



GLOBAL  
ENTREPRENEURSHIP  
MONITOR

# ENTREPRENEURSHIP IN CYPRUS

NATIONAL REPORT 2018/19

## GUEST SECTION

ENTREPRENEURSHIP IN A POST-CONFLICT REGION:  
THE UNIQUE CASE OF CYPRUS, THE STORY OF  
CYPRUSINNO, AND THE PATH FORWARD



University  
of Cyprus



## **AUTHORS**

ENTREPRENEURSHIP IN CYPRUS  
NATIONAL REPORT 2018/19

**POLYVIOU ARIANA**  
**ETEOKLEOUS PANTELITSA**  
**DIKAIAKOS D. MARIOS**  
**KASSINIS I. GEORGE**

GUEST SECTION:  
ENTREPRENEURSHIP IN A POST-CONFLICT REGION:  
THE UNIQUE CASE OF CYPRUS, THE STORY  
OF CYPRUSINNO, AND THE PATH FORWARD

**DOLUAY BURAK BERK**  
**STAVROU W. STEVEN**

# TABLE OF CONTENTS

Forefront from the Chairman of Entrepreneurship Council, University of Cyprus .....	6
Foreword by the Chief Scientist for Research and Innovation.....	7
Message from the Permanent Secretary of the Ministry of Energy, Commerce, Industry and Tourism .....	8
Message from the CEO of PwC.....	9
<b>1. EXECUTIVE SUMMARY .....</b>	<b>10</b>
<b>2. GEM INTRODUCTION AND BACKGROUND.....</b>	<b>13</b>
2.1 Gem's Conceptual Framework .....	14
2.2 Gem Methodology.....	17
<b>3. ENTREPRENEURIAL ACTIVITY IN CYPRUS IN 2018 .....</b>	<b>19</b>
3.1 Societal Values & Perceptions about Entrepreneurship .....	20
3.2 Total Early-Stage Entrepreneurial Activity (Tea).....	22
3.3 Established Business Owners .....	25
3.4 Employee Entrepreneurial Activity .....	25
3.5 Business Discontinuance.....	25
3.6 Profile of Entrepreneurs in Cyprus.....	26
3.7 Entrepreneurial Impact.....	28
<b>4. ENTREPRENEURSHIP ECOSYSTEM .....</b>	<b>34</b>
4.1 Strengths and Limitations of the Entrepreneurial Ecosystem in Cyprus.....	37
<b>5. EXISTING POLICIES AND FUTURE POLICY RECOMMENDATIONS .....</b>	<b>49</b>
<b>6. ENTREPRENEURSHIP IN A POST-CONFLICT REGION: THE UNIQUE CASE OF CYPRUS, THE STORY OF CYPRUSINNO, AND THE PATH FORWARD.....</b>	<b>59</b>

# TABLE OF FIGURES

<b>Figure 2.1:</b> GEM economies by geographic region and economic development level in 2017 .....	15
<b>Figure 2.2:</b> GEM Conceptual Framework .....	16
<b>Figure 2.3:</b> The entrepreneurial process and GEM operational definitions.....	16
<b>Figure 3.1:</b> Societal values about entrepreneurship in Cyprus and Europe .....	20
<b>Figure 3.2:</b> Ease to start a business .....	21
<b>Figure 3.3:</b> Self-perceptions about entrepreneurship in Cyprus and in Europe .....	22
<b>Figure 3.4:</b> Percentage of the population, personally know an entrepreneur .....	22
<b>Figure 3.5:</b> Total Early-stage Entrepreneurship (TEA) in Cyprus and Europe.....	23
<b>Figure 3.6:</b> Total Early-Stage Entrepreneurial Activity (TEA) Index levels.....	23
<b>Figure 3.7:</b> Nascent Entrepreneurs in Cyprus and Europe.....	24
<b>Figure 3.8:</b> New business owners in Cyprus and Europe.....	24
<b>Figure 3.9:</b> Established business ownership in Cyprus and Europe .....	24
<b>Figure 3.10:</b> Employee entrepreneurial activity in Cyprus and Europe.....	25
<b>Figure 3.11:</b> Reasons for business discontinuance in Cyprus and Europe .....	26
<b>Figure 3.12:</b> Total Early-Stage Entrepreneurial Activity (TEA) rates by age group in Cyprus and Europe.....	27
<b>Figure 3.13:</b> Total Early-Stage Entrepreneurial Activity (TEA) rates by gender and motivation in Cyprus and Europe.....	27
<b>Figure 3.14:</b> Percentage of the population that received corresponding education and is involved in Total Early-Stage Entrepreneurial Activity (TEA).....	28
<b>Figure 3.15:</b> Total Early-Stage Entrepreneurial Activity (TEA) and industry sectors in Cyprus and in Europe.....	29
<b>Figure 3.16:</b> Expected new job openings in Cyprus and Europe .....	31
<b>Figure 3.17:</b> Innovation and international orientation of entrepreneurial activity in Cyprus and Europe.....	31
<b>Figure 4.1:</b> Entrepreneurial Framework Conditions (EFCs) .....	35
<b>Figure 4.2:</b> Entrepreneurial framework condition scores for Cyprus and Europe in 2016/2017 .....	36
<b>Figure 4.3:</b> Entrepreneurial framework condition scores for Cyprus and Europe in 2017/2018 .....	36
<b>Figure 4.4:</b> Entrepreneurial framework condition scores for Cyprus and Europe in 2018/2019.....	37

## LIST OF TABLES

<b>Table 4.1:</b> Physical infrastructure .....	38
<b>Table 4.2:</b> Commercial and services infrastructure .....	38
<b>Table 4.3:</b> Government policies .....	39
<b>Table 4.4:</b> Entrepreneurial education .....	40
<b>Table 4.5:</b> Government entrepreneurship program .....	41
<b>Table 4.6:</b> Access to finance .....	41
<b>Table 4.7:</b> Cultural and social norms .....	42
<b>Table 4.8:</b> Internal market dynamics and burdens .....	43
<b>Table 4.9:</b> Research and Development Transfer .....	44
<b>Table 4.10:</b> Family Business and Digital Platforms .....	45
<b>Table A:</b> Entrepreneurial Activity Type per Economy, GEM 2018/2019 .....	55

## FOREFRONT FROM THE CHAIRMAN OF ENTREPRENEURSHIP COUNCIL, UNIVERSITY OF CYPRUS

We are delighted at the publication, for the third consecutive year, of the National Report for Entrepreneurship, by the Centre for Entrepreneurship, University of Cyprus, with the invaluable support and sponsorship of the Ministry of Energy, Commerce, and Industry. Promoting an entrepreneurial culture within and outside the University of Cyprus and contributing in the creation of a sustainable entrepreneurial ecosystem in Cyprus, represents the founding mission of the Centre for Entrepreneurship. Participating in the Global Entrepreneurship Monitor (GEM) study puts Cyprus on the worldwide map of entrepreneurship while it also fulfills one of the goals of the National Statement for Entrepreneurship.

