



**Global  
Entrepreneurship  
Monitor**

**Cyprus Report 2016–2017**

**Center for Entrepreneurship  
of the University of Cyprus**

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## MESSAGE FROM THE RECTOR OF THE UNIVERSITY OF CYPRUS

I am delighted to present the first National Report on Entrepreneurship, initiated and coordinated by the Centre for Entrepreneurship (C4E) of the University of Cyprus. This GEM Cyprus 2016/2017 report is the first participation of Cyprus in the Global Entrepreneurship Monitor (GEM) and hence this report is placing Cyprus on the international map of entrepreneurship and innovation for the first time. Allow me to convey the institution's sincere appreciation to the Bank of Cyprus, to the Ministry of Energy, Commerce, Industry and Tourism and to the Structural Reform Support Service of the EU Commission, for their valuable contribution and support on the successful development and completion of this first GEM report.

The University of Cyprus, as the leader of this initiative, supports and promotes entrepreneurship through the establishment of the Centre for Entrepreneurship in 2014. C4E promotes entrepreneurship and innovation primarily within the University community by promoting a culture of entrepreneurship on campus and via the engagement with entrepreneurs and businesses beyond UCY's boundaries, by coordinating the education of young leaders for an innovation-driven society, and by facilitating the exploitation and utilization of university research results and outputs.

At UCY, we consider Entrepreneurship in its broadest sense, namely as a mindset in scientific and scholarly work that embraces creativity, critical thinking, risk-taking and the bold experimentation with new ideas and transformative scientific approaches. The C4E of UCY aspires to turn new knowledge into real "value" through novel products, processes and services, implemented by new or existing ventures, private or public organizations, governmental institutions or non-governmental initiatives contributing to the competitiveness and growth of the Cyprus economy.

One of the main pillars of the University's Strategic Plan 2016-2025 is to bring research results closer to the market and bridge the gap between academia and industry in order to foster both societal and economic growth. The results of this report show that the majority of Cypriot entrepreneurs involved in Total early-stage Entrepreneurial Activity (TEA) hold university or vocational-training education and underline that individuals who hold tertiary education are more likely to be opportunity-driven entrepreneurs rather than necessity-driven. In the light of this finding, we also acknowledge that academia holds a notable role in the growth of entrepreneurial activity and the success of entrepreneurial endeavors in our country. As the leading academic and research institution in Cyprus, UCY actively supports the national entrepreneurial ecosystems and by all means, encourages its students, researchers and staff members to "embark" on entrepreneurial journeys. In addition, UCY commits to preserve the participation and presence of Cyprus in the international map of entrepreneurship and innovation by undertaking GEM-related activities in 2017/2018.

I do hope that you find this report useful and that its insights will contribute to the growth of the entrepreneurial ecosystem and will guide the advancement of our national entrepreneurship policies.

A handwritten signature in black ink, appearing to read 'C. Christofides', with a long horizontal line extending to the right.

Professor Constantinos Christofides,  
Rector of the University of Cyprus

## MESSAGE FROM THE MINISTRY OF COMMERCE, INDUSTRY AND TOURISM

Cyprus is moving toward a new economic era with great potential. Having managed to overcome the financial crisis within a short period of time Cyprus is moving into a new period of economic growth, with entrepreneurship to be considered as top priority for the country. The current market conditions in Cyprus underline the need to stimulate the entrepreneurial mindsets of young people, encourage the development of innovative business start-ups and foster an ecosystem friendly to entrepreneurship and entrepreneurial activities.

In 2015 the government of Cyprus has introduced the National Policy Statement for the enhancement of the Entrepreneurial Ecosystem in Cyprus aiming to contribute to the country's economic growth, by providing appropriate conditions for the successful development of business initiatives, with value added for the whole economy.

Our main goal and priority is to effectively contribute to this effort by facilitating, supporting, complementing and connecting relevant initiatives already undertaken by the private and the public sector.

To this end, I am glad to welcome the first GEM report for Cyprus one of the world's foremost studies of entrepreneurship. After 16 years of experience in 100 economies GEM is considered to be a reliable source of information about the entrepreneurial performance of Cyprus.

The Government will continue to focus its efforts on reinvigorating the entrepreneurial spirit, creating high paying jobs and enhancing growth stability.

I seize the opportunity to thank everyone that contributed toward the completion of this report, especially the University of Cyprus for taking the leading role as our National Coordinator for GEM.

Dr. Stelios Himonas,  
Permanent Secretary,  
Ministry of Energy, Commerce, Industry and Tourism



## FOREWORD BY THE MINISTER OF INTERIOR

**Welcome to the 1st** GEM Cyprus 2016/2017 report! The very first action of the National Policy Statement for the Entrepreneurial Ecosystem, which the government adopted in 2015, was the participation in the Global Entrepreneurship Monitor (GEM), in order to better understand the ecosystem, we need to enhance. GEM, since it carries out identical population surveys on an annual basis in approximately 70 countries, can be a valuable source of information providing insights into the entrepreneurial landscape of Cyprus and in comparator countries in the years to come.

**Entrepreneurship**, being a key contributor to innovativeness, product improvement and reduction of unemployment, can play an instrumental vital role in the growth of an economy. After the economic crisis in Cyprus, the government adopted the National Policy Statement for the Entrepreneurial Ecosystem which is a multi-annual plan that recognizes entrepreneurship and innovation as the driving forces of economic growth, able to create a more sustainable and competitive business environment and new jobs. In this regard, the Cypriot government did not only highlight entrepreneurship to be an area of national economic interest, but also as a viable career path with positive socio-economic impacts, something that is evident in the results of the GEM Cyprus 2016/2017 studies presented in this report.

I am particularly encouraged by the GEM results in respect of the fact that 72.7% in Cyprus considers entrepreneurship as a good career choice whereas the corresponding average in Europe is 57.2%. But, at the same time I am particularly concerned by the rate of business discontinuance.

Cyprus has the chance to embrace not only local but also foreign entrepreneurs if it introduces some key structural changes. This is exactly what the government is trying to achieve in the context of the Policy Statement for Entrepreneurship, the first coherent and holistic strategy in Cyprus for the promotion of entrepreneurship. To this end, a number of remarkable activities taking place, some completed and some quite advanced, during the last couple of years, like:

- the simplification of the procedures required to set up and operate a business in Cyprus,
- the provision of tax incentives to individuals to invest in innovative and startup companies,
- the introduction of the Cyprus Startup Visa Scheme
- the amendment of the Law governing the public universities in order to transfer know how, including the creation of spin-offs,
- the introduction of legislation and specific actions to promote social entrepreneurship
- awareness in schools of what entrepreneurship is, creativity building and critical thinking.
- School competitions to enhance entrepreneurial spirit

Cyprus businesses are entrepreneurial by nature. With the right governmental commitment and support, Cyprus can become a very attractive place for entrepreneurial oriented individuals and teams to establish operate and grow their business. The entrepreneurial ecosystem is slowly but steadily growing, and I hope that in the years to come, innovation and entrepreneurship will drive social and economic growth in the island. Success in the actions of the National Policy Statement for the Entrepreneurial Ecosystem will indicate that well directed targeted approaches can bear fruit. I cannot deny that the current economic environment poses real challenges for these ambitious individuals who are starting new businesses. The Government is committed to playing its part to create an environment in which entrepreneurs can flourish and the job creation potential of their new enterprises can be maximized.

I would like to take this opportunity to express the Government's and especially the President's gratitude to all those who participated in the preparation of this report.

A handwritten signature in black ink, appearing to read 'C. Petrides', with a stylized flourish underneath.

Constantinos Petrides  
Minister of Interior

## 1 EXECUTIVE SUMMARY

The 2016/2017 Global Entrepreneurship Monitor (GEM) survey represents the 18<sup>th</sup> consecutive year that GEM has derived insights on entrepreneurial activity including characteristics, motivations and ambitions of entrepreneurs, attitudes societies have towards entrepreneurial activity, phases of entrepreneurial activity, profiles of entrepreneurs and conditions of the entrepreneurship ecosystem. The 2016/2017 GEM survey included 65 economies, capturing 68.2% of the world's population and 84.9% of the world's GDP<sup>1</sup>. This is the first year that Cyprus participates in GEM. Each economy participating in GEM collects data from two surveys: the Adult Population Survey (APS) and the National Expert Survey (NES). The **Adult Population Survey (APS)** involved a random representative sample of 2001 adults between 18 and 64 years old. APS measured the individual participation across the phases of the entrepreneurial process. In the **National Expert Survey (NES)**, 36 experts provided their informed opinions on the environmental features that have an impact on entrepreneurial activity.

This report reflects on the results of the Adult Population Survey (APS) and the National Expert Survey (NES) conducted in Cyprus and discusses them with respect to the results of other economies. The objective of this report is to determine the extent and the characteristics of entrepreneurial activity in Cyprus, understand the factors that encourage or hinder entrepreneurial activity and provide recommendations to policy makers. Section 2 of this report provides more information on the economies participating in GEM and provides an overview of the methodology that has been employed. Section 3 and Section 4 summarize the results of the Adult Population Survey (APS) and the National Expert Survey (NES) respectively. Section 5 outlines the policy recommendations for Cyprus based on the 2016/2017 GEM results.

### Key findings

#### Entrepreneurial activity

- In Cyprus, there is an overall positive perception about entrepreneurship: 72.7% of the population consider entrepreneurship as a good career choice, 65.7% perceive that entrepreneurs receive a high status in the society, and 42.4% believe that the media provide adequate attention to entrepreneurship.
- In 2016, 35.9% of the population in Cyprus perceives that there are good opportunities to start a business and about one in two individuals (52.4%) consider that they have the capability to start a new business. However, 50.2% of the population consider that they are afraid to fail.

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<sup>1</sup>Source: GEM Global 2016/2017

- There is an encouraging entrepreneurial intention as 16.7% of the population intends to set up a business in the next three years in the area where they live. This value is higher than the corresponding average value in Europe<sup>2</sup> (11.9%).
- Cyprus is ranked 3<sup>rd</sup> in Europe in terms of its Totally Early-Stage Entrepreneurial Activity (TEA) index which is 12%. TEA in Cyprus comprises nascent entrepreneurs (7.6%) and new business owners (4.5%).
- Employee Entrepreneurial Activity (EEA), which regards the intrapreneurial activity within organizations, is 5.6% in Cyprus. The corresponding European average rate is 4.4%.

## Profile of entrepreneurs in Cyprus

- Most of the entrepreneurially active individuals belong to the 25-34 age cohort.
- The ratio between females and males involved in Totally Early-Stage Entrepreneurial Activity (TEA) in Cyprus is 0.4, indicating a low participation of women in entrepreneurial activity.
- Most of the entrepreneurs involved in TEA in Cyprus are opportunity-driven rather than necessity-driven. However, a larger percentage of men (74.9%) are involved in opportunity-driven entrepreneurial activity compared to women (70.5%). There is a larger percentage of women (28.3%) involved in necessity-driven entrepreneurship compared to men (22.4%).
- 67% of the TEA entrepreneurs in Cyprus received University or vocational-training education. This is above the corresponding average rate in Europe, which is 49%. Opportunity-driven entrepreneurs are more likely to have received a higher level of education compared to necessity-driven indicating that the more educated entrepreneurs are, the more likely they are to create a business because of their desire to explore new opportunities.

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<sup>2</sup>This report employs the definition for Europe as the one used in GEM Global 2016/2017. The countries grouped under the European geographical area are included in Table 2.1.

## Entrepreneurial impact

- Most of the Totally Early-Stage Entrepreneurial Activity (TEA) in Cyprus is relevant to the ICT, professional and other services sector (41.6%) and the wholesale, retail, hotels and restaurants sector (41%).
- Only 52.1% of the entrepreneurs involved in TEA in Cyprus foresee one or more job openings arising because of their entrepreneurial activity in the next five years. 27.1% of the entrepreneurs consider that their product is internationally oriented and 36.7% perceive that their product is new to all of their customers. The combination of these findings might signal that the high level of international orientation reported is possibly related to the involvement of a large number of Cypriot entrepreneurs in the hospitality and tourism industry.

## Entrepreneurial framework conditions

- The most important strengths among the Entrepreneurship Framework Conditions are the quality of physical infrastructures such as access to communications and utilities, and the good level of commercial and legal infrastructure.
- The most critical weakness is the entrepreneurial education at primary and secondary education levels. Experts noted that school-education provides limited activities that encourage creativity, training in market economic principles and does not provide adequate attention to entrepreneurship and new firm creation.
- The experts gave strong negative ratings to government support and initiatives provided through entrepreneurship programs. In particular, despite the recent plans of the Ministry of Commerce, Energy, Industry and Tourism to set up 'a One-Stop Shop service' for start-ups, experts consider the lack of this service an important constraint for the entrepreneurial ecosystem in Cyprus and expect that it would provide a wide range of government assistance for new and growing enterprises. In addition, they view that the

assistance provided by government programs to new and growing businesses to find what they need is restricted and have serious reserves about the capacity of agencies and government officials to efficiently support new business.

- In Cyprus, access to finance is also an important obstacle noted by the national experts. This is mainly related to the scarcity of fund managers and formal investors and the insufficient access to venture capitalists, initial public offerings (IPOs) and private lenders' funding (crowdfunding) experienced by new business in Cyprus.

Alongside to the results of the two surveys, this report also provides an overview of the existing multi-annual plan of The National Policy Statement for the Entrepreneurial Ecosystem<sup>3</sup> of the Republic of Cyprus and provides policy making suggestions with respect to the GEM 2016/2017 results.

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<sup>3</sup>Statement released by the Unit of Administrative Reform of the Presidency, formulated, in close cooperation with the Ministry of Energy, Commerce, Industry and Tourism (MECIT), and endorsed by the Council of Ministers on December 14th, 2015.

## 2 GEM INTRODUCTION AND BACKGROUND

GEM is a worldwide study on entrepreneurship. The initiative to examine “Why are some countries more entrepreneurial than others?” stated in 1997 by two academics, Michael Hay from London Business School and Bill Bygrave from Babson College. Up to 1997, there was no recognized international research that focused on studying entrepreneurship across several countries and the concept of entrepreneurship did not hold the same meaning as today.

To address the reasons leading to entrepreneurial activity as well as uncover the information gap around entrepreneurship, GEM evolved into a multinational survey that is conducted on an annual basis. The first GEM report was published in 1999 and has been conducted annually for the past 16 years. The consortium of GEM countries captures over 100 economies are participating from all levels of economic development and in almost all regions in the world (Africa, Latin America & Caribbean, Asia & Oceania, Europe, and North America). GEM currently represents approximately 70% and 75% of the world’s population and 90% of the world’s GDP. In this way, GEM contributes by providing longitudinal data and comparative analyses of the entrepreneurial activity across the globe.

