bigger risks early on.

In brief, risk-taking, customer discovery, model validation and product-market fit are the key elements for sustainability and scalability.

Figure 41 Challenges start-ups face

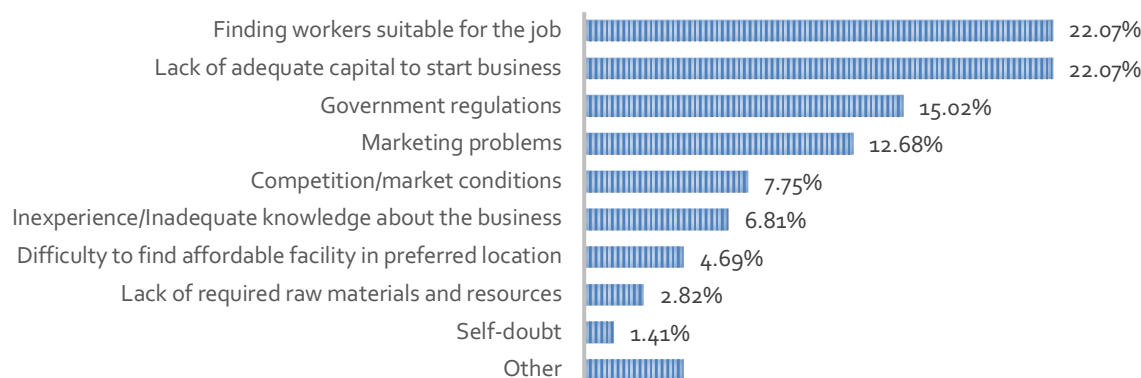


Figure 42 The main mistakes the start-ups have made

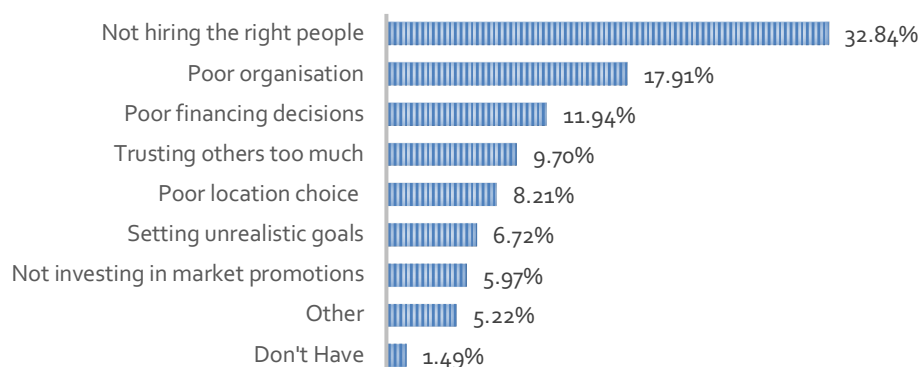


Figure 43 Factors that contributed to their success

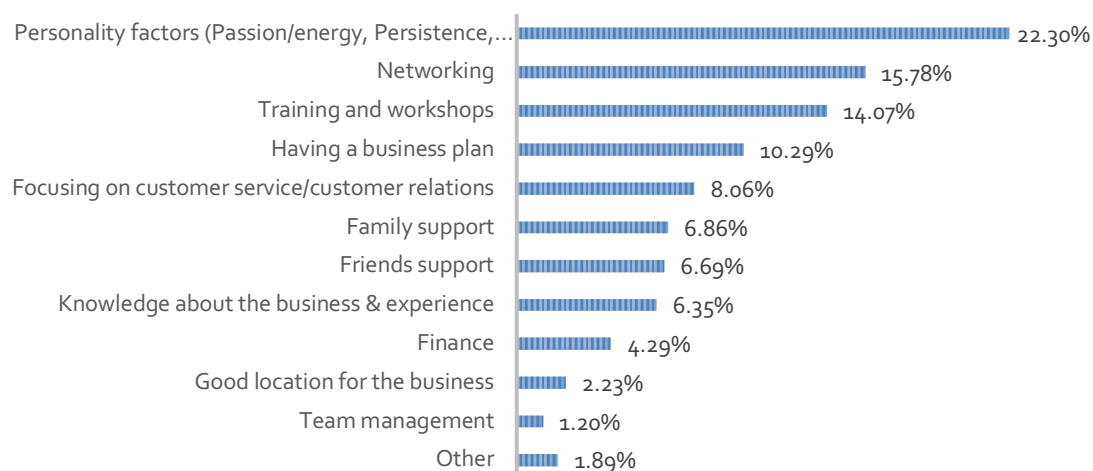
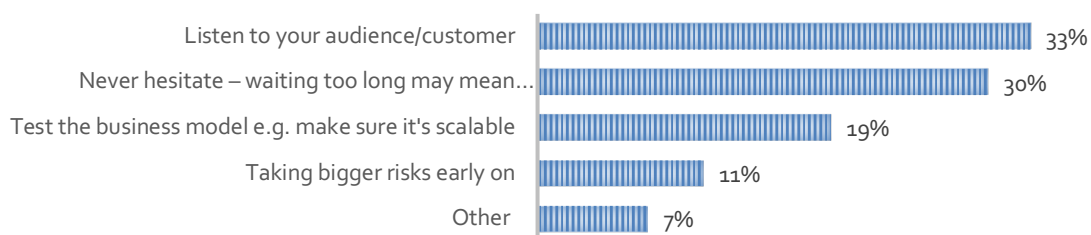