The publication of a national report is part of the obligations of the participation of each country to the GEM consortium. It is the outcome of the completion of two surveys taking place in Cyprus each year (i.e. Adult Population Survey and National Expert survey) under the guidance and support of the GEM Data Team. The report is also presented to the GEM National Advisory Board by GEM Cyprus National Team before any publication takes place, so as to receive comments and to advance its content.

Our participation in GEM provides us with vital results, mapping the current state of entrepreneurship in Cyprus, while enabling us to compare it with our previous

performance as well as with other countries in Europe and across the world. The ultimate aim is to guide national policy, and drive changes in the entrepreneurial ecosystem in order to lead the way forward for a brighter future of entrepreneurship in the island.

Along these lines, this year's special section is devoted to presenting an island-wide effort to combine entrepreneurial actions and skills so as to outline the potential for building meaningful and fruitful collaborations. It presents the efforts of CyprusInno, a digital platform targeting to connect Cypriot and other Cyprus-based entrepreneurs, startups, advisors, innovators, and investors through a number of live and online activities and events.

I am confident that this report will provide readers with substantial knowledge regarding the characteristics and state of the Cypriot entrepreneurial ecosystem. Special thanks goes to PwC Cyprus due to its commitment to sponsor the dissemination of National GEM Reports for the years to come, and to the former Cyprus Cooperative Bank, which has funded part of the activities taken place to complete Cyprus participation to GEM for 2018/2019.

**Yiorgos Chrysanthou**

*Professor  
Chairman (2018-to date)  
Entrepreneurship Council*

## FOREWORD BY THE CHIEF SCIENTIST FOR RESEARCH AND INNOVATION

I would like to warmly welcome the 3rd edition of the GEM Report and congratulate the Centre for Entrepreneurship of the University of Cyprus and the authors for providing an insightful overview of the changing dynamics of the Cyprus' entrepreneurial ecosystem.

The use of a comprehensive set of indicators, including attitudes of our society towards entrepreneurship, the characteristics, motivations and ambitions of our entrepreneurs, and the quality and conditions of our national entrepreneurial ecosystem establishes GEM as a solid base for evidence-based policy making on entrepreneurship. The results of the report facilitate the identification of early trends and foster their comparison with identical metrics at European level, thus enabling targeted action and timely interventions.

Highlighting the positive findings of this year's report, I stand on the improving societal perceptions towards entrepreneurship, in-line with increased attention by the society and the media and expected impact of entrepreneurial activity with respect to the creation of new job positions.

Regarding the strengths of our ecosystem, I stand at the entrepreneurial education at post-school level, which has notably improved this year and is identified as a strength of our ecosystem. An urging imperative, however, remains the need to improve entrepreneurial education at school-level, within a broader collaborative and integrated approach towards an education system that promotes creativity, innovation and skills required to build our entrepreneurial workforce of the 21st century.

At the same time, we need to shift further attention to enhance our population's confidence with respect to the capabilities to initiate entrepreneurial activity and to address fear of failure, remaining at remarkably high levels and having a direct impact on new, early-stage and gender-balanced entrepreneurial activity.

New developments in our national system for research and innovation (R&I) are taking place since late 2018, including the introduction of a new integrated governance system for R&I and the adoption of "Innovate Cyprus" - a new strategy framework for R&I (2019-2023) which sets bold and ambitious objectives, aiming to address the challenges of our national ecosystem for research and innovative entrepreneurship. This multilevel effort has as a fundamental objective to expand the productive base of our economy through knowledge-intensive sectors thus supporting sustainability in new and existing entrepreneurial ventures.

Having adopted an evidence-based approach to policy making through the new strategy framework, the national GEM Report will be a valuable tool for gaining deeper and better understanding of the dynamics of the Cyprus entrepreneurial ecosystem and formulating effective policy measures.

Taking into consideration the medium to longer term nature of this public intervention, we look forward for working together in a well-orchestrated manner for further improvement in national entrepreneurial performance reflected in the following years' GEM report.

**Kyriacos Kokkinos**

*Chief Scientist for Research and Innovation  
Republic of Cyprus*

## MESSAGE FROM THE PERMANENT SECRETARY OF THE MINISTRY OF ENERGY, COMMERCE AND INDUSTRY

This is the 3rd GEM report for Cyprus and I am really satisfied about the results. According to this GEM report societal perceptions towards entrepreneurship have improved and a larger part of the population perceives that high status is associated to successful entrepreneurs.

The Cyprus Government recognizes entrepreneurship among the main pillars towards job creation and economic growth. At the same time the development of a new business activity based on knowledge, technological upgrading and innovation contributes to a strong and competitive economy.

At this point of time, while Cyprus is moving out the financial recession, the main challenge of the Government is to further enhance the entrepreneurial ecosystem so as to provide favorable conditions for a successful and

comprehensive development of entrepreneurial activities. Towards this GEM results and suggestions are more than valuable.

The Government will evaluate and take into consideration the results and policy recommendations of the 3rd GEM report. We will focus on the enhancement of entrepreneurial spirit, the enrichment of the existing educational system so that to cultivate entrepreneurial mindsets at an early age, the promotion of e-government and the creation of synergies between academia and enterprises. We anticipate that the report will serve as a useful tool for boosting the entrepreneurial activity in Cyprus.

I seize the opportunity to thank once again the University of Cyprus, our National Coordinator for GEM, for the excellent and valuable work that they have done so far.

**Dr. Stelios Himonas**

*Permanent Secretary  
Ministry of Energy, Commerce, Industry and Tourism*



## MESSAGE FROM THE CEO OF PwC

We are currently living in times of extraordinary transformation with the accelerating pace of change creating new challenges and new opportunities for businesses and society.

Our country has in recent years made progress towards improving its business environment, restoring its economic competitiveness and attracting foreign investment. We need to remain focused on enhancing the competitiveness and productivity of our country in order to achieve long term sustainable growth, create fiscal space for investments in infrastructure, education, innovation, research and programmes that enhance social prosperity.

Today, technological disruption is affecting the economy, the labour market and the society in an unprecedented manner. Technology will shape our future and our ability to adapt alongside the transformational innovations of artificial intelligence, machine learning and robots will be fundamental to our social and economic well-being.

In such times, the potential for collaboration among academia, corporates and start-ups as a means of unlocking new possibilities is tremendous. Fostering an

entrepreneurial culture, supporting youth entrepreneurship and startups and strengthening research & innovation is key for successfully leading change and make a lasting difference in our country.

At PwC Cyprus we collaborate with leading academic and business stakeholders to bring this vision to life. Using our voice, knowledge, expertise and relationships, we work with others to be “part of the solution” and become catalysts of change.

In this context, we congratulate and actively support the Centre for Entrepreneurship at the University of Cyprus in its efforts to foster entrepreneurship and innovation in our country. The National Report for Entrepreneurship is an invaluable tool for guiding national policy and driving the necessary changes that will enhance our entrepreneurial ecosystem.

Creating a strong entrepreneurial culture can only be achieved through common effort and commitment in creating an environment where businesses are inspired to build the competencies and skills necessary to be fit for the future.