The difference between GEM and other studies on entrepreneurship is that GEM not only examines entrepreneurship at business level, but it also addresses it at individual level between 18 and 64 years. Among other factors, GEM addresses the attitudes, aspirations, perceptions and intentions of individuals. It captures multiple phases of business activity including intentional, early and mature entrepreneurial activity. It also provides insights on the perceptions of societies towards entrepreneurship and the quality and the maturity of the entrepreneurial ecosystem in each participating economy.



**GEM 2016 Annual Meeting Group Photo, Boston, Massachusetts, U.S.A.**

In particular, GEM employs two information tools for collecting its data:

- 1) the Adult Population Survey (APS) which collected responses by a representative sample of the adult population of each participating economy.
- 2) the National Experts Survey (NES) which provided subjective information on the status of several entrepreneurial framework conditions of each participating country.

This the first time that Cyprus participates in the Global Entrepreneurship Monitor (GEM). The 2016/2017 GEM study includes 66 economies which encapsulate 69.2% of the world's population and 84.9% of the world's GDP. These economies are summarized in Table 2.1, classified by GEM 2016/2017 based on their geographic region<sup>6</sup> and level of economic development<sup>7</sup>.

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<sup>6</sup>Classification of economies by geographic region is adapted from the United Nation's composition of the macro geographical regions. Found at: <http://unstats.un.org/unsd/methods/m49/m49regin.htm>

<sup>7</sup>GEM's classification of economies by economic development level is adapted from the World Economic Forum (WEF). According to WEF's classification, the factor-driven phase is dominated by subsistence agriculture and extraction businesses, with a heavy reliance on (unskilled) labour and natural resources. In the efficiency-driven phase, an economy has become more competitive with more-efficient production processes and increased product quality. As development advances into the innovation-driven phase, businesses are more knowledge-intensive, and the service sector expands (<http://weforum.org>). Economies in transition from factor- to efficiency-driven have been grouped with the factor-driven economies, while those in transition from efficiency- to innovation-driven have been included in the efficiency- driven category.



Table 2.1 – GEM economies by geographic region and economic development level 2016  
 Source: GEM Global Report 2016/2017

	FACTOR-DRIVEN	EFFICIENCY-DRIVEN	INNOVATION-DRIVEN
Africa	Burkina Faso Cameroon Senegal	Egypt Morocco South Africa	
Asia & Oceania	India Iran Kazakhstan	China Georgia Indonesia Jordan Lebanon Saudi Arabia Thailand Turkey	Australia Hong Kong Israel Qatar Republic of South Korea Taiwan United Arab Emirates
Latin America & Caribbean		Argentina Belize Brazil Chile Colombia Ecuador El Salvador Guatemala Jamaica Mexico Panama Peru Uruguay	Puerto Rico
Europe	Russian Federation	Bulgaria Croatia Hungary Latvia FYROM Poland Slovakia	Austria Cyprus Estonia Finland France Germany Greece Ireland Italy Luxembourg Netherlands Portugal Slovenia Spain Sweden Switzerland United Kingdom
North America			Canada United States

## 2.1 GEM conceptual framework<sup>8</sup>

GEM's conceptual framework depicts the multifaceted features of entrepreneurship, recognizing the proactive, innovative and risk responsive behavior of individuals, always in interaction with the environment. The GEM survey was conceptualized with regard for the interdependency between entrepreneurship and economic development, in order to:

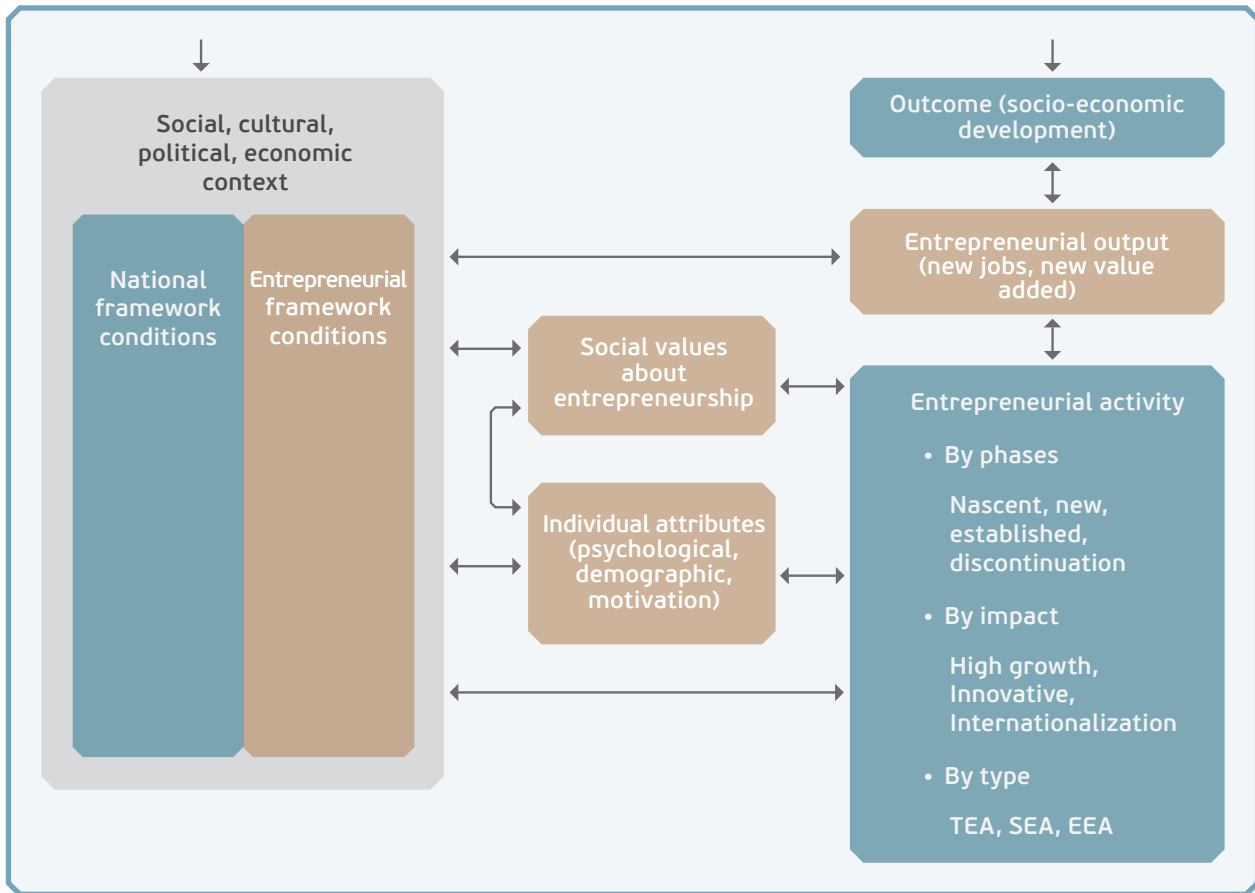
- Explore the factors that encourage or hinder entrepreneurial activity, especially related to societal values, personal attributes and the entrepreneurship ecosystem.
- Provide a platform for assessing the extent to which entrepreneurial activity influences economic growth within individual economies.
- Uncover policy for the purpose of enhancing entrepreneurial capacity in an economy.

The GEM conceptual framework derives from the basic assumption that national economic growth is the result of the personal capabilities of individuals to identify and seize opportunities, and that this process is affected by environmental factors which influence individuals' decisions to pursue entrepreneurial initiatives. Figure 2.1, shows the main components and relationships into which GEM divides the entrepreneurial process and how it classifies entrepreneurs according to the level of their organizational development.

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<sup>8</sup>This Section was adapted from GEM 2016/2017, p.13-16

Figure 2.1 – GEM Conceptual Framework  
Source: GEM Global Report 2016/2017



The social, cultural, political and economic context is represented through National Framework Conditions (NFCs), which take into account the advancement of each society through the three phases of economic development (factor-driven, efficiency-driven and innovation-driven), and Entrepreneurial Framework Conditions (EFCs) which relate more specifically to the quality of the entrepreneurial ecosystem and include: entrepreneurial finance, government policy, government entrepreneurship programs, entrepreneurship education, research and development (R&D) transfer, commercial and legal infrastructure, internal market dynamics and entry regulation, physical infrastructure, and cultural and social norms.

As indicated in Figure 2.1, the GEM conceptual framework recognizes that entrepreneurship is part of a complex feedback system, and makes explicit the relationships between social values, personal attributes and various forms of entrepreneurial activity. It also recognizes that entrepreneurship can mediate the effect of the NFCs on new job creation and new economic or social value creation. Entrepreneurial activity is thus an output of the interaction of an individual's perception of an opportunity and capacity (motivation and skills) to act upon this and the distinct conditions of the respective environment in which the individual is located. In addition, while entrepreneurial

activity is influenced by the framework conditions in the particular environment in which it takes place, this activity ultimately benefit this environment as well, through social value and economic development.

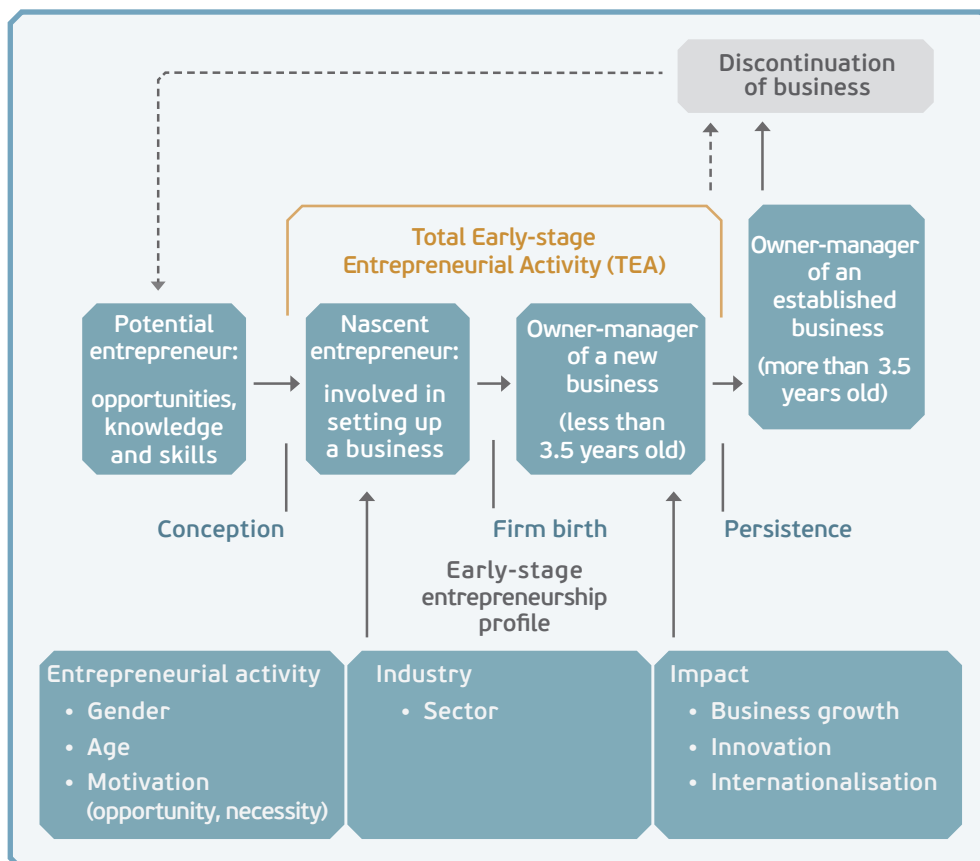
**Social values about entrepreneurship:** This includes aspects such as the extent to which society values entrepreneurship as a good career choice; whether entrepreneurs have high societal status; and the extent to which media attention to entrepreneurship is contributing to the development of a positive entrepreneurial culture.

**Individual attributes:** This includes different demographic factors (such as gender, age, geographic location); psychological factors (including perceived capabilities, perceived opportunities, fear of failure); and motivational aspects (necessity versus opportunity based ventures, improvement-driven ventures).

**Entrepreneurship activity:** This is defined according to the phases of the life cycle of entrepreneurial ventures (nascent, new business, established business, discontinuation); according to impact (high growth, innovation, internationalization); and by type (Total Early-stage Entrepreneurship Activity – TEA, Employee Entrepreneurship Activity – EEA).

Operational definitions of the business phases and entrepreneurship characteristics are represented in Figure 2.2.

Figure 2.2 – GEM model of business phases and entrepreneurship characteristics  
Source: GEM Global Report 2016/2017



GEM methodology includes a set of key entrepreneurship indicators which receive a ranking for each economy participating in the report. Overall, this group of indicators may be viewed as a dashboard representing a comprehensive set of measures that collectively contribute toward the impact entrepreneurship has on a society and the extent society supports this activity. These include:

### **Societal values and perceptions:**

**Good career choice:** Percentage of the adult population between the ages of 18 and 64 years who believe that entrepreneurship is a good career choice. High status to successful entrepreneurs: Percentage of the adult population between the ages of 18 and 64 years who believe that high status is afforded to successful entrepreneurs.

**Media attention for entrepreneurship:** Percentage of the adult population between the ages of 18 and 64 years who believe that there is a lot of positive media attention for entrepreneurship in their country.

### **Individual attributes of a potential entrepreneur:**

**Perceived opportunities:** Percentage of the population between the ages of 18 and 64 years who see good opportunities to start a firm in the area where they live.

**Perceived capabilities:** Percentage of the population between the ages of 18 and 64 years who believe they have the required skills and knowledge to start a business.

**Entrepreneurial intention:** Percentage of the population aged 18 – 64 years (individuals involved in any stage of entrepreneurial activity excluded) who are latent entrepreneurs and who intend to start a business within three years.

**Fear of failure rate:** Percentage of the population aged 18 – 64 years perceiving good opportunities who indicate that fear of failure would prevent them from setting up a business.

### **Entrepreneurial activity indicators:**

**Nascent entrepreneurs:** Entrepreneurs who have taken steps to start a new business, but have not yet paid salaries or wages for more than three months.

**New entrepreneurs:** Entrepreneurs who are running new businesses that have been in operation for between 3 months and 42 months.

*Three indicators describe the life cycle of a venture:*

**Total Early-stage Entrepreneurial Activity – TEA:** Percentage of the adult population between the ages of 18 and 64 years who are in the process of starting a business (a nascent entrepreneur) or owner-manager of a new business which is less than 42 months old.

**Established business ownership rate:** Percentage of the adult population between the ages of 18 and 64 years who are currently an owner-manager of an established business, i.e. owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than 42 months.

**Business discontinuation rate:** Percentage of the adult population aged between 18 and 64 years (who are either a nascent entrepreneur or an owner-manager of a new business) who have, in the past 12 months, discontinued a business, either by selling, shutting down, or otherwise discontinuing an owner/ management relationship with the business.

**Entrepreneurial Employee Activity – EEA:** Percentage of the adult population aged between 18 and 64 years who as employees have been involved in entrepreneurial activities such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary<sup>9</sup>.