Figure 44 The main lessons you learned when starting your business**(d) Future Trends in the Entrepreneurship Ecosystem**

This section presents the future trends in the entrepreneurship ecosystem from the start-up perspective.

As shown in (Figure 45), 61% believe that their business would achieve its objective by 2018 (i.e. they see positive, future opportunity for their start-ups in the upcoming years) and only 16% intend to sell the company in the near future (Figure 46). About 49% think that their business is successful (Figure 47). In addition, 62% of the respondents asserted that their own business is their only source of income (Figure 48).

Regarding the potential for scalability, 65% aim to scale up their business in order to increase market share and profitability and 20% have already scaled-up (Figure 49) and (Figure 50). However, about 52% of respondents are dissatisfied with the current investment status in Egypt and only 17% expressed satisfaction with the current investment climate (Figure 51). Therefore, more investment and more programmes to encourage angel investors to invest in nascent start-ups are needed to help such enterprises to stay in the market and face challenges.

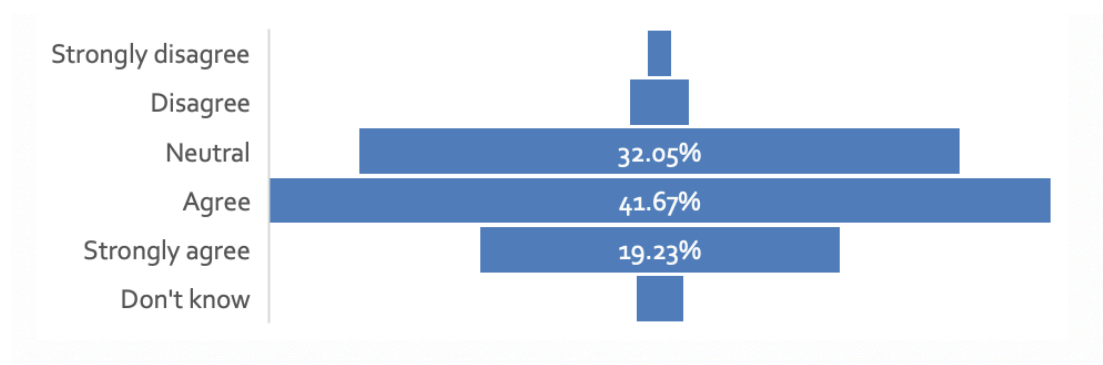
Figure 45 To what extent do you believe the company will achieve its objectives in 2018?

Figure 46 Do you intend to sell the company in the near future (over the next 3 years)?

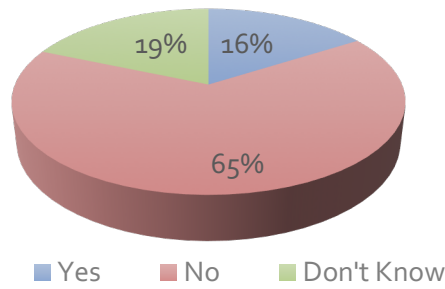


Figure 47 To what extent do you think your company is successful?

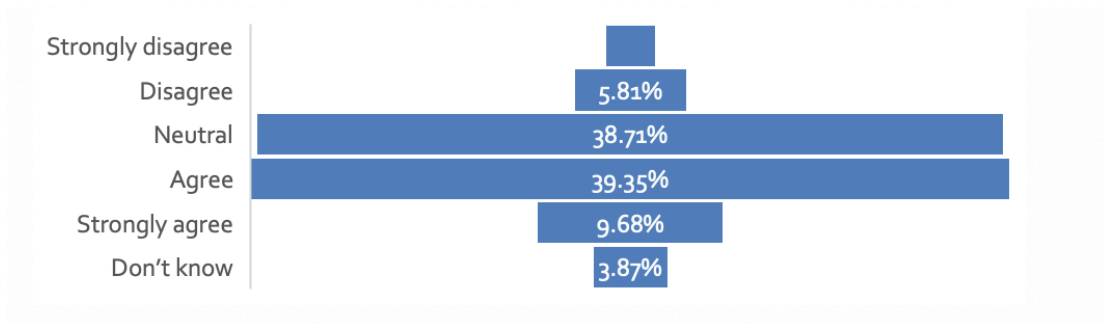


Figure 48 Do you have a job besides your company?