**Evgenios C Evgeniou**

CEO  
PwC Cyprus

# EXECUTIVE SUMMARY



Women's Bazaar by Telemachos Kanthos





Currently at the cusp of a new wave of deep transformative innovations, entrepreneurship and innovation are becoming the key drivers of economic growth and prosperity. Gaining and sustaining a position in the international entrepreneurship and innovation arena is becoming a top priority for every country that strives to set the foundations for a future of resilient economic growth. The Republic of Cyprus acknowledges the window of opportunity that lies ahead and it is determined to formulate the necessary conditions that will enable the growth of its scientific, entrepreneurship and innovation ecosystem. The appointment of the first Chief Scientist for Research and Innovation, the establishment of the Cyprus Research

and Innovation Framework<sup>1</sup> as well as a plethora of recent actions by the Ministries demonstrate a willingness to transform the country towards this direction.

For the past twenty years, Global Entrepreneurship Monitor (GEM) is the leading worldwide study on entrepreneurship, covering all geographic regions and economic levels. GEM's conceptual framework encapsulates a comprehensive set of indicators on entrepreneurship, allowing for the construction of detailed profiles of entrepreneurship in each participating economy. These include attitudes of societies towards entrepreneurship, the characteristics, motivations and ambitions of entrepreneurs, and the

quality of entrepreneurial ecosystems in different economies. It also extracts data on the conditions of each country's entrepreneurial ecosystem.

Shedding light on the status of the entrepreneurial activity, its characteristics as well as on the factors that affect it, is an important step towards taking informed and effective policy-making decisions that account for the rapidly changing technological, economic and social landscape. This is the third successive year Cyprus participates in GEM, providing in this way retrospective data that enable the identification of changes of the country's entrepreneurial landscape. The purpose of this year's national GEM report is to provide an insightful overview of the changing dynamics of Cyprus' entrepreneurial ecosystem across the recent years, enable the identification of early trends and foster their comparison with identical metrics at European level. GEM Cyprus 2018/2019 results can serve a powerful tool to inform the country's entrepreneurship and innovation policy-making.

On the plus side, societal perceptions towards entrepreneurship have improved compared to the previous years and a larger part of the population perceives that high status is associated to successful entrepreneurs (61.5% in 2017/2018, 67.6% in 2018/2019). Similarly, media attention for entrepreneurship has increased (50.5% in 2017/2018, 54.3% in 2018/2019). The expected impact by entrepreneurial activity in Cyprus with respect to new job positions has improved. Compared to the previous years, a larger number of entrepreneurs in Cyprus foresee one or more job positions arising by their entrepreneurial activity in the following years (34% expects 1-5 new job positions, 22.4% expects more than 6 job positions). In 2018/2019 the physical infrastructure and commercial and services infrastructure remain the most important strengths of the entrepreneurial ecosystem in Cyprus. Entrepreneurial education at post-school level has notably improved this year and is also identified as a strength of the ecosystem.

Despite these improvements, the population's confidence with respect to the capabilities to initiate entrepreneurial activity has been reduced across the years (52.4% in 2016/2017, 46.4% in 2017/2018, 45.9% in 2018/2019), whereas fear of failure remains remarkably high as approximately one in two Cypriots fear failure with regards to entrepreneurial activity. This has a direct impact on Cyprus' Total Early-Stage Entrepreneurial Activity (TEA), as the TEA index value recorded is the lowest across the last

three years (12% in 2016/2017, 7.3% in 2017/2018, 3.9% in 2018/2019). Compared to the previous years, nascent entrepreneurial activity has largely been reduced (7.6% in 2016/2017, 3.6% in 2017/2018, 1.2% in 2018/2019). Difficulties in accessing financial resources is one of the most important reasons of business exit, whereas the gender gap with regards to Cyprus' TEA persists across the years. The country's entrepreneurial ecosystem urges the need for improving entrepreneurial education at school-level as well as improving the visibility of entrepreneurial programs available for new businesses and boosting the access of new businesses to financial resources.

Overall, while Cyprus is shifting away from the years of financial recession, GEM 2018/2019 results reveal that its entrepreneurial ecosystem is still affected. Despite all efforts to increase its start-up activity, this activity mainly targets the local market. However, it is necessary for Cyprus to raise the number of transformational entrepreneurs that can be disruptive at a global scale. Increasing access to financial resources, especially for early-stage and high-risk entrepreneurial endeavors, is necessary for improving the country's potential to compete in the international entrepreneurial arena. Similarly, enhancing entrepreneurial-related education at school level can largely contribute in reducing fear of failure, minimizing risk-averseness and in cultivating an entrepreneurial culture from an early stage. Along the same lines, although there is a variety of initiatives by different ministries in supporting the start-up ecosystem and offering entrepreneurship programs, there is currently a lack of orchestration. The forthcoming Deputy Ministry of Innovation and Digital Policy could possibly coordinate all relevant initiatives in the future. Additionally, improving the integration across the different entrepreneurship programs could elevate their visibility and effectiveness.

GEM enables the generation of yearly data on Cyprus' entrepreneurship status and fosters the comparison with several other countries. This year's report provides insights on Cyprus' entrepreneurial activity across the last three years and uses European average values benchmarks. Drawing on these results, it provides policy making recommendations. We aspire that the report can serve as a useful tool for boosting the island's entrepreneurial activity.

---

1 Innovate Cyprus 2019/2023. Available at: <https://chiefscientist.gov.cy/wp-content/uploads/Innovate-Cyprus-CYRI-Strategy-Framework-2019-2023-NBRI-May-2019-2.pdf>



# GEM INTRODUCTION AND BACKGROUND



La Parisienne Minoan Lady by Andreas Laddommatos

The Global Entrepreneurship Monitor (GEM) is the leading worldwide study of entrepreneurship. Since its inaugural survey in 1999, GEM's research has produced 20 years of data rates captured by over 2.9 million surveyed adults, in 112 economies. Countries participating in GEM represent all levels of economic development and almost all geographic regions. Each year, the GEM annual report is launched at the GEM annual meeting. Following that, the research teams in each GEM country publish national reports, providing more information on entrepreneurship in their countries, comparing data with prior years, and drawing on their local knowledge, conditions and initiatives to interpret entrepreneurial activity.

GEM results are disseminated in the media, including well-known global news publications such as the Wall Street Journal, the Economist, Financial Times, Business Week, Fortune, Forbes, and Entrepreneur. Along the same lines, the research teams in each participating country contribute to GEM's extensive reach into local, regional and national news outlets. This has led to the broad dissemination of GEM findings, shaping how the public, and more specifically relevant practitioner and policy audiences understand, address and promote entrepreneurship.

The main difference between GEM and other entrepreneurship studies currently conducted is that GEM provides a comprehensive set of indicators on entrepreneurship, allowing for the construction of detailed profiles of entrepreneurship in each participating country. It looks beyond businesses and towards 18 to 64-year old individuals, from a demographically representative portion of the population. GEM applies a rigorous methodology, which is consistently followed by all GEM research teams and carefully supervised and processed by the central GEM data team. This enables cross-national comparisons across all the economies participating in GEM each year, as well as longitudinal comparisons.