## 2.2 GEM Methodology

Given that GEM's goal is to provide a comprehensive view of entrepreneurship across the globe, it aims to measure the attitudes of the population, and the activities and characteristics of individuals involved in various phases and types of entrepreneurial activity. GEM provides comparable data across the economies participating in the report. To do so, it employs a mutual research design for all participating countries. Each country participating in GEM collects annual data throughout two studies: the Adult Population Survey (APS) and the National Expert Survey (NES).

### Adult Population Survey (APS)

The Adult Population Survey (APS) measures the key entrepreneurship indicators described in Figure 2.2. Research teams in each participating economy administer and supervise the data collected through the Adult Population Surveys (APS). In each country, of at least 2 000 randomly selected adults (18 – 64 years of age) participate in APS annually. The studies are conducted between May and July each year, using a standardized questionnaires provided by the GEM Global Team which is translated in the national language of each economy.

The Center for Entrepreneurship of the University of Cyprus in collaboration with CYMAR Market Research Ltd conducted the APS in Cyprus. A computer-aided telephone interviewing process was followed including 70% fixed-line numbers and 30% mobile numbers. Each phone number was selected at random and at least five contacts were made to each number drawn, before number was dropped.

The study included 2001 respondents between 16-64 years old, living in both rural and urban areas of the Republic of Cyprus. Both genders were equally represented in the sample. A multi-staged selection process was followed for sampling the respondents, so as to ensure that the geographical distribution of the sample was in line with the actual distribution of the targeted population.

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<sup>9</sup>This Section reuses the description of the GEM methodology included in GEM 2016/2017, p.13-16.

In particular, 43% of the respondents were residents of the Nicosia district, 28% of the Limassol district, 16% of the Larnaca district, 8% of the Paphos district and 5% of the Famagusta district.

Quality assurance tests were conducted by the GEM Global Team in order to ensure the uniformity of the statistical calculations. After this stage, individual countries gained access to the datasets. Section 3 of this report provides an overview of the results of the APS conducted in Cyprus.

## **National Expert Survey (NES)**

The National Expert Survey (NES) gathers in-depth opinions from selected national experts about the factors that have an impact on the entrepreneurship ecosystem in each economy. Information is gathered about the nine entrepreneurial framework conditions: financing, government policies, taxes and bureaucracy, government programs, school-level entrepreneurship education and training, post-school entrepreneurship education and training, R&D transfer, access to commercial and professional infrastructure internal market dynamics, internal market burdens, access to physical and services infrastructure and social and cultural norms. At least four experts from each of the entrepreneurial framework condition categories must be interviewed, making a minimum total of 36 experts per country. In order to construct a balanced and representative sample, the experts were drawn from entrepreneurs, government, academics, and practitioners in each economy. Additional aspects such as regional area, gender, involvement in the public or private sector and experience level were also accounted when selecting the sample. Respondents were requested to reflect on the factors that have an impact on the entrepreneurship ecosystem using a 1-9 Likert scale (1= highly insufficient to 9=highly sufficient) as well as provide responses to open-ended questions. Questions were translated to the national language of each country. The National Expert Survey (NES) of GEM Cyprus 2016/2017 collected the responses through the use of an online data collection tool. The majority (66%) of the national experts denoted of having more than ten years of work experience in areas related to entrepreneurship. Out of the 36 respondents, 5 belong to the 25-34 age cohort, 11 belong to the 35-44 age cohort, 15 belong to the 45-54 age cohort and 5 are over 55 years old. Both genders participated in the study, 25% of the participants were females and 75% were males. Concerning the expert specialization<sup>10</sup> of the respondents participating in the NES, 15 denoted to be entrepreneurs, 2 were investors, financiers or bankers, 10 were policy makers, 13 were business and support services providers and 13 denoted to be educators, teachers and entrepreneurship researchers. More information about the results of the NES can be found in Section 5.

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<sup>10</sup> Respondents were able to choose more than one categories of expert specialization.

### 3 ENTREPRENEURIAL ACTIVITY IN CYPRUS IN 2016

This section reports on the state of entrepreneurship in Cyprus following the GEM Adult Population Survey (APS) model. This is the first year that Cyprus is participating in GEM and hence there are no chronological data to be used as benchmarks for interpreting the entrepreneurial activity in Cyprus. However, the interpretation of a single data point would be impossible without the use of relevant benchmarks. To maximize the interpretability of the results, this report employs the average rates of European countries included in GEM2016/2017 as its benchmark. GEM 2016/2017 groups countries included in broader European regional areas and for consistency reasons, this report follows the same approach. Appendix 1 includes a list of all the European countries captured by GEM 2016/2017 with respect to the corresponding entrepreneurial activity indexes. The GEM APS framework captures the status of the national entrepreneurial environment. This includes insights on the extent and different types of entrepreneurial activity, the profile of entrepreneurs and the impact of entrepreneurial activity at national level. The rest of this section discusses the national entrepreneurial environment of Cyprus in 2016.

#### 3.1 SOCIETAL VALUES & PERCEPTIONS ABOUT ENTREPRENEURSHIP

Although insights on the societal attitudes and perceptions about entrepreneurship are not a direct part of the entrepreneurial process, they play an important role in shaping the entrepreneurial culture of a country. Positive or negative perceptions of the society about entrepreneurship can have a notable impact on the entrepreneurial ambition and willingness. GEM 2016/2017 addresses societal values about entrepreneurship by capturing perceptions of individuals on entrepreneurship. This includes questions on whether entrepreneurship is perceived as a good career choice, the status of successful entrepreneurs and the extent to which entrepreneurship receives adequate media attention. Table 3.1, summarizes the societal values about entrepreneurship in Cyprus and in Europe. In Cyprus, 72.7% considers entrepreneurship as a good career choice. The corresponding value in Europe is 57.2%. Despite the markedly low media attention for entrepreneurship in Cyprus (42.4%), the majority of the respondents believes that successful entrepreneurs enjoy high societal status (65.7%).

Table 3.1 – Societal values about entrepreneurship in Cyprus and Europe

	CYPRUS	EUROPE
Entrepreneurship as good career choice	72.7%	57.2%
High status to successful entrepreneurs	65.7%	66.1%
Media attention for entrepreneurship	42.4%	54.5%



While a broader entrepreneurial culture, to some extent, influences entrepreneurial intentions, the self-perceptions about entrepreneurship provide a clearer overview about factors that shape entrepreneurial intentions in a country. Table 3.2 summarizes the self-perceptions in Cyprus and in Europe about entrepreneurship. About one in three individuals of the adult population in Cyprus (35.9%), perceive good opportunities to initiate entrepreneurial activity in the area in where they live. However, 50.2% of the population that views good opportunities to initiate entrepreneurial activity in the area where they live, indicate that fear of failure would prevent them from embarking on the entrepreneurial endeavor. This is partly contrasting to the fact that 52.4% of the adult population in Cyprus consider that they have the required skills and knowledge to start a business. In Europe, 43.5% of the population perceives that they have the necessary capabilities to initiate entrepreneurial activity. The higher perceived capabilities rate recorded in Cyprus could be attributed to the fact that the majority of entrepreneurs in Cyprus have received university education (see Figure 3.3) or even to aspects of self-perception influenced by culture and tradition. This positive perception about capabilities is also reflected in the direct measurement of entrepreneurial intentions. Despite the high rates of fear of failure recorded, a relatively large percentage of the adult population intends to start a business within the next three years<sup>11</sup>. The entrepreneurial intention rate is higher in Cyprus than the corresponding benchmark value in Europe. For Cyprus, this may indicate the existence of a supportive legal and tax framework as well as the existence of a highly skilled human capital.

**Table 3.2 – Self-perceptions about entrepreneurship in Cyprus and Europe**

	CYPRUS	EUROPE
Perceived opportunities	35.9%	36.2%
Perceived capabilities	52.4%	43.5%
Fear of failure	50.2%	40.1%
Entrepreneurial intention	16.7%	11.9%

### 3.2 TOTALLY EARLY-STAGE ENTREPRENEURIAL ACTIVITY (TEA)

The Totally Early-Stage Entrepreneurial Activity (TEA) Index is a measure of a country's early-stage entrepreneurial activity. The TEA Index includes both nascent entrepreneurs (currently actively working on starting a new business) and new business owners. TEA index is important as it reflects on the new businesses that could later become established businesses and hence TEA represents the entrepreneurial potential of the country. In Cyprus, the 12.0% of the respondents aged between 18 and 64 indicated early-stage entrepreneurial activity (Table 3.3). The corresponding TEA

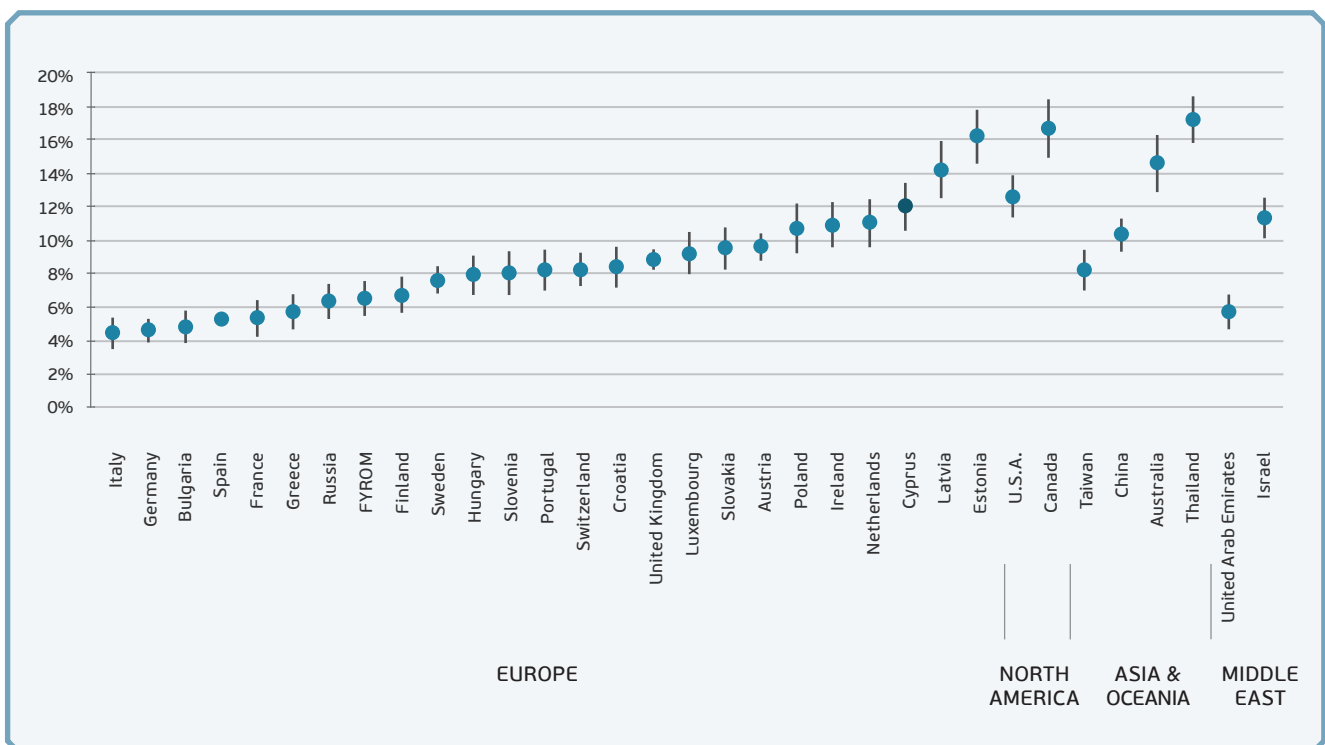
<sup>11</sup> Individuals included in any stage of entrepreneurial activity were excluded.

index average value among the European countries participating in GEM 2016/2017, is 8.4%. Compared to other European countries participating in GEM, Cyprus is among the countries with high level of early-stage entrepreneurial activity as it is ranked 3<sup>rd</sup> in terms of the TEA Index among other European Countries participating in GEM 2016/2017. Figure 3.1 summarizes the TEA Index levels of the European countries participating in GEM 2016/2017 as well as countries from other geographical regions. TEA Index is particularly high in Latvia (14.2%), Estonia (16.2%), Canada (16.7%), Australia (14.6%) and Lebanon (21.2%).

**Table 3.3 – Entrepreneurship in Cyprus and Europe**

	CYPRUS	EUROPE
Early-stage entrepreneurs (TEA) <sup>12</sup>	12.0%	8.4%

**Figure 3.1 – Totally Early-Stage Entrepreneurial Activity (TEA) Index levels<sup>13</sup>**



<sup>12</sup>In some instances, TEA index rate is less than the combined totals for nascent and new business owners. This is because, incases where respondents qualify as both a nascent and a new business owner, they are counted only once in the TEA Index.

<sup>13</sup>The horizontal lines illustrate the margin of error. It is shorter in countries that included a larger number of responses. For example, Spain surveyed 22000 respondents for the 2016/2017 GEM report. Cyprus collected 2001 responses and its margin error is +/- 1.4%.

### 3.2.1 NASCENT ENTREPRENEURS

Nascent entrepreneurs are early-stage individuals that are currently active in planning a new venture. They have part-time or full-time involvement in this activity and will have at least partial ownership of the new business. The new business in this case has not paid any wages or salaries for the past three months. In Cyprus, 7.6% of the population between 18 and 64 were identified as nascent entrepreneurs. This rate is higher than the European average rate of nascent entrepreneurs which is 5.2% (Table 3.4). Cyprus is ranked 3<sup>rd</sup> for nascent entrepreneurial activity among the European countries included in GEM 2016/2017. The highest rates of nascent entrepreneurs in the population were recorded in Latvia (11.6%) and Estonia (9.7%).

Table 3.4 – Nascent Entrepreneurs in Cyprus and Europe

	CYPRUS	EUROPE
Nascent entrepreneurs	7.6%	5.2%

About half of the nascent entrepreneurs in Cyprus expect to have full ownership of the new venture (49.7%), 25.5% expecting the new business to have two owners, 18.8% expecting three owners, and 6% expecting more than three owners.

The entrepreneurial activity of the majority of the nascent entrepreneurs in Cyprus is motivated by positive reasons as they are driven by opportunity rather than necessity. In particular, opportunity-driven entrepreneurship is related to the desire to increase personal income (43.7%) or to reach greater independence (34.5%). Most of the nascent entrepreneurs in Cyprus reported that their motives are solely related to opportunity. However, 22.8% of nascent entrepreneurs are solely driven by necessity, as they are seeking to start a new business because of not having any other alternative and 16.6% of the nascent entrepreneurs hold both opportunity and necessity motives.

### 3.2.2 NEW BUSINESS OWNERS WITH SIGNIFICANT GROWTH POTENTIAL

New business owners are early-stage entrepreneurs that are involved as owners and managers of new firms that have been set up and are less than 42 months old. The new ventures have not paid salaries or wages yet. In Cyprus, 4.5% of the respondents between 18 and 64 were identified as new business owners as it is in the case of nascent entrepreneurs. This rate is above the corresponding average of new business owners in Europe which is 3.4% (Table 3.5). Cyprus is ranked 5<sup>th</sup> among the GEM 2016/2017 European countries, in terms of new business owners in the population. The highest new business owner's rates in Europe were recorded in Poland (6.1%), Netherlands (5.4%), Latvia (4.9%) and Estonia (4.8%).