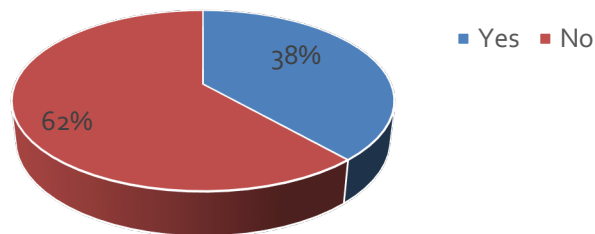


Figure 49 Do you plan to scale up your business?

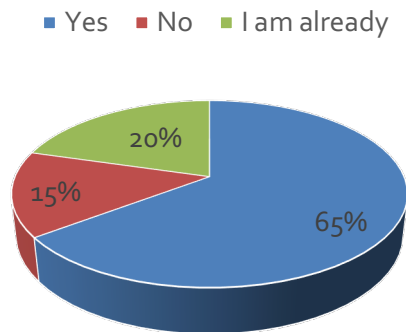
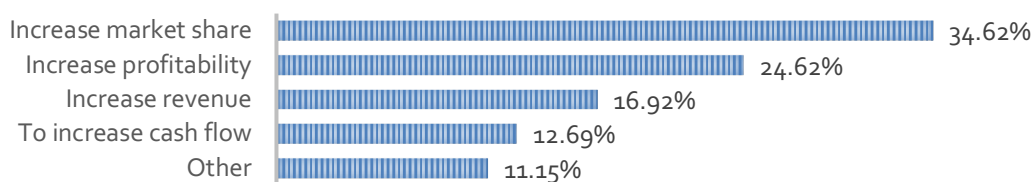
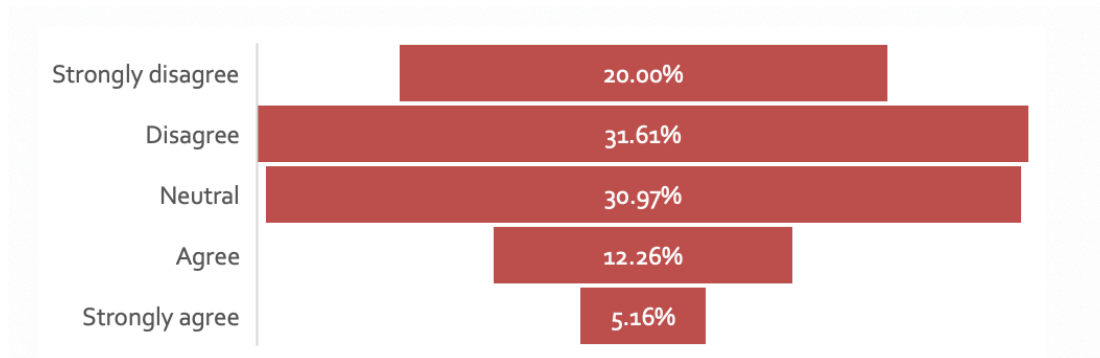


Figure 50 What is the most important aim for your start-up?**Figure 51** How satisfied are you with current investment in Egypt?

Discussion and Recommendations

The findings of this study reflect the significant impact of the specialty and educational background of the entrepreneurs in relation to the sector in which the start-ups were established. In addition, the results prove that knowledge and cumulative experience increase the potential of business success and mitigate against the risks of failure. Also, a positive perception of the market has a vital role in increasing the success rate of start-ups. That, in turn, asserts that conducting market research continuously is an essential and vital part of any successful enterprise strategy, as the business environment is always changing (i.e. environment uncertainties). By recognising such changes, entrepreneurs can plan ahead for these changes and have strategies in place to deal with whatever environment the enterprise finds itself in, in order to mitigate against the possible negative effects of these changes. Market research is an essential tool to help entrepreneurs understand what the customer needs and to create benchmarks based on key performance indicators, to evaluate the start-up's progress.