GEM's focus is on the people who start and run businesses. GEM explores the attributes, aspirations, attitudes, perceptions and intentions of the adult population in each country. It tracks societal attitudes and perceptions, in light of the need for people who are ready to venture into entrepreneurship and those willing to support their efforts. It accounts for multiple phases of the entrepreneurial activity, including early-staged ventures and mature businesses.

Another unique aspect of GEM is the involvement of the research teams of each participating country that collaborate closely with the central GEM team. Teams closely manage the survey process and data collection, while they also collaborate with the central team to ensure the adequacy of the survey approach and data validity. Drawing on their understanding of national conditions, they provide explanations for their unique results of their country. National teams also disseminate a wide range of knowledge about entrepreneurship every year, and they

conduct research that advances academic and practical understanding about this phenomenon.

Over the years, GEM has gained widespread recognition as the most informative and authoritative longitudinal study of entrepreneurship in the world. The 2018/2019 GEM study includes 49 economies. As illustrated in Figure 2.1, GEM classifies economies into four regions following the classification of the World Economic Forum and the United Nations. It also classifies economies by income level. Following the approach of earlier GEM Cyprus reports, in our analysis we draw on the countries belonging to the European regional area to calculate EU average rates.

## 2.1 THE GEM CONCEPTUAL FRAMEWORK

GEM's conceptual framework, shown in Figure 2.2, illustrates the relationship of entrepreneurship with its environment. GEM accounts for specific contextual factors such as social, political, and economic, as it considers them influential in creating unique business and entrepreneurial contexts. They also indirectly influence entrepreneurship through societal values and individual attributes. The GEM methodology regards the relationships between the various key determinants of the entrepreneurial framework conditions.

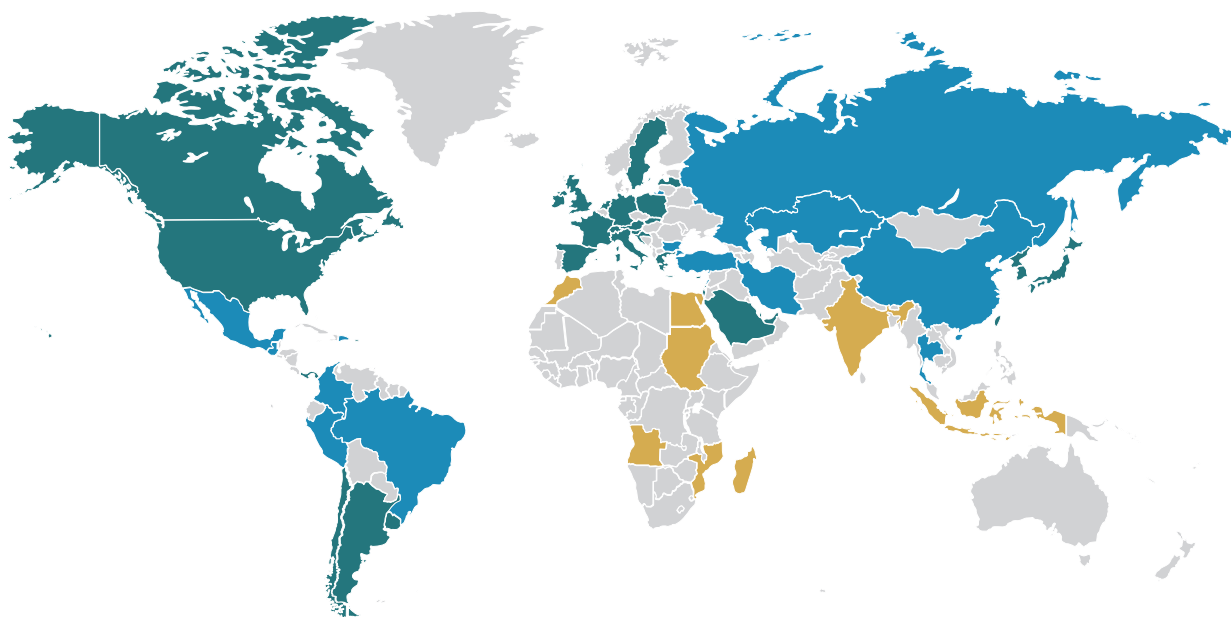
GEM considers that the national economic growth is the outcome of the inter-dependencies between several entrepreneurial framework conditions and the personal traits and capabilities of individuals to identify and seize opportunities. Drawing on these parameters as the basis of its conceptual framework, this GEM report aims:

- To identify the factors that encourage or hinder entrepreneurial activity in Cyprus, related to societal values, individual attributes and entrepreneurial framework conditions;
- To provide a platform for assessing the extent to which entrepreneurial activity influences Cyprus' socio-economic development
- To provide policy making recommendations for enhancing Cyprus' entrepreneurial capacity.

The GEM conceptual framework considers that national economic growth is the result of people's capacity to identify and seize opportunities, and that this process is affected by environmental factors which influence individuals' decisions to pursue entrepreneurial initiatives (regarded as entrepreneurial framework conditions in GEM methodology). Figure 2.2 shows the main components and relationships of the GEM methodology including the entrepreneurial context, the social values about entrepreneurship, the individual attributes of entrepreneurs, the level of entrepreneurial activity and the expected impact.

The social, cultural, political and economic context is

**Figure 2.1:** GEM economies by geographic region and economic development level



	Low Income	Middle Income	High Income
East and South Asia	India, Indonesia	China, Thailand	Japan, Korea Rep., Taiwan
Europe and North America		Bulgaria, Kazakhstan*, Russian Federation, Turkey	Austria, Canada, Croatia, Cyprus, France, Germany, Greece, Ireland, Italy, Latvia*, Luxembourg, Netherlands, Poland, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States
Latin America & Caribbean		Brazil, Colombia, Dominican Republic*, Guatemala, Mexico*, Peru	Argentina, Chile, Panama, Puerto Rico, Uruguay
Middle East and Africa	Angola, Egypt, Madagascar, Morocco, Mozambique*, Sudan	Iran, Lebanon	Israel, Qatar, Saudi Arabia, United Arab Emirates

\*included in National Entrepreneurship Context Index (NECI) only

Source: GEM 2018/2019

represented through the National Framework Conditions (NFCs), which measure the quality of the entrepreneurial ecosystem in each country. Societal Values about entrepreneurship regard societal beliefs about entrepreneurship whereas individual attributes regard demographic characteristics, self-perceptions and motives. Entrepreneurial activity encompasses multiple phases of the business process, potential impact, and type of activity. These are further analyzed towards the end of this subsection.

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. 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 where 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 benefits this environment as well, through the creation of social value and economic development.