Table 3.5 – New business owners in Cyprus and Europe

	CYPRUS	EUROPE
New business owners	4.5%	3.4%

Similar to nascent entrepreneurs, 50% of the new business owners in Cyprus have full ownership of the venture, 28.4% have two owners, 14.8% have three owners and 6.8% have more than three owners. New business owners in Cyprus are mainly motivated by opportunity. In particular, 57% are opportunity-driven entrepreneurs, 27.9% are necessity-driven and 15.1% consider both opportunity and necessity as their motives. Among the opportunity motives, the most important reasons contributing to their decision to start a new business is the desire to reach greater independence (51.1%) and increase personal income (38.3%). New business owners consider reaching greater independence as a more important reason for starting a new business, whereas for nascent entrepreneurs increasing personal income is more important. This could be attributed to the greater entrepreneurial experience of new business owner compared to nascent entrepreneurs, which has provided them the opportunity to gain hands-on experience on a wider spectrum of benefits gained through entrepreneurship.

### 3.3 ESTABLISHED BUSINESS OWNERS

Established business owners are entrepreneurs who are involved in established firms as owners and managers. These firms are older than 42 months old and have already provided salaries or wages. In Cyprus, the rate of established business owners is 8.2% (Table 3.6). Cyprus is ranked 5<sup>th</sup> in Europe in terms of the rate of established business owners and the rate recorded is higher than the European average rate which is 6.9%. The rate of established business owners is higher in Greece (14.1%), Netherlands (11.2%), Latvia (9.5%), and Austria (8.8%). Among established businesses in Cyprus, 67.6% have one owner, 18.2% have two owners, 5.9% have three owners, 8.3% have more than three owners. Most of the established business'

owners are motivated by positive reasons, namely a 68.1% is motivated solely by opportunity and a 9.4% is partly motivated by opportunity. In particular, opportunity motives are related to the desire to increase personal income (41.3 %) and the desire for greater independence (33.7%). Approximately one in five established business owners consider necessity as their core motive (22.1%).

**Table 3.6 – Established business ownership in Cyprus and Europe**

	CYPRUS	EUROPE
Established business ownership rate	8.2%	6.9%

### 3.4 EMPLOYEE ENTREPRENEURIAL ACTIVITY

Beyond the entrepreneurial activity conducted by individuals acting on their own account, there is also entrepreneurial activity recorded within organizations. Intrapreneurs are individuals who initiate and are involved in new business activities in the frame of their employment. In Cyprus, 5.6% of the adult employed population reported that they have been involved in new entrepreneurial activities for their employer in the past three years (Table 3.7). This rate is higher than the corresponding European average rate which is 4.4%. Cyprus intrapreneurial activity for the past three years is above the European average rate and Cyprus is ranked 14<sup>th</sup> in intrapreneurship across Europe. The Netherlands have reported the highest rate of intrapreneurial activity (10.4%) in Europe, followed by Austria, Luxembourg and the U.K.

**Table 3.7 – Employee entrepreneurial activity in Cyprus and Europe**

	CYPRUS	EUROPE
Employee entrepreneurial activity	5.6%	4.4%

### 3.5 BUSINESS DISCONTINUANCE

The rate of business discontinuance in Cyprus in 2016 is 4%. This is lower than the European average rate on business discontinuance which is 4.3%. Given the relatively high rates of early-stage and mature entrepreneurial activity in Cyprus, it is expected that a proportion of these businesses will discontinue. Although the entrepreneurial endeavor is important for the individuals and the economy, it is also complex and incorporates many risks. Table 3.8 outlines additional

reasons for business discontinuance in Cyprus and in Europe. The most important reasons leading to business discontinuance in Cyprus is that the businesses are not profitable (46.3%) and there are problems in getting finance (18.8%). In Europe, the corresponding average values recorded are lower as business discontinuance due to business not being profitable is 33.7% and business discontinuance due to problems in getting finance is 10.7%.

**Table 3.8 – Reasons for business discontinuance in Cyprus and Europe**

	CYPRUS	EUROPE
Opportunity to sell	1.3%	4.3%
Business not profitable	46.3%	33.7%
Problems getting finance	18.8%	10.7%
Another job or business opportunity	8.8%	12.3%
Exit was planned in advance	2.5%	5.9%
Family or personal reasons	16.3%	16.6%
Government/tax policy/bureaucracy	6.3%	7.7%

### 3.6 PROFILE OF ENTREPRENEURS IN CYPRUS

#### Age distribution

The GEM adult population survey provides information on the entrepreneurial activity of individuals and as a result it provides the opportunity to draw insights on the demographic and other characteristics of Cypriot entrepreneurs. The data also allow the assessment of the extent to which each demographic group engages in early-stage entrepreneurial activity and the related motivations. In Cyprus, the highest prevalence of early-stage entrepreneurial activity is among the 25-34 and 35-44 age cohorts, followed by the 45-54 and 18-24 age cohorts which share an almost similar entrepreneurial activity rate (Table 3.9). The relatively low early-stage entrepreneurial activity among the youth (18-24 years old) could be attributed to the male compulsory military service policy followed in Cyprus as well as the high involvement of youth in tertiary education. The remarkable decrease in the early-stage entrepreneurial activity of the 55-64 age cohort could be due to the fact that this age cohort is closer to the stage pension age (65 years old in Cyprus), holds higher level of household savings or other income sources and as a result it is less motivated to initiate entrepreneurial activity. The higher participation of individuals in the age cohort 25-34 and 35-44 could be attributed to the fact that these groups are currently in their early or mid-careers, they had

the time to educate and work. These have allowed them to develop their skills and network, build confidence in their own abilities and gain access to financial resources. The 25-34 age cohort has recorded the highest rate of entrepreneurial activity in Cyprus. Compared to the 35-44 age cohort, 25-34 is at a less established career stage and is likely to have fewer financial commitments or family obligations which justifies the difference in the entrepreneurial activity rates between these age cohorts.

This pattern of entrepreneurial activity tends to be very similar to the corresponding European average rates and the rates recorded across all countries participating in GEM 2016/2017.

**Table 3.9 – Totally Early-Stage Entrepreneurial Activity (TEA) rates by age group in Cyprus and Europe**

	CYPRUS	EUROPE
18-24 years	9.9%	8.2%
25-34 years	17.7%	11.3%
35-44 years	12.6%	9.7%
45-54 years	10%	7.6%
55-64 years	6.6%	7.8%
Total TEA 18-64 years	12%	8.4%

### Gender distribution

The GEM 2016/2017 report as well as previous GEM reports demonstrate that women are less likely to be involved in early-stage entrepreneurial activity than men. The results correspond to the ones in Cyprus, as well where women exhibit a notably lower early-stage entrepreneurial activity compared to men. In fact, the ratio of entrepreneurial activity of female to male entrepreneurs is 0.4. Table 3.10 outlines the rates of male and female early-stage entrepreneurial activity in Cyprus and in Europe. In Cyprus, women are more likely to engage in entrepreneurship out of necessity, whereas men are more likely to be involved in entrepreneurial activity because of opportunity. Similarly, in Europe, opportunity-driven entrepreneurship is higher for males than females and necessity-driven entrepreneurship is higher for females than males. Compared to all countries involved in GEM 2016/2017, Europe reports the lowest female entrepreneurship compared to other regions. These insights highlight the need for additional policies that will promote and strengthen female entrepreneurship in Cyprus and in Europe.

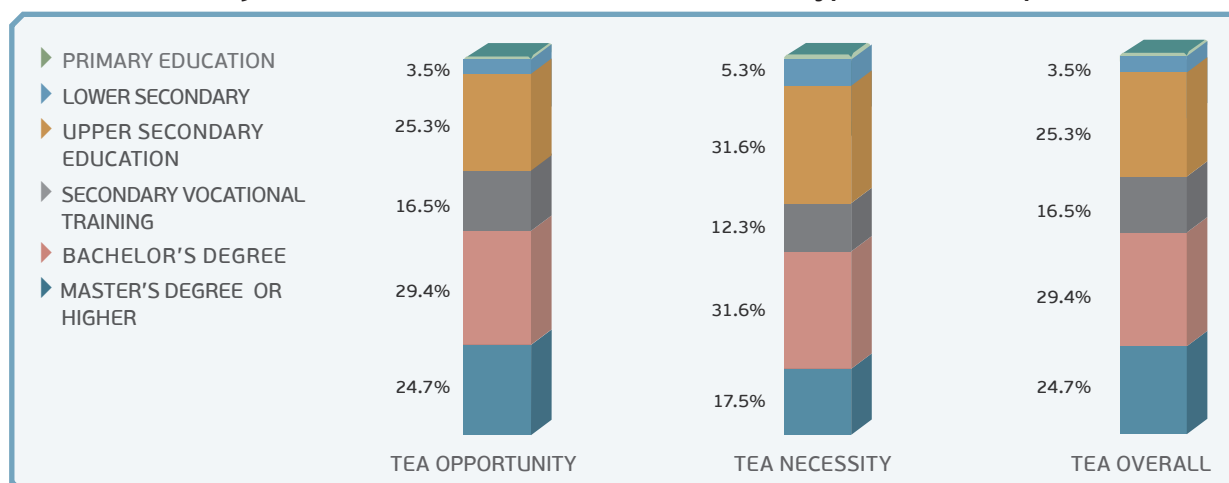
**Table 3.10 – Totally Early-Stage Entrepreneurial Activity (TEA) rates by gender and motivation in Cyprus and Europe**

	CYPRUS	EUROPE
Male TEA (%of adult male population)	17.0%	10.7%
Female TEA (%of adult female population)	7.3%	6.1%
Ratio of female/male TEA	0.4	0.6
Male TEA opportunity (% of male TEA)	74.9%	77.6%
Female TEA opportunity (% of female TEA)	70.5%	72.9%
Male TEA necessity (% of male TEA)	22.4%	19.2%
Female TEA necessity (% of female TEA)	28.3%	23.8%

## Education

A highly educated workforce with the capacity to innovate is vital for the economic development of a country. In Cyprus, approximately two in three entrepreneurs received at least post-secondary education (67%), whereas in Europe, the average rate of post-secondary education among entrepreneurs is 49%. Cyprus is ranked 4<sup>th</sup> in terms of the rate of entrepreneurs that hold post-secondary education or higher. Figure 3.2 shows that, in Cyprus, opportunity-driven entrepreneurs are more likely to have received a higher level of education than necessity-driven entrepreneurs. In particular, 54.1% of opportunity driven entrepreneurs involved in TEA activity have received university education and 24.7% of opportunity-driven entrepreneurs hold a Master’s or doctoral degree. The rate of necessity-driven entrepreneurs that received university education is 49.1%, whereas 17.5% received a Master’s or doctoral degree. This demonstrates that the more educated entrepreneurs are, the more likely it is to create a business in order to explore new opportunities. On the other hand, entrepreneurs with lower levels of education are experiencing more notable difficulties in finding employment and choose entrepreneurship out of necessity.

**Figure 3.2 – Education and TEA motives in Cyprus and Europe**





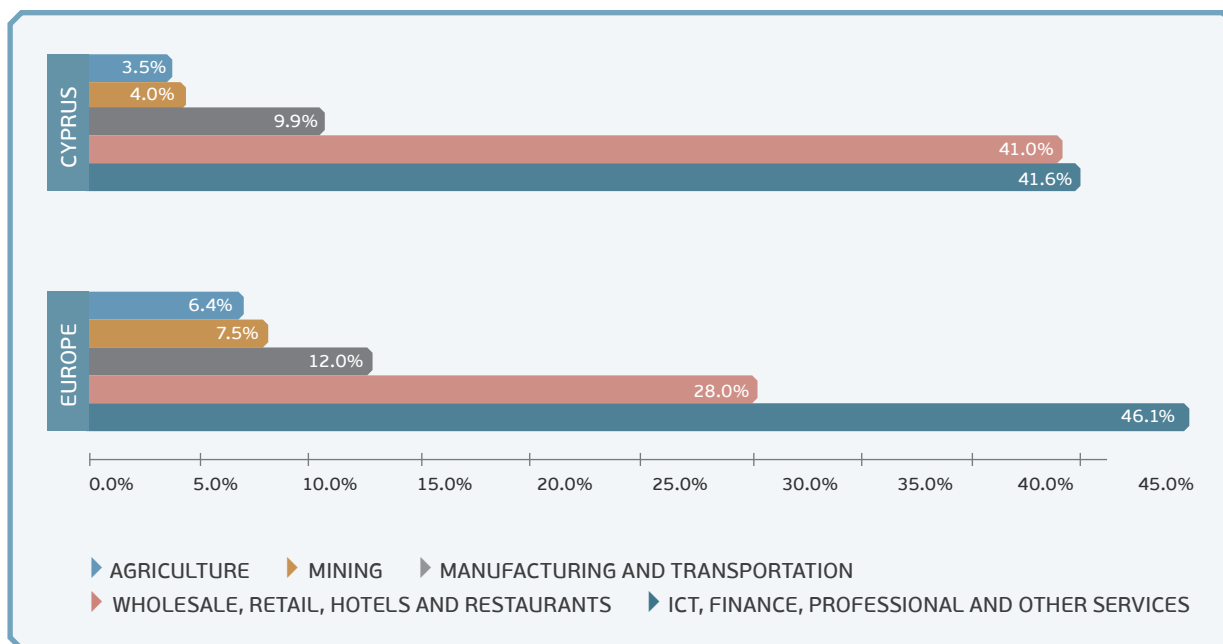
### 3.7 ENTEPRENEURIAL IMPACT

GEM considers that entrepreneurship has a different impact in each country. Economic entrepreneurial development and growth in each country is a mix of industry sectors, job creation, level of innovation and international orientation. This section analyses the impact of early-stage entrepreneurial activity in Cyprus in terms of these four factors.

#### Industry

Figure 3.4 illustrates the early-stage entrepreneurial activity with respect to industrial sector in Cyprus and in Europe. In Europe, the highest level of participation of the early-stage entrepreneurial activity (46.1%) is the technology and service sectors (Figure 3.3). This could be attributed to the strong consumer economy as well as to the greater entrepreneurial knowledge intensity of individuals in other European countries. In Cyprus, the highest level of participation is in the ICT, professional and other services sector (41.6%). Within the technology and service sectors, the largest percentage of Cypriot entrepreneurs offers government, health, education and social services (17%), professional services (9.3%) and information and communication services (4.5%). The Cypriot entrepreneurial activity in the technology and service sector is lower than the corresponding European average level, including lower levels in professional services and information and communication services. Beyond the technology and service sectors, Cypriot entrepreneurs are also highly active in the wholesale, retail, hotels and restaurants (41%). The strong presentation of this sector could be attributed to the strong development of the tourism sector in Cyprus<sup>14</sup>.