The survey results highlighted the positive impact of attending workshops and training sessions in the field of entrepreneurship in relation to the success of the interviewed start-ups, reflecting the vital role of university-based and post-school entrepreneurship education in reducing the risk-averse culture towards entrepreneurship. Business incubators can play a pivotal role in this sense, as they can help nascent enterprises through their early development by providing business advice, resources, mentors and advisor contacts, and funding. They are attractive for young entrepreneurs because they can learn from experienced executives and test their business model. Business Incubators help start-ups grow by one or more of the following: (1) providing start-ups with access to finance via seed funding, whether as a grant or as an

investment in return for equity, (2) creating linkages between start-ups and the network of venture capitalists and angel investors and/or (3) Knowledge-transfer by providing expert coaching and mentors to guide early stage start-ups, bridging the knowledge gap they have in a number of aspects, such as the basics of business, marketing, finance, operations, and to help them prepare a business plan for potential investors, to develop their entrepreneurial skills, etc.

More efforts are needed at many levels to endorse and to improve the advancement and development of entrepreneurial framework conditions, such as improvements in the entrepreneurship environment regarding access to finance by creating alternative tools to finance start-ups, such as creating a syndicated fund to support innovative start-ups, in which different entities can participate such as banks, financial institutions, the private sector, and individuals, as well as more encouraging governmental policies, reducing the level of bureaucracy, more flexible rules and regulations that allow the rapid evolution of entrepreneurial activities, as well as encouraging the new venture to be export-oriented and to have more integration in the global value chain.

For female entrepreneurs, introducing new programmes to encourage women entrepreneurship can have positive effects on bridging the gender gap in this field. Civil society may also help change stereotyping that holds back women entrepreneurs in certain regions, as well as assisting in creating the necessary social support networks and accessing necessary venture capital (Global Entrepreneurship Monitor 2018).

The integration between decision makers, universities and research centres, and the private sector, as well as civil societies and regional and international organisations are all crucial in creating and endorsing these improvements.

To summarise, the status of the Entrepreneurship Ecosystem in Egypt does have positive trends, as the majority believe there is a positive future for their business, although they have a requirement for more financial facilities to accelerate their business and to scale-up in new market segments, locally and globally, which will lead them to recruit more employees and participate efficiently in job creation (i.e. they usually aim to recruit the right person for the right position).

References

1. Achy, L., & Selim, R. (2016). Micro and Small Enterprises in Egypt Access to Finance and Job Creation Dynamics. In Proceedings of the 23rd ERF Annual Conference “Regional Cooperation Peace & Development: Issues & Lessons for MENA., Amman, Jordan, March 2017.
2. Acs, Z. J., Desai, S., & Hessels, J. (2008). Entrepreneurship, Economic Development and Institutions. *Small Business Economics*, 31(3), 219–234.
3. Bosman, L., & Fernhaber, S. (2018). Defining the Entrepreneurial Mindset. Teaching the Entrepreneurial Mindset to Engineers, 7–14.
4. Dahlqvist, J., & Wiklund, J. (2012). Measuring the market newness of new ventures. *Journal of Business Venturing*, 27(2), 185–196.
5. El-Said, H., Al-Said, M. & Zaki, C. (2013). Access to Finance and Financial Problems of SMEs: Evidence from Egypt, *Int. J. Entrepreneurship and Small Business*, 20(3), 286–309.
6. Ensari, M. Ş., & Karabay, M. E. (2014). What Helps to Make SMEs Successful in Global Markets? *Procedia - Social and Behavioural Sciences*, 150, 192–201.
7. Friar, J. H., & Meyer, M. H. (2003). Entrepreneurship and Start-Ups in the Boston Region: Factors Differentiating High-Growth Ventures from Micro-Ventures. *Small Business Economics*, 21(2), 145–152.
8. Gardetti, M. A., & Muthu, S. S. (2015). Sustainable apparel? Is the innovation in the business model? - The case of IOU Project. *Textiles and Clothing Sustainability*, 1(1), 2.
9. Global Entrepreneurship Monitor (GEM). (2018). Global Entrepreneurship Monitor. Babson Park: Babson College.
10. Global Entrepreneurship Monitor (GEM). (2019). Global Entrepreneurship Monitor. Babson Park: Babson College.
11. Haaker, T., Bouwman, H., Janssen, W., & De Reuver, M. (2017). Business Model Stress Testing: A Practical Approach to test the Robustness of a Business Model. *Futures*, 89, 14–25.
12. Ismail, A., Tolba, A. & Barakat, S. (2018), Global Entrepreneurship Monitor - GEM Egypt Report 2016-17. Cairo, Egypt.
13. Ismail, A., Tolba, A. & Barakat, S. (2019), Global Entrepreneurship Monitor - GEM Egypt Report 2016-18. Cairo, Egypt.
14. Luger, M. I., & Koo, J. (2005). Defining and Tracking Business Start-Ups. *Small Business Economics*, 24(1), 17–28.
15. McCann, P., & Ortega-Argilés, R. (2016). Smart specialisation, entrepreneurship and SMEs: issues and challenges for a results-oriented EU regional policy. *Small Business Economics*, 46(4), 537–552.