GEM's approach is unique as it collects primary data on a global basis and data from individuals who are surveyed about a variety of key issues regarding entrepreneurial aspirations, attitudes, intentions and activities. It also collects data about the entrepreneurship phenomenon

Figure 2.2: GEM Conceptual Framework

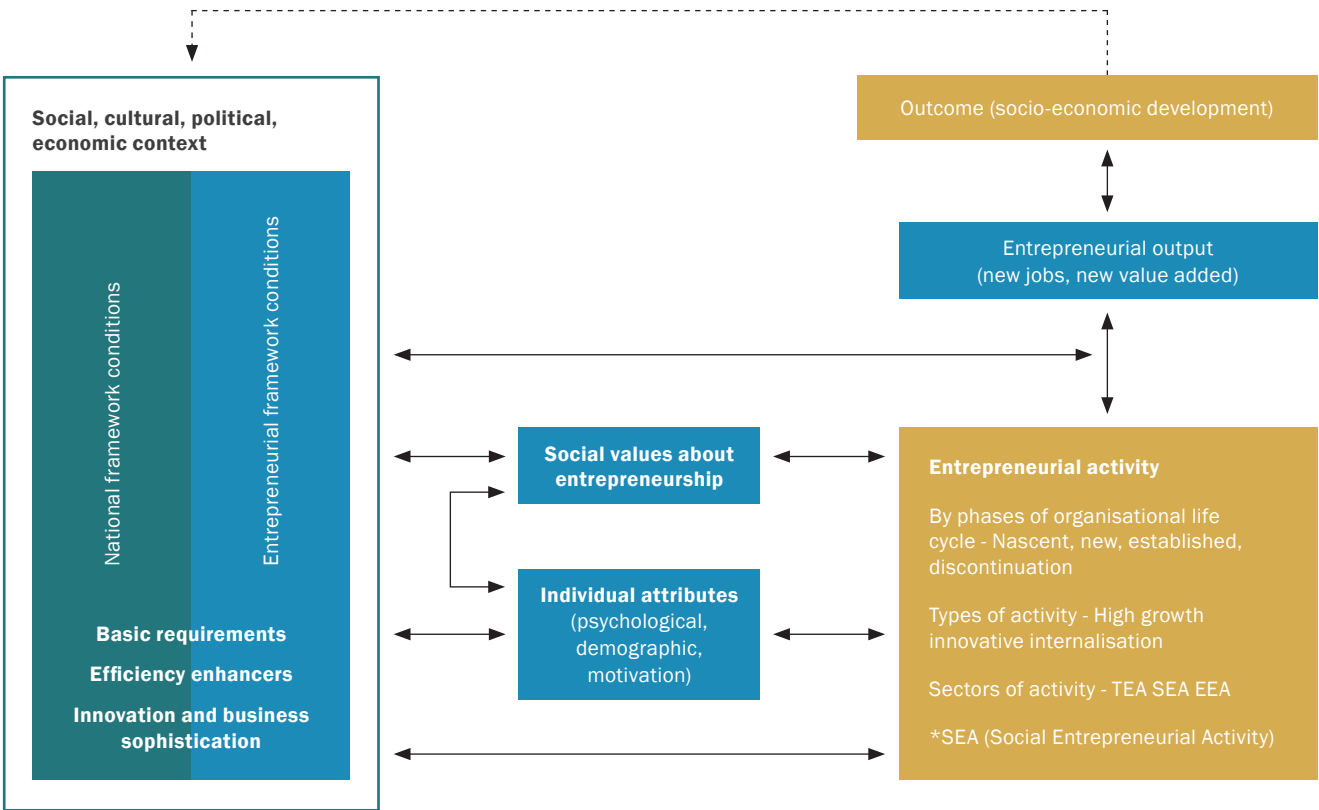
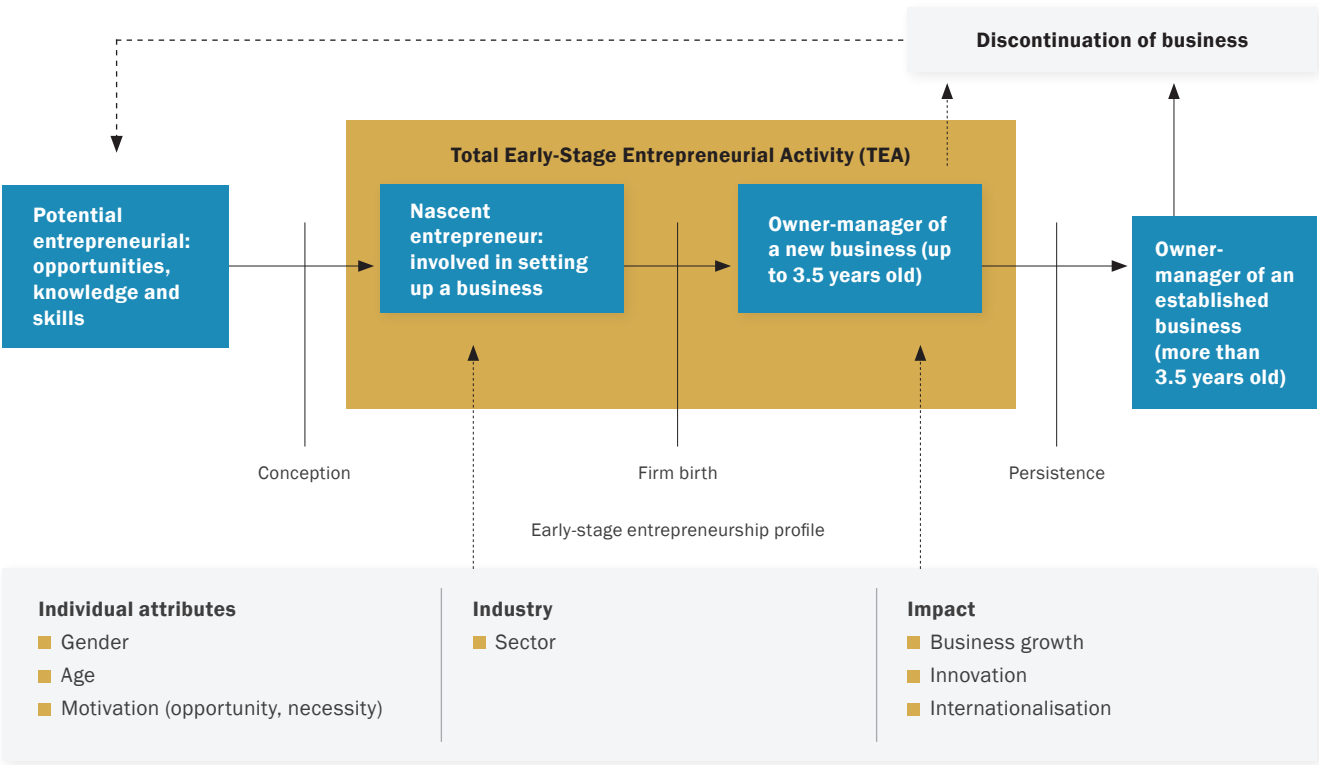


Figure 2.3: The entrepreneurial process and GEM operational definitions



Source: GEM 2018/2019



along the entrepreneurship cycle, from the conception of entrepreneurial opportunities to its maturity or, alternatively, to its demise (Figure 2.3).