Figure 3.3 – Totally Early-Stage Entrepreneurial Activity (TEA) and industry sectors in Cyprus and in Europe



<sup>14</sup>Eurostat, Tourism statistics, Nights Spent at Tourist Accommodation Establishments

## Job creation

A key priority of the European Union is to deliver growth with a strong emphasis on job creation and poverty reduction<sup>15</sup>. Whether existing entrepreneurial activity has the potential to create job opportunities, is of great interest to policy makers and other stakeholders in the economy that are affected by dynamism in the job market. GEM questioned early-stage entrepreneurs about the number of employees (other than owners), they expect to have in the next five years or more. The difference between existing and expected job positions is an indicator of the growth expectations of the entrepreneurs.

Table 3.11 analyzes the intentions of Cypriot early-stage entrepreneurs to create new job opportunities in the next five years. In Cyprus, most of the early-stage entrepreneurs are not optimistic about new job openings, as 47.1% do not foresee that their entrepreneurial activity will create any jobs in the next five years. About one in three (31.2%) expect to create one to five jobs in the next five years and about one in five (20.9%) expect to create more than five jobs in the next five years. The entrepreneurial endeavors in Cyprus are aligned with the European average values in terms of the new job opportunities expected in the next five years. The premature nature of early-stage entrepreneurial activity could be one of the reasons that most of the early-stage entrepreneurs do not expect new job creations in the next five years. The industry sector could be another reason for the low rate of expected job creation projected in the next five years. Other reasons that may deter entrepreneurs to remain small could be the limited access to entrepreneurial finance or the use of sophisticated technology and communications that enable entrepreneurs to operate on their own. Additionally, early-stage entrepreneurs may choose to remain small also because of their desire to avoid complexities related to tax and legal requirements. It should be noted that these growth expectations are projections of the entrepreneurs and given the preliminary stage of their entrepreneurial activity this expresses growth potential that has, as yet, not been tested and hence part of these could be unduly optimistic. However, entrepreneurs with realistic medium and high growth expectations should be supported by policies, so as to boost their economic growth and job creation potential. This could be achieved by offering targeted financial support and altering legal burdens.

**Table 3.11 – Expected new job openings in Cyprus and Europe**

	CYPRUS	EUROPE
Expects 0 jobs in the next 5 years	47.9%	47.1%
Expects 1-5 jobs in the next 5 years	31.2%	31.0%
Expects 6+ jobs in the next 5 years	20.9%	21.9%

<sup>15</sup>European Commission, Europe 2020 Strategy, Priorities.

## Innovation and international orientation

Innovation and entrepreneurship are closely related concepts. Start-ups disrupt the market status-quo as they introduce new product-market combinations that create new value for users, make more efficient use of resources and eliminate firms with less attractive value propositions. The success of innovation is not only related to creating new products or services, but it is also related to the ability of the entrepreneurs to understand competitive offerings, find new market niches and commercialize their products or services efficiently. Therefore, innovation is vital for the success of new ventures and the innovation capabilities of a country reflect the economy's ability to become competitive. In GEM 2016/2017, innovation in entrepreneurial activity has been assessed based on the extent to which new ventures are introducing products that are new to some or all customers and which are offered by a limited number of competitors. In Cyprus, approximately one in three entrepreneurs (36.7%) believe that their product is new to all or some customers and have few competitors (Table 3.12). This rate is above the European average rate for innovation which is 28.3%. In this respect Cyprus is ranked 4<sup>th</sup> among the countries of the European region. This could be attributed to the fact that a large number of early-stage entrepreneurs in Cyprus have received University education.

International orientation reflects the percentage of entrepreneurs who report that at least 25% of their sales comes from outside their economy. Table 3.12 indicates that entrepreneurs in Cyprus have high levels of international orientation as 27.1% of the TEA population have reported that 25% or more of their customers are based outside Cyprus. At regional level, the European average rate is 21.7%. It should be noted, that although entrepreneurs in Cyprus report a relatively high level of international orientation, there is a low involvement of Cypriot entrepreneurs in information and communication sectors and high involvement in the retail trade, hotels and restaurants sector. The combination of these findings might signal that the high level of international orientation reported is possibly related to the involvement of a large number Cypriot entrepreneurs in the tourism and hospitality industry.

**Table 3.12 – Innovation and international orientation of entrepreneurial activity in Cyprus and Europe**

	CYPRUS	EUROPE
Product is new to all customers	36.7%	28.3%
International orientation	27.1%	21.7%

This section provided an overview of the results of the Adult Population Survey (APS) of the 2016/2017 GEM Cyprus. Table 3.13 summarizes the results of this Section. Section 4 provides insights on the entrepreneurial ecosystem of Cyprus as arising by the results of the National Expert Survey (NES).

# TYPICAL EARLY-STAGE ENTREPRENEUR IN CYPRUS 2016/2017

## Male/Female .....

- 17% of males are involved in TEA
- 7.3% of females are involved in TEA

## 25-34 years old .....

- 17.7% involved in TEA



## University education .....

- 52.6% of TEA hold a Bachelor's degree or higher

Active in the ICT,  
Finance, Professional  
and Other Services  
or in the Wholesale,  
Retail, Hotels &  
Restaurants sectors  
.....

- 41% of TEA

## Opportunity driven .....

- 73.5% opportunity driven
- 22.4% necessity driven

Table 3.13 – Summary of Adult Population Survey (APS) Results<sup>16</sup>



**Population:** 0.9 million (2015)

**GDP:** \$19.3 billion (2015)

**GDP per capita:** \$22,588 (2015)

**SME contribution to GDP:** 72% (2015)

**World Bank Doing Business Rating (2015):** 73/100  
**Rank:** 45/190

**World Bank Starting a Business Rating (2015):** N/A; **Rank:** 53/190

**World Economic Forum Global Competitiveness Rating (2015):** 4.0/7; **Rank:** 83/138

**Economic Development Phase:**  
Efficiency-Driven

#### SELF PERCEPTIONS ABOUT ENTREPRENEURSHIP

	Value %
Perceived opportunities	35.9
Perceived capabilities	52.4
Undeterred by fear of failure	50.2
Entrepreneurial intentions	16.7

#### ACTIVITY

	Value %
Total Early-stage Entrepreneurial Activity (TEA) 2016	12.0
Established business ownership rate	8.2
Entrepreneurial Employee Activity – EEA	5.6

#### MOTIVATIONAL INDEX

	Value %
Improvement-Driven Opportunity/Necessitive Motive	2.0

#### GENDER EQUALITY

	Value %
Female/Male TEA Ratio	0.4
Female/Male Opportunity Ratio	0.9

#### ENTREPRENEURSHIP IMPACT

	Value %
Job expectations (6+)	20.9
Innovation	36.7
Industry (% in Business Services Sector)	21.8

#### SOCIETAL VALUE ABOUT ENTREPRENEURSHIP

	Value %
High status to entrepreneurs	65.7
Entrepreneurship a good career choice	72.7

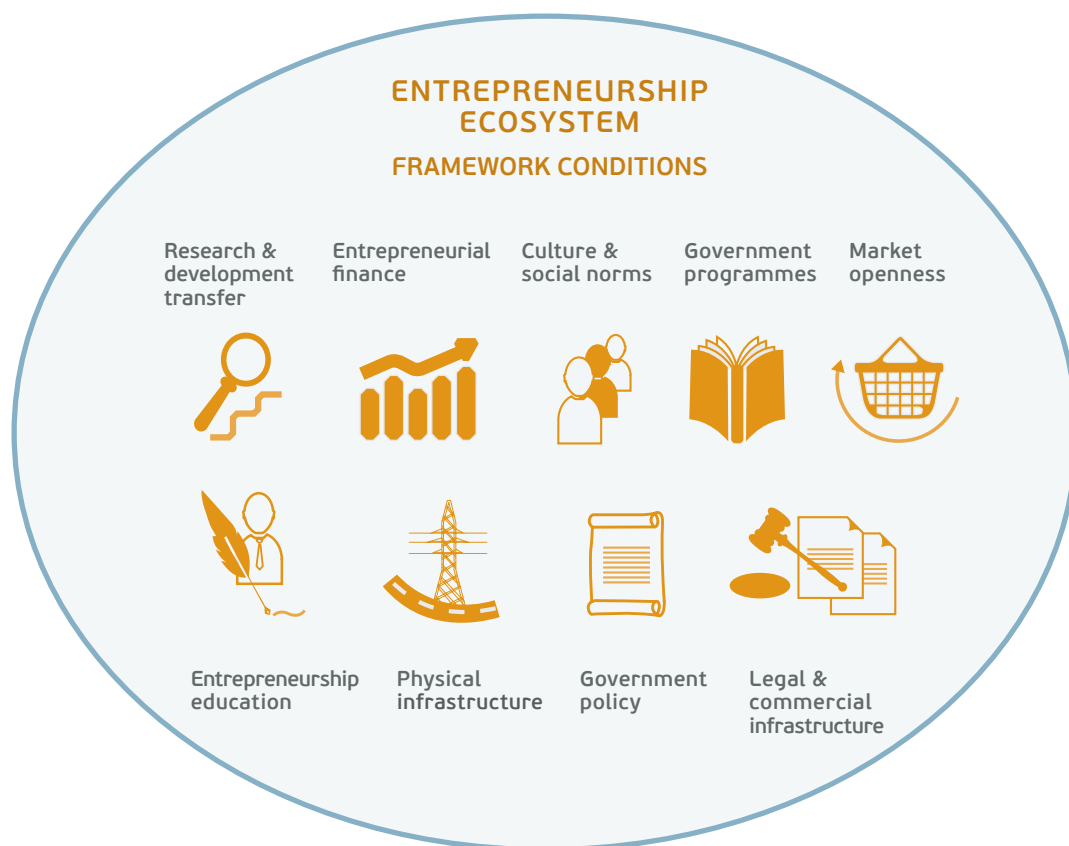
<sup>16</sup> GEM Global 2016/2017.

## 4 THE ENTREPRENEURIAL ECOSYSTEM

The Policy for the Enhancement of the Entrepreneurial Ecosystem in Cyprus formulated in December 2015<sup>17</sup>, aims at enhancing and supporting the entrepreneurial activity in Cyprus, contributing to the development of entrepreneurial ability among individuals and strengthening competitiveness and extraversion of new or growing businesses.

Beyond the views of the adult population on entrepreneurship presented in Section 3, GEM 2016/2017 also captures the informed opinions of experts or informants regarding the entrepreneurial ecosystem in their country. The National Expert Survey (NES) invites experts to evaluate specific national conditions with respect to entrepreneurship. NES emphasizes on the environmental features that are expected to have significant impact on the entrepreneurial attitudes and activities, rather than on the economic factors. GEM dismantles these environmental features into nine **Entrepreneurial Framework Conditions (EFCs)**: financing, government policies, taxes and bureaucracy, government programs, school-level entrepreneurship education and training, post-school entrepreneurship education and training, R&D transfer, access to commercial and professional infrastructure internal market dynamics and market openness, and social and cultural norms. Figure 4.1 summarizes these framework conditions.

Figure 4.1 – Entrepreneurial Framework Conditions (EFCs)<sup>18</sup>



<sup>17</sup>Statement released by the Unit of Administrative Reform of the Presidency, formulated, in close cooperation with the Ministry of Energy, Commerce, Industry and Tourism (MECIT), and endorsed by the Council of Ministers on December 14th, 2015.

<sup>18</sup>GEM Global 2016/2017.

NES provides insights on how EFCs shape the entrepreneurial ecosystem in each economy. The NES questionnaire is standardized for all countries and is designed to capture the informed judgments of carefully selected national experts. Respondents were requested to reflect on the conditions that foster (or constrain) entrepreneurial activity and development. The responses were measured using a 1 (highly insufficient) to 9 (highly sufficient) Likert scale. The data were analyzed to determine the mean score for each group of questions. Table 4.1 summarizes the mean scores for each of the nine entrepreneurial framework conditions in Cyprus and the corresponding average values among European Countries participating in GEM. According to the results of NES, the most important strengths of Entrepreneurship Framework Conditions of Cyprus are physical infrastructures (6.2 out of 9) and access to commercial and legal infrastructure (5.1 out of 9). The mean score of the physical infrastructure in Cyprus is close to the average value recorded in Europe, whereas Cyprus' commercial and legal infrastructure score is above the corresponding European average value. The national experts also provided scores below 4 for some of the conditions. These conditions were considered as the weaknesses of the ecosystem in Cyprus. The most critical weakness is the entrepreneurial education at primary and secondary education levels (2.9 out of 9), the lack of government support and initiatives through entrepreneurship programs (3.3 out of 9) and the lack of financial environment for entrepreneurship (3.3 out of 9). The scores of these categories are low and consistently below the corresponding European benchmark values.