16. OAMDI. (2013). Micro and Small Enterprises Survey (MSEs), <http://erf.org.eg/data-portal/>. Version 1.0 of Licensed Data Files; Egypt MSEs 2004. Egypt: Economic Research Forum (ERF).
17. OAMDI. (2013). Micro and Small Enterprises Survey (MSEs), <http://erf.org.eg/data-portal/>. Version 1.0 of Licensed Data Files; Egypt MSEs 2003. Egypt: Economic Research Forum (ERF).
18. OAMDI. (2016). Study on the Constraints Facing the Development of Micro and Small Enterprises, <http://erf.org.eg/data-portal/>. Version 1.0 of Licensed Data Files; Egypt CDMSE 2014. Egypt: Economic Research Forum (ERF).
19. Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers and Challengers*. USA: Wiley.
20. Osterwalder, A., Pigneur, Y., & Tucci, C.L. (2005). Clarifying Business Models: Origins, Present, and Future of the Concept. *Communications of the Association for Information Systems*, 16, 1-40.
21. Price, D. P., Stoica, M., & Boncella, R. J. (2013). The relationship between innovation, knowledge, and performance in family and non-family firms: an analysis of SMEs. *Journal of Innovation and Entrepreneurship*, 2(1), 14.
22. Raatikainen, M., Komssi, M., Kiljander, H., Hokkanen, L., Märijärvi, J., & Mohout, O. (2016). Eight Paths of Innovations in a Lean Startup Manner: A Case Study. In P. Abrahamsson, A. Jedlitschka, A. Nguyen Duc, M. Felderer, S. Amasaki, & T. Mikkonen (Eds.), *Product-Focussed Software Process Improvement* (pp. 15–30). Cham: Springer International Publishing.
23. Richter, N., Jackson, P., & Schildhauer, T. (2018). Entrepreneurial Behaviour and Startups: The Case of Germany and the USA. In N. Richter, P. Jackson, & T. Schildhauer (Eds.), *Entrepreneurial Innovation and Leadership: Preparing for a Digital Future* (pp. 1–14). Cham: Springer International Publishing.
24. Ripsas, S., Schaper, B., & Tröger, S. (2016). A Startup Cockpit for the Proof-of-Concept. In G. Faltin (Ed.), *Handbuch Entrepreneurship* (pp. 1–16). Wiesbaden: Springer Fachmedien Wiesbaden.
25. Schumpeter J.A. (1934). *Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Harvard University Press, Cambridge, MA.
26. Schumpeter, J.A. (1947). The Creative Response in Economic History. *Journal of Economic History*, 7, 149-159.
27. Shane, S., & Venkataraman, S. (2000). The Promise of Entrepreneurship as a Field of Research. *The Academy of Management Review*, 25(1): 217–26.
28. Trimi, S., & Berbegal-Mirabent, J. (2012). Business Model Innovation in Entrepreneurship. *International Entrepreneurship and Management Journal*, 8(4), 449–465.
29. Tülüce, N. S., & Yurtkur, A. K. (2015). Term of Strategic Entrepreneurship and Schumpeter's Creative Destruction Theory. *Procedia - Social and Behavioural Sciences*, 207, 720–728.

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30. UNCTAD. (2015). Investment Policy Framework for Sustainable Development. Geneva: United Nations.
 31. Van Eck, N. J., & Waltman, L. (2010). Software Survey: VOSviewer, A Computer Program for Bibliometric Mapping. *Scientometrics*, 84(2), 523–538.
 32. Van Praag, C. M., & Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29(4), 351–382.
 33. World Bank. (2017). World Bank Enterprise Survey (WBES). Available at: <http://www.enterprisesurvey.org>. Washington, DC. The World Bank.



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EMNES will produce books, studies, scientific and policy papers and will disseminate through the organisation of annual conferences, and workshop meetings in the region, bringing together leading senior and junior researchers, academics, policy makers and representatives in civil society, to discuss and debate optimal policies for the future of the region.

EMNES is built on four core principles: independence, excellence, policy relevance and deep knowledge on Euro-Mediterranean affairs.

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