GEM's methodology includes a set of key entrepreneurship indicators which receive a ranking for each participating country. 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 to which society supports this activity. The GEM methodology identifies five categories of indicators, as follows.

### Societal values and perceptions:

**Good career choice:** Percentage of the adult population (18-64 years' old) who believe that entrepreneurship is a good career choice.

**High status to successful entrepreneurs:** Percentage of the adult population (18-64 years' old) who believe that high status is afforded to successful entrepreneurs.

**Media attention for entrepreneurship:** Percentage of the adult population (18-64 years' old) 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 (18-64 years' old) who see good opportunities to start a firm in the area where they live.

**Perceived capabilities:** Percentage of the population (18-64 years' old) 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:** those who have taken steps to start a new business, but have not yet paid salaries or wages for more than three months.

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

### Indicators describing the life cycle of a venture:

#### Total Early-stage Entrepreneurial Activity – TEA:

Percentage of the adult population between 18 and 64 who are in the process of starting a business (nascent entrepreneurs) or are owner-managers of a business which is younger than 42 months old.

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

**Business discontinuation rate:** Percentage of the adult population aged between 18 and 64 (either nascent entrepreneurs or owner-managers 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 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 a subsidiary.

### National/Entrepreneurial framework conditions:

The quality of the entrepreneurial framework conditions is based on the average value of experts' perceptions, using a Likert scale ranging from 1 (highly insufficient) to 9 (highly sufficient), for the following entrepreneurial framework components:

- Entrepreneurial financing
- Government policies: support and relevance
- Government policies regarding taxes and bureaucracy
- Government entrepreneurship programs
- Entrepreneurship education at primary and secondary school stage
- Entrepreneurship education at post-school stage and entrepreneurship training
- Research & Development (R&D) transfer
- Commercial and legal infrastructure
- Internal market dynamics
- Internal market burdens or entry regulations
- Physical infrastructure
- Cultural and social norms

## 2.2 GEM METHODOLOGY

In each participating economy, GEM provides an integrated overview of the entrepreneurial activity. In particular, it measures social perceptions and the population's attitudes

towards entrepreneurship as well as the activities and characteristics of individuals involved in various phases and types of entrepreneurial activity. Every year, GEM generates comparative data from all the economies participating in the GEM report, as all participating countries follow a mutual methodology for data collection. The methodology is consistent across the years, enabling in this way the two different surveys, the Adult Population Survey (APS) and the National Expert Survey (NES).

### Adult Population Survey (ASP)

The Adult Population Survey (APS) measures a plethora of entrepreneurial factors. Figure 2.3 provides an overview of the main factors captured by APS. Each economy participating in GEM collects data from 2000 or more randomly selected adults (18 – 64 years of age). Data collection is conducted between May and July each year, using a standardized questionnaire provided by the GEM Global Team and translated in the national language of each economy.

The research teams in each participating economy administer and supervise the data collection. The APS survey in Cyprus was conducted by the Center for Entrepreneurship of the University of Cyprus in collaboration with IMR LTD. A computer-aided telephone interviewing process was followed, which included 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 that number was dropped.

The 2000 participants were individuals who lived in both rural and urban areas controlled by the Republic of Cyprus. Men and women were equally represented in the sample. A multi-staged selection process was followed for sampling the respondents, in order to ensure that the geographical distribution of the sample was in line with the actual distribution of the targeted population. Quality assurance tests were conducted by the GEM Global Team to safeguard the uniformity of the statistical calculations across countries. Following this stage, individual countries were given access to the datasets.

### National Expert Survey (NES)

NES gathers in-depth opinions from selected national experts regarding the factors that have an impact on the entrepreneurship ecosystem in each economy. Information is collected 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. GEM Global requires national teams to interview at least four experts from each of the entrepreneurial framework condition categories, 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 officials, academics, and practitioners in each economy. Sample selection also accounted for balance across regional area, gender, involvement in the public or private sector and experience level. Interviewees were invited to reflect on the factors that have an impact on the entrepreneurship ecosystem following a 1-9 Likert scale (1= highly insufficient to 9=highly sufficient) and answer open-ended questions. Questions were translated to the national language of each country participating in GEM. For the 2018/2019 GEM Cyprus, an online data collection tool was employed for collecting the data. This year's NES included 51 experts. Of the 51 respondents, 15 are females (29.4%) and 36 are males (70.6%). Respondents invited for NES hold an average of 14.5 years in activities related to entrepreneurship. In particular, 20 identify themselves as entrepreneurs, 4 as investors, financiers or bankers, 16 as policy makers, 14 as business and support-service providers and 17 as educators, teachers and entrepreneurship researchers. Respondents were able to choose more than one category of expertise.

# ENTREPRENEURIAL ACTIVITY IN CYPRUS IN 2018



Untitled by Christos Petrides



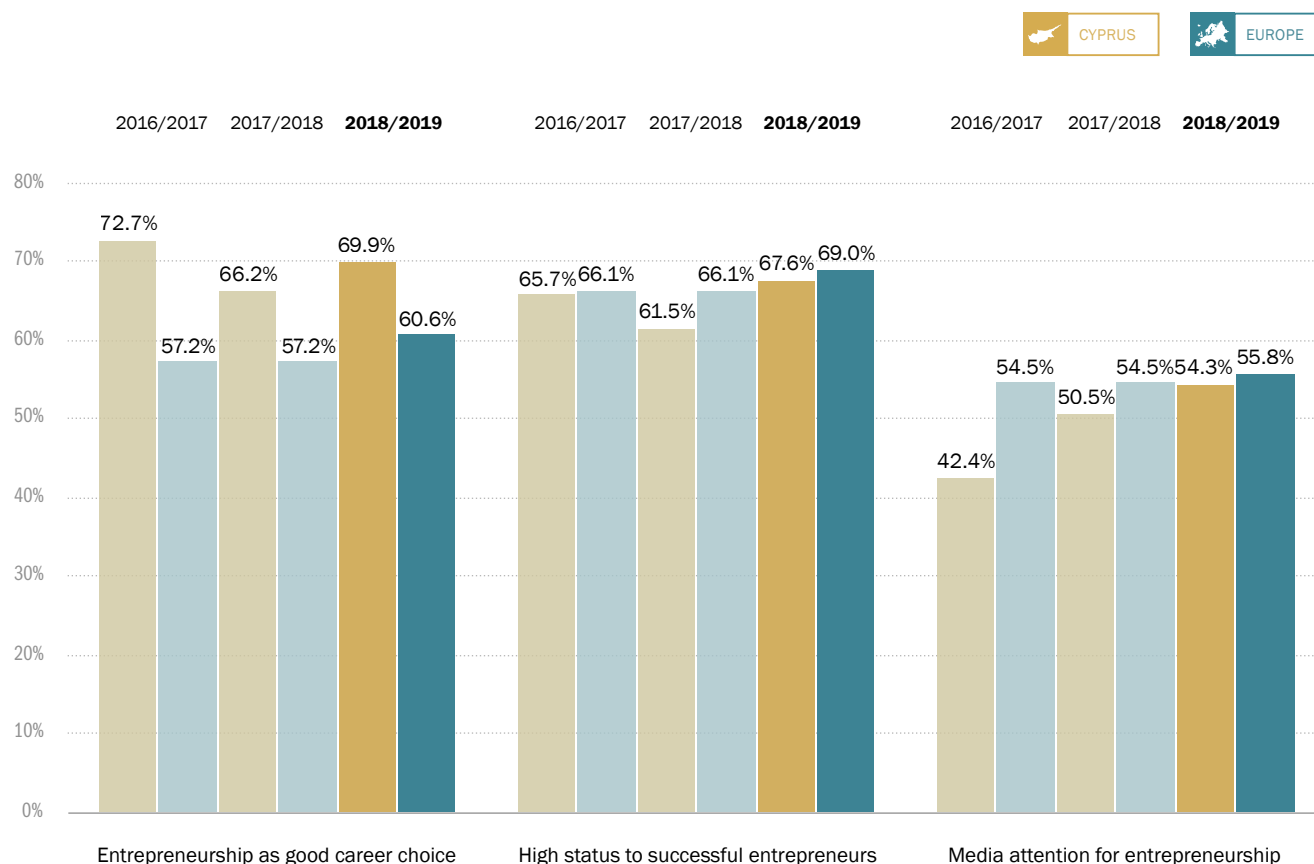
Drawing on the dataset collected through the APS, this section reports on the entrepreneurial activity in Cyprus for 2018/2019. This is the third consecutive year that Cyprus participates in GEM. Thus, where possible, this report draws on Cyprus' longitudinal data to report on the state of entrepreneurship and interpret this year's findings. To enhance the interpretability of the results, this report also employs the average rates of European countries as benchmark rates. The report groups countries in broad European regional areas, following the approach of GEM Cyprus reports published in the previous years. The countries in the broad European regional area are outlined in Section 2.