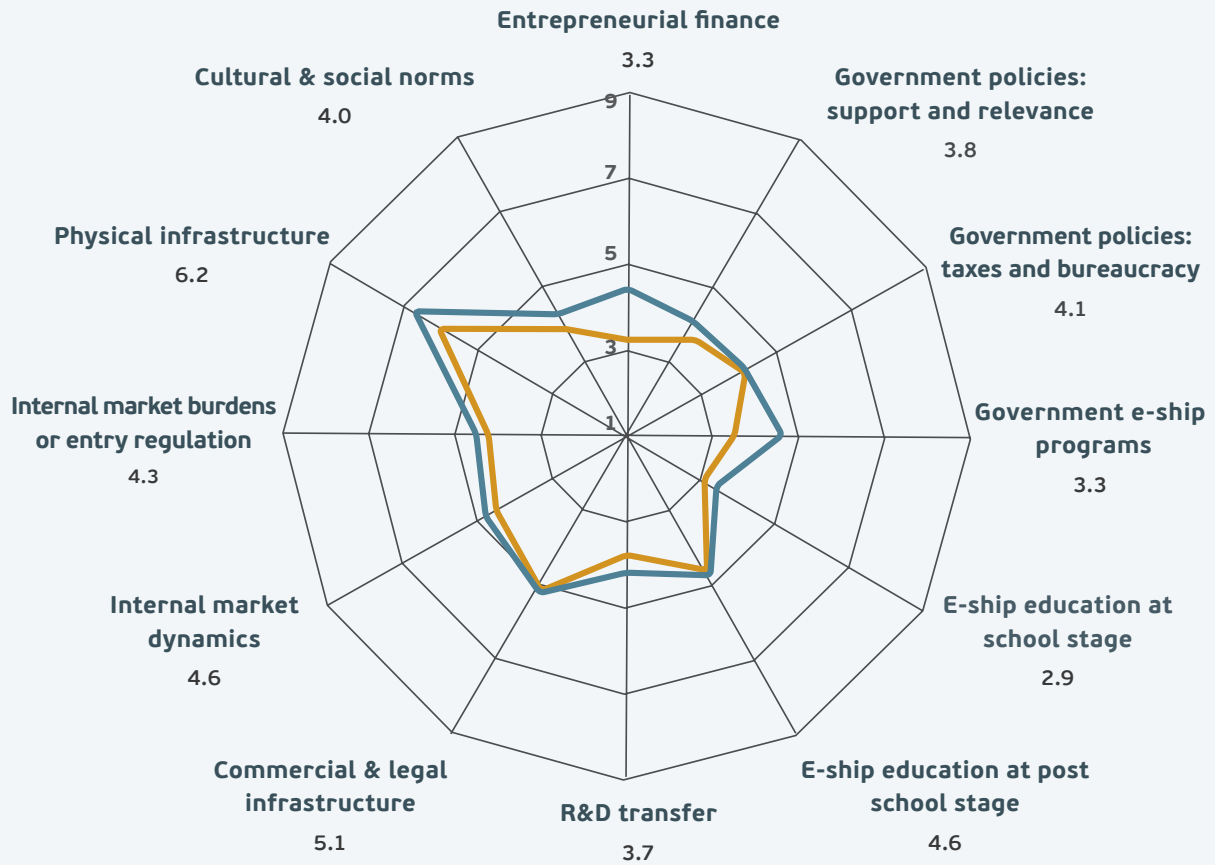
**Table 4.1 – Entrepreneurial framework condition scores 2016**  
(weighed average, scale: 1=highly insufficient, 9=highly sufficient)

	CYPRUS	EUROPE
Physical infrastructure	6.2	6.5
Commercial and legal infrastructure	5.1	4.9
Entrepreneurial education at post-school stage	4.6	4.6
Internal market dynamics	4.6	4.9
Internal market burdens or entry regulation	4.3	4.2
Government policies: taxes and bureaucracy	4.1	4.0
Cultural and social norms	4.0	4.7
Specific governmental support and entrepreneurship as a priority	3.8	4.2
R&D transfer	3.7	3.8
Financial environment for entrepreneurship	3.3	4.4
Government entrepreneurship programs	3.3	4.3
Entrepreneurial education at school stage	2.9	3.1

Figure 4.2 – Entrepreneurial framework conditions scores for Cyprus and Europe<sup>19</sup>

▶ EUROPE ▶ CYPRUS

1 = highly insufficient, 9 = highly sufficient



<sup>19</sup>GEM Global 2016/2017



## 4.1 Strengths and constraints of the entrepreneurial ecosystem in Cyprus

### Commercial and services infrastructure

Cyprus is considered as a center of excellence in the provision of professional services. It comprises a plethora of highly-trained, experienced and multilingual professionals that offer high-quality legal, accounting, auditing, consulting and other types of services at competitive rates. There are more than 2,700 registered advocates and 160 limited liability law firms, 120 accounting firms and 40 partnerships operating in Cyprus, while top international accounting firms established in Cyprus provide services<sup>20</sup>. The strong financial and banking sector in Cyprus is aligned with legislation adopting international best practices and has a simplified, effective and transparent tax system. The NES results also support this viewpoint. In particular, the national experts consider that the quantity of subcontractors, suppliers and consultants is adequate to support new and growing firms (5 out of 9). The high quality of commercial and services infrastructure in Cyprus makes it is easy for entrepreneurs to access good professional legal and accounting services (6.4 out of 9), good banking services (5.6 out of 9) and good subcontractors, suppliers and consultants (4.9 out of 9). Table 4.2 includes the questions included in NES for measuring the commercial and services infrastructure condition.

**Table 4.2 – Commercial and services infrastructure in Cyprus and Europe**  
(scale: 1=completely false, 9=completely true)

COMMERCIAL AND SERVICES INFRASTRUCTURE	CYPRUS	EUROPE
There are enough subcontractors, suppliers, and consultants to support new and growing firms.	5.1	5.9
New and growing firms can afford the cost of using subcontractors, suppliers, and consultants.	3.5	4.0
It is easy for new and growing firms to get good subcontractors, suppliers, and consultants.	4.9	4.7
It is easy for new and growing firms to get good, professional legal and accounting services.	6.3	5.9
It is easy for new and growing firms to get good banking services (checking accounts, foreign exchange transactions, letters of credit, and the like).	5.7	5.8

<sup>20</sup> Source: <http://www.investcyprus.org.cy/images/media/assetfile/02538%20-%20CIPA%20-%20Investors%20Guide.pdf>

## Physical Infrastructures

Cyprus has a constantly evolving system of advanced and modern infrastructure, including sophisticated road, air and sea transport solutions and services<sup>21</sup>. Access to good quality and affordable physical infrastructures is an important factor contributing to the viability of new businesses. Physical infrastructure is considered as one of the most important strengths of the entrepreneurial ecosystem in Cyprus. National experts consider that the physical infrastructure of Cyprus such as roads, utilities, communications, waste disposal, provides very good support for new entrepreneurial endeavors (5.9 out of 9). New businesses are able to quickly gain good access to communications (telephone, internet, etc (7.2 out of 9) and good access to utilities (gas, water, electricity, sewer) (7.1 out of 9) and most of the national experts consider the costs associated to these services as affordable for new or growing businesses. Table 4.3 provides more information on the ratings provided by national experts in Cyprus and in Europe, regarding the questions on physical infrastructure.

**Table 4.3 – Physical Infrastructure<sup>22</sup>**  
(scale: 1=completely false, 9=completely true)

PHYSICAL INFRASTRUCTURE	CYPRUS	EUROPE
The physical infrastructure (roads, utilities, communications, water disposal) provides good support for new and growing firms.	5.9	6.2
It is not too expensive for a new or growing firm to get good access to communications (phone, Internet, etc.).	5.0	7.0
A new or growing firm can get good access to communications (telephone, internet, etc.) in about a week.	7.2	7.0
New and growing firms can afford the cost of basic utilities (gas, water, electricity, sewer).	5.3	6.6
New or growing firms can get good access to utilities (gas, water, electricity, sewer) in about a month.	7.1	6.7

<sup>21</sup>Source: <http://www.investcyprus.org.cy/en/why-cyprus/top-reasons-to-invest-in-cyprus/well-developed-infrastructure>

<sup>22</sup>Item average values are not weighted

## Government policies

Government policies are important since they are able to shape, foster and boost entrepreneurial activity. Government policies in Cyprus, are at least to some extent, supportive for new businesses. Cyprus offers an attractive, transparent and stable tax regime and one of the lowest corporate income tax rates in the European Union (12.5%). From a taxation perspective, Cyprus constitutes a reliable and affordable host for new businesses. Experts participating in NES consider that the government supports entrepreneurial endeavors from this perspective as taxes are not a burden for the new and growing firms (6.1 out of 9) and taxes and other government regulations are applied to new and growing firms in a predictable and consistent way (5.3 out of 9). Table 4.4 enlists all the questions employed for measuring government policies condition in the NES, in Cyprus and in Europe.

**Table 4.4 – Government Policies<sup>22</sup>**  
(scale: 1=completely false, 9=completely true)

GOVERNMENT POLICIES	CYPRUS	EUROPE
Government policies (e.g., public procurement) consistently favor new firms.	3.4	3.1
The support for new and growing firms is a high priority for policy at the national government level.	4.4	4.5
The support for new and growing firms is a high priority for policy at the local government level.	3.4	4.3
New firms can get most of the required permits and licenses in about a week.	1.9	3.6
The amount of taxes is NOT a burden for new and growing firms.	6.1	4.0
Taxes and other government regulations are applied to new and growing firms in a predictable and consistent way.	5.3	4.4
Coping with government bureaucracy, regulations, and licensing requirements is not unduly difficult for new and growing firms.	3.2	3.9

Despite the competitive tax regime, experts consider that government processes and procedures often constraint entrepreneurial activity. The process for setting up a business in Cyprus (Table 4.5), currently includes five procedures and requires approximately seven to twelve working days. Experts view that a lot of effort is required by new and growing firms to deal with government bureaucracy, regulations, and licensing requirements (3.2 out of 9). As one of the experts highlighted in the commentary open-ended questions: “the bureaucratic procedures and high administrative burden of a number of key public services” are to some extent inhibiting new entrepreneurial endeavors.

**Table 4.5 – Procedures stages and time to complete for setting up a business in Cyprus<sup>23</sup>**

PROCEDURE	TIME TO COMPLETE
1. Reserve the company name and get initial approval from the Registrar of Companies	1-5 days
2. Prepare the Memorandum and Articles of association by a Lawyer	1-2 days
3. Submit documents at the Companies Section of the Department of Registrar of Companies and Official Receiver	2 days
4. Register at the Tax Department for Tax and VAT and obtain a Tax Identification Number	2 days
5. Register for Social Contribution at the Ministry of Labor, Welfare and Social Insurance (simultaneous with previous procedure)	1 day

<sup>23</sup> Information provided by Dr. Eleni-Tatiani Synodinou, Associate Professor, Faculty of Economics and Management, University of Cyprus.

## Entrepreneurial education and training

Cyprus is considered one of the most educated nations within the European Union. Cyprus ranks second in the EU in terms of proportion of the population with tertiary education as 54.6% of the 30 to 34 age-group hold at least a bachelor's degree<sup>24</sup>. The results of the Adult Population Survey discussed in Section 3.6, showed a correlation between the education level and the level of TEA in Cyprus. Entrepreneurial activity in Cyprus is most likely to be initiated by individuals that hold post-secondary or university education as education enhances the skills, knowledge and influences confidence of potential entrepreneurs. Early-stage, primary or secondary education can potentially contribute, to a large extent, in developing skills such as opportunity identification, creativity, risk-taking, critical thinking and teamwork. These skills are vital for individuals who will later on choose to pursue entrepreneurial endeavors. Early-stage education may also cultivate the interest of youngsters in entrepreneurship as viable career choice. According to 2016 GEM Youth Report<sup>25</sup>, developing empowered, critical, mindful and competent youngsters can largely contribute to the enhancement of entrepreneurial activity.

Table 4.6 reflects on the perceptions of national experts on school and post-school education with respect to entrepreneurship in Cyprus and in Europe. The experts consider that post-school education in Cyprus, to some extent provides the necessary skills and competences for entrepreneurs. In particular, they consider that post-school business and management education (rated 5,5 out of 9) as well as vocational, professional and continuing education (rated 5 out of 9), provide relatively good and adequate preparation to individuals for proceeding with entrepreneurial endeavors and growing new firms. However, experts consider that school-level education on entrepreneurship in Cyprus is still insufficient. Reflecting on primary and secondary education in Cyprus, experts consider that it does not include activities or courses that encourage creativity, self-sufficiency and personal initiative (rated 3 out of 9), it does not provide adequate instruction in market economic principles (rated 3 out of 9), and does not provide adequate attention to entrepreneurship and new firm creation (rated 3 out of 9). Overall, it could be concluded that the primary and secondary education in Cyprus does not provide adequate orientation towards entrepreneurship and puts limited emphasis on the development of the personal characteristics (e.g. take initiative) that are necessary for proceeding with entrepreneurial endeavors. As one of the experts noted, in Cyprus "education curriculum is based and focuses on knowledge building, rather than on creativity".

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<sup>24</sup>Europe 2020 education indicators in 2015, Eurostat, 27 April, 2016

<sup>25</sup>Global Education Monitoring Report 2016, Unesco

**Table 4.6 – Entrepreneurial education<sup>22</sup>**  
 (Scale: 1=completely false, 9=completely true)

	CYPRUS	EUROPE
<b>SCHOOL EDUCATION</b>		
Teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative	3.00	3.6
Teaching in primary and secondary education provides adequate instruction in market economic principles	3.00	3.3
Teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation	2.00	2.9
<b>POST-SCHOOL EDUCATION</b>		
Colleges and universities provide good and adequate preparation for starting up and growing new firms	4.50	4.3
The level of business and management education provide good and adequate preparation for starting up and growing new firms	5.50	4.9
The vocational, professional, and continuing education systems provide good and adequate preparation for starting up and growing new firms	5.00	4.6

## Government entrepreneurship programs

The views of the experts on government programs prompt for a “one-stop shop” agency that will include the necessary infrastructure and human resources to support and guide new and growing businesses. Although the Ministry of Commerce, Energy, Industry and Tourism has set up “The Department of One Stop-Shop”<sup>26</sup> which provides services that accelerate and simplify the process of setting up a business, national experts highlight the need for a more efficient and effective “one-stop shop” agency. More specifically, experts consider that there is still lack of a “one-stop shop” service that would provide a wide range of government assistance for new and growing enterprises and consider this issue as an important constraint for the entrepreneurial ecosystem in Cyprus (2 out of 9). They also consider that there is limited help and assistance provided by government programs to new and growing businesses to find what they need (2 out of 9). Moreover, they also report that the support provided to individuals by science parks and business incubators is ineffective (3.1 out of 9) and consider that the capacity of government agencies and the Human Resources thereof provide effective support for new and growing

<sup>26</sup> Statement released by the Unit of Administrative Reform of the Presidency, formulated, in close cooperation with the Ministry of Energy, Commerce, Industry and Tourism (MECIT), and endorsed by the Council of Ministers on December 14th, 2015.

firms is limited (3.2 out of 9). Table 4.7 includes the questions employed for measuring government entrepreneurship programs condition with respect to the relevant mean values and reflects on the item average values for Cyprus and European regional area.

**Table 4.7 – Government entrepreneurship programs<sup>22</sup>**  
(scale: 1=completely false, 9=completely true)

GOVERNMENT ENTREPRENEURSHIP PROGRAMS	CYPRUS	EUROPE
A wide range of government assistance for new and growing firms can be obtained through contact with a single agency.	2.8	4.1
Science parks and business incubators provide effective support for new and growing firms.	3.1	5.3
There are an adequate number of government programs for new and growing businesses.	3.9	4.9
The people working for government agencies are competent and effective in supporting new and growing firms.	3.2	4.4
Almost anyone who needs help from a government program for a new or growing business can find what they need.	3.1	4.1
Government programs aimed at supporting new and growing firms are effective.	3.1	4.2

## Access to finance

Obtaining funding is particularly challenging for new and growing businesses. Easing and supporting access to finance is particularly important for the development of new firms and the growth of the economy. The Executive Opinion Survey 2016 of the World Economic Forum notes identifies access to finance, as one of the most problematic factors for doing business in Cyprus<sup>27</sup>. This is aligned with the results of the NES, as most of the experts consider that overall the current financial environment in Cyprus is the third most important obstacle for entrepreneurial activity (Table 4.1). In particular, they consider that new and growing businesses are able to access relatively sufficient financial support by informal investors such as family members, friends or colleagues (4,8 out of 9). Government also provides some kind of financial support

<sup>27</sup>The Global Competitiveness Report 2016-2017, World Economic Forum.

mainly through subsidies such as the “Support Aid for Young Entrepreneurs”<sup>28</sup>. Despite the access to finance fostered through informal investors and government policies, there is a lack of competent fund managers and proficient formal investors in the Cypriot ecosystem. National experts consider that the ecosystem has insufficient access to finance provided by venture capitalists (2.3 out of 9), initial public offerings (IPOs) (2.3 out of 9) and private lenders’ funding (crowdfunding) (2.1 out of 9). Although the majority of the respondents in Cyprus consider limited access to finance a weakness of the ecosystem in Cyprus, we note that these findings are not unique to Cyprus, but are aligned with the weaknesses experienced by most immature entrepreneurial ecosystems across the world. Table 4.8 summarizes the mean score for the questions measuring access to finance.

**Table 4.8 – Access to finance<sup>22</sup>**  
(scale: 1=completely false, 9=completely true)

ACCESS TO FINANCE	CYPRUS	EUROPE
There is sufficient equity funding available for new and growing firms.	3.3	4.6
There is sufficient debt funding available for new and growing firms.	3.5	4.7
There is sufficient government subsidies available for new and growing firms.	4.8	5.0
There is sufficient funding available from informal investors (family, friends and colleagues) who are private individuals (other than founders) for new and growing firms.	4.4	4.8
There is sufficient professional Business Angels funding available for new and growing firms	4.0	4.5
There is sufficient venture capitalist funding available for new and growing firms.	2.3	4.5
There is sufficient funding available through initial public offerings (IPOs) for new and growing firms.	2.3	3.5
There is sufficient private lenders’ funding (crowdfunding) available for new and growing firms	2.1	4.3

<sup>28</sup>Support Scheme for Youth Entrepreneurship, Ministry of Energy, Commerce, Industry and Tourism.



## Cultural and social norms

The results of the Adult Population Survey (APS) discussed in Section 3, demonstrate that societal values about entrepreneurship in Cyprus are supportive as the majority of the adult population in Cyprus considers entrepreneurship to be a good career choice and views that entrepreneurs are regarded with high status (above European average values to a large extent - see Table 3.1). These results are partly aligned with the views of national experts on the entrepreneurship ecosystem in Cyprus. National experts consider that the national culture is supportive, but still low, for successful entrepreneurs who have achieved through own personal efforts (4.6 out of 9). However, they perceive that the national culture is not as supportive when it comes to earlier stages of entrepreneurial activity. In particular, they consider that there is very low propensity to entrepreneurial risk-taking (3.2 out of 9) and that there is limited encouragement for entrepreneurial creativity and innovativeness (3.6 out of 9). In the commentary, open-ended questions, some of the experts associate the low propensity of entrepreneurial risk-taking to the fear of failure and the orientation towards safe employment. These factors have a negative influence on entrepreneurial culture in Cyprus and make individuals reluctant to follow an entrepreneurial career path. Table 4.9 summarizes the average values for each item related to cultural and social norms for Cyprus and Europe.

**Table 4.9 – Cultural and social norms<sup>22</sup>**  
(scale: 1=completely false, 9=completely true)

CULTURAL AND SOCIAL NORMS	CYPRUS	EUROPE
The national culture is highly supportive of individual success achieved through own personal efforts.	4.6	4.4
The national culture emphasizes self-sufficiency, autonomy, and personal initiative.	4.5	4.4
The national culture encourages entrepreneurial risk-taking.	3.2	3.5
The national culture encourages creativity and innovativeness.	3.6	4.6
The national culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life.	4.2	4.3

## Internal market dynamics and Internal market burdens or entry regulation

To measure market openness, GEM considers the internal market dynamics and internal market burdens or entry regulation in each economy participating in GEM. In Cyprus, national experts provided average ratings for the adequacy of internal market dynamics (4.6 out of 9) and internal market burdens or entry regulation (4.3 out of 9). In particular, national experts consider that the change in markets of consumer goods and services is neither dramatic nor mild (4.6 out of 9). They view that it is slightly difficult for new and growing firms to enter new markets (4 out of 9) and that the cost of market entry is likely to be not affordable by new and growing firms (3.6 out of 9). Table 4.10 summarizes the questions employed for measuring internal market dynamics and internal market burdens or entry regulation.

**Table 4.10 – Market Openness<sup>22</sup>**  
(scale: 1=completely false, 9=completely true)

MARKET OPENNESS	CYPRUS	EUROPE
The markets for consumer goods and services change dramatically from year to year.	4.6	5.0
The markets for business-to-business goods and services change dramatically from year to year.	4.6	4.8
New and growing firms can easily enter new markets.	4.0	4.5
New and growing firms can afford the cost of market entry.	3.6	4.0
New and growing firms can enter markets without being unfairly blocked by established firms.	4.2	4.5
The anti-trust legislation is effective and well enforced.	4.8	4.8

## Research and Development (R&D) Transfer

Beyond the communication of knowledge and the diffusion of research results through within academia (e.g. scientific publications, conference presentations, mobility of research staff etc.), it is equally important to seek for the transfer of the research results to the industry and the exploitation and commercialization of the research results were possible. The transfer of research and development results from academia to industry in Cyprus as well as the commercialization

of the research results is low – national experts rated R&D transfer as 3.7 out of 9. More specifically, national experts consider that there is inefficient communication of new technology, science and other knowledge from universities and public research centers to new and growing firms (3.1 out of 9), despite the fact that new and growing firms can afford the use of the latest technology (5 out of 9). They also view that there is limited support available for engineers and scientists to have their ideas commercialized through new and growing firms (3 out of 9). Table 4.11, includes the questions employed for measuring research and development transfer with respect to the relevant ratings for Cyprus and Europe.

**Table 4.11 – Research and Development Transfer<sup>22</sup>**  
(scale: 1=completely false, 9=completely true)

RESEARCH AND DEVELOPMENT TRANSFER		
New technology, science, and other knowledge are efficiently transferred from universities and public research centers to new and growing firms.	3.1	4.0
New and growing firms have just as much access to new research and technology as large, established firms.	3.2	3.8
New and growing firms can afford the latest technology.	5.0	3.8
There are adequate government subsidies for new and growing firms to acquire new technology.	4.0	4.2
The science and technology base efficiently supports the creation of world-class new technology-based ventures in at least one area.	3.6	4.8
There is good support available for engineers and scientists to have their ideas commercialized through new and growing firms.	3.0	4.3

This Section provided an overview of the National Expert Survey (NES) results and outlined the strengths and burdens of the entrepreneurial ecosystem in Cyprus. Among others, it revealed that physical infrastructure and commercial and legal infrastructure are the most important strengths of the entrepreneurial ecosystem in Cyprus. It also highlighted that the strongest burdens of the ecosystem are the entrepreneurial education provided at school stage, the government entrepreneurship programs and the lack of access to finance for startups. The results extracted throughout the NES as well as the results of the APS provide suggestions for policy making actions which are discussed in Section 5 of this report.

## 5 EXISTING POLICIES AND FUTURE POLICY RECOMENDATIONS

After the financial recession in Cyprus, the government adopted the “National Policy Statement for the Entrepreneurial Ecosystem”<sup>29</sup> which is a multi-annual plan that recognizes entrepreneurship and innovation as the driving forces of economic growth, able to create a more sustainable and competitive business environment and new jobs. In this regard, the Cypriot government did not only highlight entrepreneurship to be an area of national economic interest, but also as a viable career path with positive socio-economic impacts, something that was evident in the results of the GEM Cyprus 2016/2017 studies presented earlier in this report. In fact the policy declaration came to support and boost the existing, though growing entrepreneurial structures and ecosystem that was driven by motivated individuals in universities and non-governmental organizations. As a result, governmental support was deemed essential to provide a holistic and orchestrated approach towards entrepreneurship while involving other crucial actors in the game. In fact, after the adoption of the policy declaration, a number of noteworthy activities took place during the last couple of years which are described below.

### Creating and developing an entrepreneurial culture among the young generation

A number of ministries have embarked on the journey to promote entrepreneurship in their own areas of operation in order to boost entrepreneurial culture, especially among the young generation. For instance, the Ministry of Education made a commitment to raise awareness of what entrepreneurship is, build creativity, critical thinking and other related skills and competencies to students of all ages. Students have also been given the opportunity to participate in entrepreneurial activities and competitions that are supported by both governmental and non-governmental organizations and networks such as the “Digital Entrepreneurship Competition”, “Student Enterprise”, “Spending Smart” program in cooperation with the “Junior Achievement Cyprus” and the Association of Cyprus Banks. For instance, under the latter program students were given the opportunity to develop and run their own business from idea to operation and closure of a company. In addition, teachers of secondary education received training aimed at promoting the entrepreneurial culture and related action within the school environment.

Another target group, for promoting entrepreneurship is soldiers, most of them between the age of 18-20 years. Soldiers had the opportunity to attend a free series of entrepreneurship lectures (e.g., Innovation and Entrepreneurship, guidelines on how to create, organize and operate a modern enterprise and the opportunity to participate in Competitions during their two years of military service.

A noteworthy effort is spotted within universities where centers dedicated towards entrepreneurship are now being established and have started undertaking interesting activities promoting education in entrepreneurship. For example, they offer certificates and minor degrees in entrepreneurship, workshops and seminars related to creativity, innovation, and entrepreneurship, and other activities seeking to increase awareness on this topics within the student population.

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<sup>29</sup>Statement released by the Unit of Administrative Reform of the Presidency, formulated, in close cooperation with the Ministry of Energy, Commerce, Industry and Tourism (MECIT), and endorsed by the Council of Ministers on December 14th, 2015

These centers also encourage and support students and researchers to participate in national and European competitions and summer entrepreneurship programs, trying to attract a wider audience of students and young scientists to new or older activities, national or international, such as the “Cyprus Entrepreneurship Competition,” the “European Innovation Academy” Summer School, the Start Up Weekend (Cyprus) and “ClimateLaunchpad” among others. Moreover, Universities have embarked on an initiative to create maker spaces aimed to boost creativity, exploration and learning among students that share an interest to bring ideas to life. One of the public universities of the country has already established its own makerspace in Limassol while another one is in the developing stage aiming to launch its maker space within 2017 in Nicosia.

## Improving the business environment and changing the legal framework

Actions also took place to modernize the legal system that surrounds the establishment and operation of businesses in Cyprus. One of the main activities was to simplify the legal procedures required to register a company, simplify and facilitate the procedure to submit VAT and income tax documents. Along with this, a more attractive tax income framework was adopted in order to provide tax incentives to individuals to invest in innovative and start-up companies. Another activity was the development of the SME Test to assess the impact of legislative measures taken per type of business in order to avoid imposing additional burdens especially to micro businesses and SMEs. This new revised framework for Impact Assessments was approved by the Council of Ministers to be implemented as of January 1st 2017.

Two of the major aspects where the Cypriot Business Environment is lagging are e-government and e-commerce. The relevant Cypriot ministries initiated an effort to create a digital platform in order to provide information for funding Schemes related to companies (e.g., available funding, procedures to submit applications, related legal issues), so that they can easily spot available funding opportunities. At the same time, the government has taken up actions to harmonize the Cypriot legal framework with the European one in terms of e-commerce and to inform the interested parties accordingly. This framework targets to create a reliable system for businesses to carry out e-commerce activities and to protect consumers’ rights. Another important amendment of the Cypriot Law was the one of the income tax law of the intellectual property regime (the IP box regime) (exploitation and/or sale of intangible assets) by the Cypriot Parliament. The amendment targeted the alignment of the Cypriot IP regime according to the relevant recommendations of the Organization for Economic Co-operation and Development (OECD)<sup>30</sup> and new EU rules.

Another notable initiative was the “Startup Visa program/scheme” aimed to attract entrepreneurs from third countries<sup>31</sup>, to create and register a start up in Cyprus. The pilot program is planned to operate within 2017. The aim of the “Cyprus Startup Visa” scheme is to provide the opportunity to talented entrepreneurs from third countries to develop and operate a startup of high growth potential in Cyprus. The Startup visa is an interesting scheme that comprises of four steps: submitting an application with a business plan via email by the talented entrepreneurs (individuals or teams) which will be evaluated within five weeks. The successfully applicants should apply for entry visa which will be granted within three weeks and then to submit application for

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<sup>30</sup>Action 5 of the Base Erosion and Profit Shifting (BEPS) plan on Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance.

<sup>31</sup>Countries outside the European Union (EU) and outside the European Economic Area (EEA).

work and residence permit. After the positive reply from the relevant authority, the “idea/ startup” should carry out the entrepreneurial activity within two years’ time to be considered eligible.

Last but not least, one of the most important impediments for innovation in the Cypriot legal framework is the exclusion of public universities from creating spin-off companies. This constraint impedes the commercial uptake of university research, even though public research universities of Cyprus are the places where a great deal of world-class research activities occur, and which attract and develop the talent and the knowledge required to build or sustain innovative companies with an international outlook.

To address this legal obstacle and align the law of public universities with best practices applied in advanced economies of Europe, North America and Asia, the three public universities of Cyprus worked in collaboration with government stakeholders and came up with a “framework” of proposed amendments to the law governing the public universities in order to allow them to establish private legal entities with private inventors, investors and entrepreneurs. In parallel to this effort, the Research Promotion Foundation of Cyprus has developed an initial business plan to establish and operate a Technology Transfer Office to develop know-how and support services for the academic and research institutions, in order to support them in exploiting their research results and in securing their intellectual property rights.

### **National and european funding-competitive schemes**

A number of funding schemes are now available to new companies and SMEs. The Research Promotion Foundation announced in 2016 its new funding program for 2016-2020, “RESTART”, that is open to all public and private entities. It is multi-annual framework of programmes that supports Research, Technological Development and Innovation in Cyprus. This framework was built on Priority Sectors identified through the Smart Specialization Strategy for Cyprus. The Schemes are co-funded by national and European resources. A number of calls were open or are planned to open soon and are dedicated towards providing funding to create startups, to address and provide funding to protect intellectual property rights, to support SMEs R&D activities, consultation activities and international networking ones. It should be noted that the Ministry of Energy, Commerce, Industry and Tourism is running for several years now a funding scheme specifically designed to provide assistance to young and women entrepreneurs to create their own new businesses.

In relation to the above and in an attempt to motivate private legal entities to submit applications for funding, apart from the informative digital platform mentioned above, an agreement was signed among Cypriot Commercial Banks, the Ministry of Energy, Commerce, Industry and Tourism, and the Directorate General for European Programmes, Coordination and Development to achieve the commitment of banks to fund companies that were approved for funding in order to cover their participation cost in their funding schemes of interest.