The APS framework captures the status of the national entrepreneurial environment, including the societal values and perceptions on entrepreneurship, the different types of entrepreneurial activity and their extent, the profile of entrepreneurs, the motives of entrepreneurial activity, the sectors in which entrepreneurial activity is recorded, and the impact of entrepreneurial activity at the national level. The rest of this Section discusses these topics in more detail.

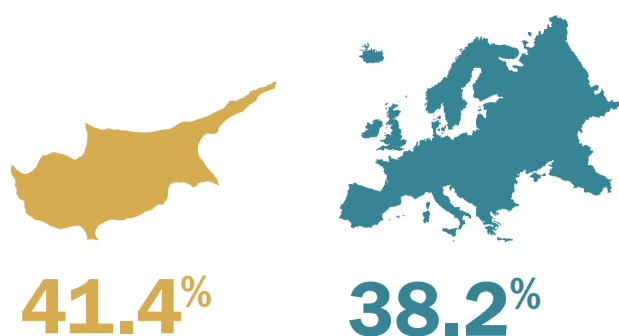
### 3.1 SOCIETAL VALUES & PERCEPTIONS ON ENTREPRENEURSHIP

Societal values and perceptions on entrepreneurship are not a direct metric of entrepreneurial activity. However, they can serve as proxies for acquiring a broader understanding of the entrepreneurial landscape in each country, as values and perceptions influence entrepreneurial ambition and intention. GEM addresses social perception on entrepreneurship by measuring whether entrepreneurship is perceived as a good career choice, the status of successful entrepreneurs, and the extent to which entrepreneurship receives adequate media attention. Figure 3.1 summarizes the results on societal values on entrepreneurship for Cyprus as extracted by GEM across the last three years. To facilitate the comparability of the results, it also includes the corresponding EU average values for each index and for each year. In 2018/2019, 69.9% of the population in Cyprus considers entrepreneurship as a good career choice. This value is higher than this year's European average rate (60.6%). Although European average values regarding this index are slightly increasing across the last three years (i.e., perception of entrepreneurship as good career choice is constantly improving), the Cyprus index

**Figure 3.1:** Societal values about entrepreneurship in Cyprus and Europe



**Figure 3.2:** Ease to start a business



Easy to start a business 2018/2019

fluctuates across the years as the value has decreased by 6.5% from 2016/2017 to 2017/2018, while it has increased by 3.7% from 2017/2018 to 2018/2019. Along the same lines, in 2018/2019, 67.6% of Cypriots consider that successful entrepreneurs enjoy a high status, which is close to the European average value of 69%. Similarly to the previous index, although the European average value tends to slightly increase each year, the corresponding index for Cyprus varies across the years. In particular, despite the 67.6% recorded in this year's report, 'high status to successful entrepreneurs' was 65.7% in 2016/2017 and 61.5% in 2017/2018. This year, media attention for entrepreneurship in Cyprus was 54.3%, which is slightly lower than the European average rate of 55.8%. Despite the variation across the years recorded for the other two factors of this category, media attention to entrepreneurship in Cyprus has recorded an increasing trend across the years. In particular, from 2016/2017 to 2017/2018 the value has increased by 8.1%, whereas from 2017/2018 to 2018/2019 it has increased by 6.1%. For the first time in GEM's history, GEM 2018/2019 has captured whether it is easy to start a business in each country. In Cyprus, about two in five citizens (41.4%) consider that it is relatively easy to start a business in Cyprus. This value is higher than the European average value (38.2%). These results confirm that the procedures for setting up a business as well as other contextual factors, make it easy to start a business in Cyprus. Increased media attention for entrepreneurship might also have an indirect impact on the perception of the public regarding the easiness of starting a business in Cyprus.

The perceived entrepreneurial opportunities and capabilities of a country are an indicator of the country's entrepreneurial intention. GEM measures perceived opportunities,

capabilities and fear of failure relevant to entrepreneurship. Perceived opportunities represent the perception of the population regarding the opportunities that are available for initiating entrepreneurial activity. As summarized in Figure 3.3, the first GEM Cyprus report (2016/2017), the perceived opportunities index was recorded to be 35.9%. In 2017/2018, the perceived opportunities index increased to 51%, whereas this year (2018/2019) the index is approximately 5% lower than last year (45.9%). Cyprus' perceived opportunities index 2018/2019 is slightly higher than the corresponding European average value of 43.2%. Despite the difference recorded between Cyprus' 2017/2018 and 2018/2019 values, it could be argued that perceptions regarding opportunities to initiate entrepreneurial activity in Cyprus are positive as approximately one in two residents are optimistic regarding the opportunities for initiating entrepreneurial activity.