### **Policy recommendations**

Despite noteworthy efforts and initiatives planned or implemented, additional actions are required to elevate the level and impact of the entrepreneurial activity in Cyprus. As retrieved throughout both the Adult Population Survey (APS) and the National Expert Survey (NES),

although there is high rate of entrepreneurial activity in Cyprus, certain environmental, legal and economic conditions delay or hinder entrepreneurial activity and its impact. In this respect, this report, provides a number of recommendations for policy and practice in addition to the aforementioned governmental commitments found in the National Policy Statement:

## Education

Despite recent policy initiatives to promote an entrepreneurial culture among the youth, GEM Cyprus 2016/2017 results prompt for the need to take additional actions for entrepreneurial education. In particular, the results of APS and NES show that, although a large number of individuals with university-level education are involved in entrepreneurial activity, there is a lack of entrepreneurial education. Entrepreneurial education may be improved through the:

- Continuous and systematic training of the educators in creative and innovative thinking and in embedding the teaching of innovation, creativity and entrepreneurship in different course topics.
- Development and strengthening of national talent in research and innovation, in fields like Science, Technology, Engineering and Mathematics, through an increase of funds for basic and applied research, advanced postgraduate studies, mobility of researchers, and international collaboration with world-leaders in innovation and research.
- Enhancement of the school-level educational programs with additional courses and events that will cultivate entrepreneurial mindset of the pupils and will help them to develop entrepreneurial, creativity, critical thinking and risk-taking skills. This should be implemented alongside with the development of a training strategy for the educators.
- Enrichment of all University level curriculums with courses relevant to creativity and critical thinking, entrepreneurship, design thinking, and other relevant soft skills, in line with international trends and requirements arising by the fourth industrial revolution.
- Development of life-long educational programs targeting graduates of different educational levels and backgrounds. Such programs should focus on developing the necessary soft-skills, technical and digital literacy skills of adults.
- Enhancement of the education at all levels with courses and case studies emphasizing on female and senior entrepreneurship.

## Government processes

As highlighted by the results of the NES, the high administrative burden of a number of key public services is currently hindering entrepreneurial activity. Bureaucracy associated to administrative procedures is slowing down and hindering entrepreneurial activity. Despite the planned and implemented actions of the National Policy, the GEM study provides additional suggestions for reforms on government processes:

- Further acceleration and improvement of the services provided to innovative, high-tech and startup companies, such as the procedures required for registering a company and the capability to easily attract foreign talent.
- Enrichment of the services to be accelerated with additional services related to new and growing firms such as the procedures required for registering patents.
- Enhancement of the services provided by the “One-Stop Shop” service of the Ministry of Commerce, Energy, Industry and Tourism, and wider dissemination of the service.
- Implementation and deployment of electronic government, open data standards and services, and other initiatives to facilitate the automation of administrative transactions, to reduce administrative burden, to ease and speed up administrative processes, to foster transparency and to facilitate the development of novel business opportunities arising from the modernization of government operations.
- Designing mechanisms that will train public servants in innovation and entrepreneurial thinking, and enable government units to engage in activities leading to public-service innovations.

## Financial support

The results of the APS show that one of the most important reasons for business discontinuance in Cyprus is the issues in getting finance. These results are aligned with the indications extracted by the NES, denoting that the Financial Environment for Entrepreneurship is one of the entrepreneurial framework conditions that inhibit entrepreneurial activity in Cyprus. This issue was also raised through the open-ended questions included in NES. These results prompt for additional policies that will enhance the existing financial support schemes and improve access to finance for new and growing firms. In particular, the results of the GEM study highlight the need for the:

- Establishment of investment funds to provide pre-seed, early-stage and venture funding required to translate inventions, research results



and innovative ideas into commercial products, services or start-ups. The Government could collaborate with private or institutional investors to establish such funds, for instance by providing matching funds or guarantees.

- Wider dissemination of existing national and EU funding schemes and support provisioning for startups that are interested in applying.
- Introduction of sector-specific funding schemes and extension of existing funding schemes targeted to women in entrepreneurship and firms that develop products with international orientation.
- Urgent legalization and/or promotion of other forms of funding such as venture capital and crowd-funding.

## Business support

Despite the high rate of entrepreneurial activity and entrepreneurial intention in Cyprus, most entrepreneurs in Cyprus do not expect their entrepreneurial activity to have a notable impact in terms of job creation and growth. This prompts for the need to shift the focus of new businesses to innovation, to the use of new technologies and product orientation towards external markets. In addition, the results of the APS indicate that there is a relatively low coverage of successful entrepreneurial activity and show that the ratio of entrepreneurial activity between males and females is disproportional. Alongside these findings, the results of the open-ended questions included in NES indicate that academia and industry should become more interconnected. These results lead to a number of policy making suggestions including the:

- Promotion and boost of the exchange of know-how and the collaboration between academia and industry, based on agile practices from abroad, including platforms that will enable the use of R&D infrastructures and prototyping labs by startups and other stakeholders.
- Enhancement of the university regulations so as to foster the generation of spin-off companies by universities and research centers.
- Establishment of a national team of mentors that will provide advice to startups.
- Provisioning tax incentives for certain types of innovative startups (e.g., start-ups related to social, green entrepreneurship) as well as for companies investing in start-ups.

- Development of tools and mechanisms that will assist start-up companies to extend their networks such as trade missions abroad.
- Stimulation of media attention and coverage for successful entrepreneurs, so as to enhance positive perception towards entrepreneurship and encourage entrepreneurial activity, especially for female entrepreneurs.

## Conclusion

One of the main priorities for 2017 is to deeply analyze the challenges and opportunities of the entrepreneurial ecosystem in Cyprus, through road-mapping activities and developing a holistic framework to monitor the results of this Policy Declaration. This will provide vital input on the specific actions to be taken. That is why the Cypriot government does recognize the value and results of GEM as an input and indicator of the current situation of the entrepreneurial activity in Cyprus. By being part in GEM, we will not only be able, as a country, to track potential improvements and hallmarks for our ecosystem, but also be able to assess Cypriot entrepreneurial activity in comparison to countries of interest.

In 2016, one of the most notable and tangible achievements, was the 21% increase in the number of new companies registered in Cyprus in contrast to a 3% increase in 2015. The majority of the population in Cyprus is highly educated individuals (university graduates)<sup>32</sup>, whereas the island has been recognized as one of the safest places to leave and work. If one adds to the above the world class professional legal, audit and tax services that can be found in the island, Cyprus can be an attractive place for entrepreneurial oriented individuals and teams to establish, operate and grow their business. The entrepreneurial ecosystem is in place and is growing, it is expected that in the years to come, along with the governmental commitment and support, innovation and entrepreneurship, to drive social and economic growth in the island.

The National Policy Statement for the Entrepreneurial Ecosystem<sup>33</sup> provides quantified summary of the targeted actions of the government by 2020. These include: a) to increase the number of businesses established each year by 20%, b) to increase the percentage of viable new businesses by 25% by 2020, c) to increase the number of businesses with high rate of development by 50% each year, d) to increase the number of employees in start-up companies by 10% and in SMEs by 5% by 2020.

GEM Cyprus 2016/2017 was the first step in understanding entrepreneurial activity in Cyprus and deriving comparable data in order to contrast it with other countries. This report also highlighted both the strengths and the burdens of the current entrepreneurial

<sup>32</sup> Eurostat, Educational attainment statistics 2015.

<sup>33</sup> Statement released by the Unit of Administrative Reform of the Presidency, formulated, in close cooperation with the Ministry of Energy, Commerce, Industry and Tourism (MECIT), and endorsed by the Council of Ministers on December 14th, 2015.

environment in Cyprus. The results of the APS and the NES provided a number of policy recommendations for enlarging entrepreneurial activity in Cyprus and elevating its impact on the economy. Improving the entrepreneurial environment in Cyprus is one of the important pillars of the Cyprus Presidency and we envision that this report will contribute towards this direction.

## APPEDIX 1

Table A – Entrepreneurial Activity Type by Region, GEM 2016/2017 – Percentage of Population Aged 18 – 64 years<sup>34</sup>.

Region	Nascent entrepreneurship rate	New business ownership rate	Total Early- stage entrepreneurial activity (TEA)	EEA	Established business ownership rate	Discontinuation of businesses (% of TEA)
Burkina Faso	21.2	13.5	33.5	0.6	28.0	9.4
Cameroon	17.8	10.9	27.6	1.2	15.2	14.9
Egypt	8.2	6.6	14.3	2.0	6.1	17.4
Morocco	1.3	4.3	5.6	0.5	7.5	12.0
South Africa	3.9	3.3	6.9	0.7	2.5	10.0
Regional Average	10.5	7.7	17.6	1.0	11.9	12.7
Australia	8.8	6.2	14.6	9.0	11.3	4.4
China	4.5	6.1	10.3	1.2	7.5	6.4
Georgia	4.6	4.3	8.6	0.5	8.6	11.1
Hong Kong	5.0	4.7	9.4	4.1	6.1	5.0
India	3.9	6.8	10.6	2.5	4.6	26.4
Indonesia	3.9	10.4	14.1	0.7	15.3	2.9
Iran	6.9	6.2	12.8	1.2	11.6	13.3
Israel	7.0	4.5	11.3	7.3	4.0	11.9
Jordan	4.1	4.6	8.2	1.5	2.7	21.2
Kazakhstan	6.9	3.4	10.2	0.7	2.4	3.4
Korea	3.7	3.0	6.7	2.3	6.6	8.2
Lebanon	9.5	12.1	21.2	2.6	20.1	9.2
Malaysia	2.0	2.8	4.7	0.3	4.7	14.6
Qatar	4.3	3.6	7.8	6.4	3.0	14.0
Saudi Arabia	3.7	7.7	11.4	4.7	2.31	3.6
Taiwan	3.6	4.7	8.2	5.7	7.7	10.9
Thailand	5.2	12.6	17.2	1.0	27.5	6.9
Turkey	8.9	7.6	16.1	3.6	9.4	9.5
United Arab Emirates	1.3	4.4	5.7	2.2	1.9	20.7
Regional Average	5.1	6.1	11.0	3.0	8.3	11.2
Argentina	8.9	5.7	14.5	3.1	7.9	10.0
Belize	18.7	10.7	28.8	8.0	5.3	18.8
Brazil	6.2	14.0	19.6	1.5	16.9	5.6
Chile	15.6	9.3	24.2	5.4	8.0	10.1
Colombia	16.3	11.3	27.4	1.2	8.9	8.9
Ecuador	22.4	11.0	31.8	0.7	14.3	11.8

<sup>34</sup> Table retrieved from GEM Report 2016/2017.

Region	Nascent entrepreneurship rate	New business ownership rate	Total Early-stage entrepreneurial activity (TEA)	EEA	Established business ownership rate	Discontinuation of businesses (% of TEA)
El Salvador	8.0	6.7	14.3	1.0	11.5	11.3
<b>Guatemala</b>	<b>12.2</b>	<b>8.6</b>	<b>20.1</b>	<b>1.7</b>	<b>9.1</b>	<b>6.3</b>
Jamaica	4.1	5.8	9.9	0.7	8.2	9.0
<b>Mexico</b>	<b>6.1</b>	<b>3.6</b>	<b>9.6</b>	<b>4.8</b>	<b>7.5</b>	<b>5.9</b>
Panama	8.6	4.7	13.2	0.2	4.4	7.1
<b>Peru</b>	<b>19.9</b>	<b>5.7</b>	<b>25.1</b>	<b>0.8</b>	<b>6.1</b>	<b>8.3</b>
Puerto Rico	8.5	2.0	10.3	1.8	1.6	7.4
<b>Uruguay</b>	<b>10.1</b>	<b>4.2</b>	<b>14.1</b>	<b>2.6</b>	<b>7.4</b>	<b>14.6</b>
Regional Average	11.8	7.4	18.8	2.4	8.4	9.6
<b>Austria</b>	<b>6.0</b>	<b>3.7</b>	<b>9.6</b>	<b>7.3</b>	<b>8.8</b>	<b>11.3</b>
Bulgaria	2.6	2.2	4.8	0.9	6.2	7.3
<b>Croatia</b>	<b>6.1</b>	<b>2.5</b>	<b>8.4</b>	<b>5.3</b>	<b>4.2</b>	<b>4.1</b>
Cyprus	7.6	4.5	12.0	5.6	8.2	4.7
<b>Estonia</b>	<b>11.7</b>	<b>4.8</b>	<b>16.2</b>	<b>6.3</b>	<b>7.8</b>	<b>8.8</b>
Finland	4.3	2.7	6.7	5.6	7.3	2.9
<b>France</b>	<b>3.1</b>	<b>2.3</b>	<b>5.3</b>	<b>3.6</b>	<b>4.3</b>	<b>8.5</b>
Germany	2.9	1.7	4.6	5.1	7.0	4.7
<b>Greece</b>	<b>3.2</b>	<b>2.6</b>	<b>5.7</b>	<b>1.4</b>	<b>14.1</b>	<b>2.8</b>
Hungary	4.8	3.2	7.9	3.0	5.5	3.4
<b>Ireland</b>	<b>7.0</b>	<b>4.4</b>	<b>10.9</b>	<b>6.2</b>	<b>4.4</b>	<b>10.1</b>
Italy	2.3	2.2	4.4	2.1	5.2	4.4
<b>Latvia</b>	<b>9.7</b>	<b>4.9</b>	<b>14.2</b>	<b>4.5</b>	<b>9.5</b>	<b>7.2</b>
Luxembourg	6.4	2.9	9.2	7.2	3.2	12.3
<b>FYROM</b>	<b>3.4</b>	<b>3.1</b>	<b>6.5</b>	<b>1.4</b>	<b>7.2</b>	<b>6.4</b>
Netherlands	5.7	5.4	11.0	7.6	10.2	7.5
<b>Poland</b>	<b>4.6</b>	<b>6.1</b>	<b>10.7</b>	<b>5.2</b>	<b>7.1</b>	<b>9.8</b>
Portugal	4.7	3.7	8.2	2.4	7.1	4.0
<b>Russian Federation</b>	<b>3.2</b>	<b>3.0</b>	<b>6.3</b>	<b>0.7</b>	<b>5.3</b>	<b>6.7</b>
Slovakia	6.4	3.2	9.5	2.2	6.1	12.2
<b>Slovenia</b>	<b>5.1</b>	<b>3.1</b>	<b>8.0</b>	<b>4.7</b>	<b>6.7</b>	<b>5.0</b>
Spain	2.3	2.9	5.2	2.7	6.2	4.4
<b>Sweden</b>	<b>5.8</b>	<b>1.8</b>	<b>7.6</b>	<b>6.1</b>	<b>4.5</b>	<b>10.2</b>
Switzerland	5.1	3.2	8.2	6.1	11.1	4.4
<b>United Kingdom</b>	<b>5.2</b>	<b>3.7</b>	<b>8.8</b>	<b>7.0</b>	<b>6.1</b>	<b>6.3</b>
Regional Average	5.2	3.4	8.4	4.4	6.9	6.8
<b>Canada</b>	<b>10.0</b>	<b>6.9</b>	<b>16.7</b>	<b>5.9</b>	<b>6.8</b>	<b>16.3</b>
USA	8.9	4.0	12.6	7.0	9.2	7.7
Regional Average	9.5	5.5	14.7	6.5	8.0	12.0

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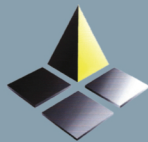
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