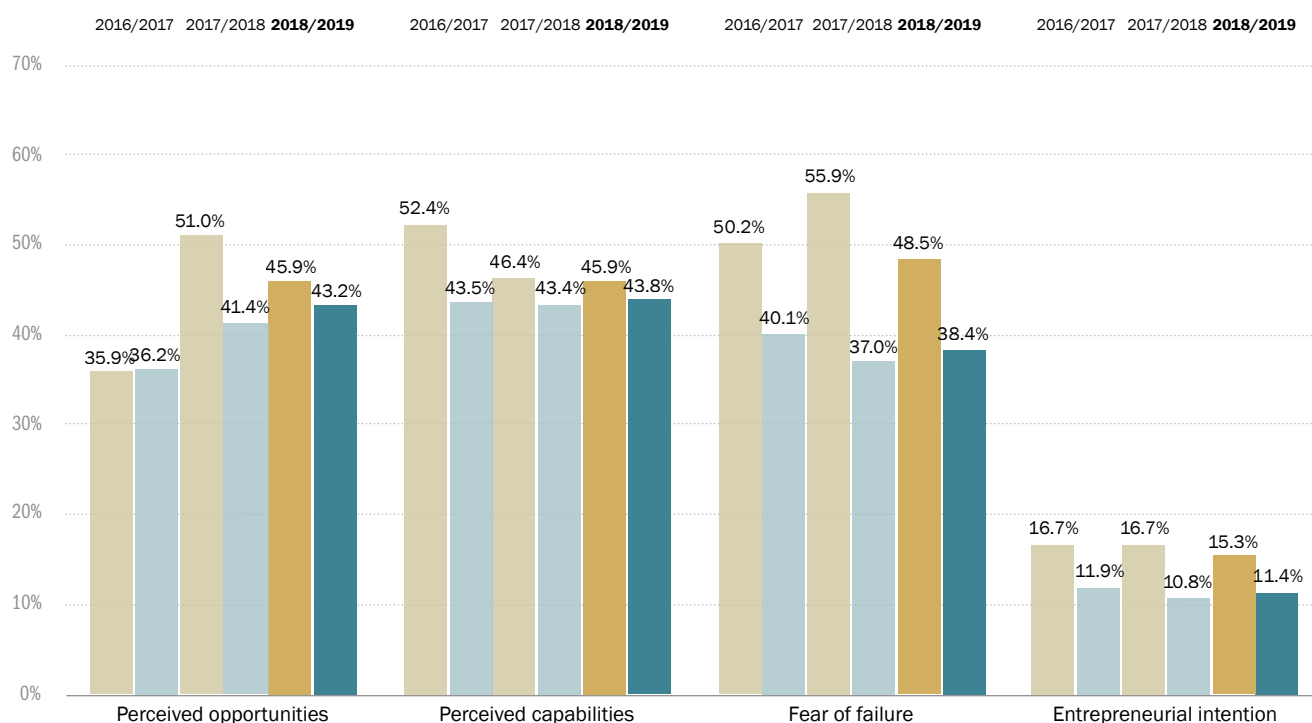
Along the same lines, the population is optimistic regarding perceived capabilities for initiating entrepreneurial endeavors in Cyprus across the years, as about one in two residents consider that they have the necessary capabilities for initiating entrepreneurial activity. However, the perceived capabilities value recorded in Cyprus in 2018/2019 is slightly lower than the value recorded last year. More specifically, in 2016/2017, 52.4% of the population considered that they had the required skills and knowledge to initiate entrepreneurial activity, whereas in 2017/2018 the corresponding value was 46.4% and in 2018/2019 the value is 45.9%. The European average value for 2018/2019 was 43.8% and has been relatively stable across the years. Thus, it could be argued that compared to other European countries participating in GEM, Cypriots seem to have been more optimistic about their capabilities to initiate entrepreneurial activity. The slight reduction in the perceived capabilities index for Cyprus could be partly attributed to the increased media attention to entrepreneurship recorded in the last years, which may have contributed in raising awareness about the necessary skills and competences for entrepreneurship.

Increased media attention might have also contributed to the slight reduction of Cyprus' fear of failure index recorded this year. In Cyprus, in 2018/2019 about 48.5% of the respondents consider that they fear failure related to entrepreneurial activity. The corresponding value was 55.9% in 2017/2018 and 50.2% in 2016/2017. The 7.4% decrease of fear of failure value recorded this year may be attributed to the increased media attention to entrepreneurship in Cyprus which has possibly improved the perception regarding failure. However, fear of failure in Cyprus is notably higher if compared to the average European value for 2018/2019, which is 38.4%. Thus, Cyprus needs to take additional action for improving perceptions relevant to entrepreneurial failure.

Entrepreneurial intention captures the expressed intention of an individual to initiate entrepreneurial activity in the next three years<sup>2</sup>. In Cyprus, the entrepreneurial intention rate has been consistent across 2016/2017 and 2017/2018

2 Individuals included in any stage of entrepreneurial activity were excluded.

**Figure 3.3:** Self-perceptions on entrepreneurship in Cyprus and in Europe



(16.7%). However, in 2018/2019, the entrepreneurial intention value was 15.3%. Despite the 1.4% reduction in the entrepreneurial intention recorded this year, the entrepreneurial intention rate in Cyprus is still higher than the corresponding European average value (11.4%). This could be possibly attributed to Cyprus' supportive national legal and tax framework as well as to the existence of highly skilled human capital. As one in three Cypriots denoted that they personally know an entrepreneur (Figure 3.4), communication of positive experiences regarding the legal/tax framework or human capital by existing entrepreneurs

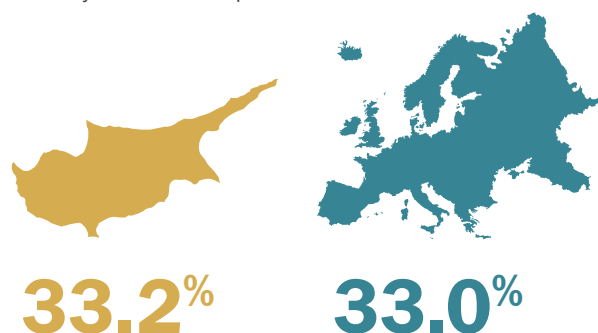
may also indirectly influence entrepreneurial intention.

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

The GEM methodology accounts for entrepreneurship of different levels of maturity, including the Total Early-Stage Entrepreneurial Activity (TEA) Index, which is a measure of a country's early-stage entrepreneurial activity. TEA Index is considered as one of the most important indexes of the GEM methodology as it provides insights on new entrepreneurial endeavors that could be later transformed into established businesses and thus it reflects on the country's entrepreneurial potential. The TEA index includes both nascent entrepreneurs and new business owners. Early-stage entrepreneurial activity in Cyprus and in Europe tends to reduce in the last years. As illustrated in Figure 3.5, in 2018/2019 3.9% of Cypriots were involved in early-stage entrepreneurial activity, whereas in 2017/2018 and 2016/2017, Cyprus' TEA value was 7.3% and 12% respectively. Cyprus' TEA index value in 2018/2019 is notably lower than the European average TEA value (7.8%). Cyprus' TEA businesses are to a large extent owned by more than one owners as only 0.1% of TEA is reported as solo-entrepreneurship.

Compared to the European countries participating in this year's GEM, Cyprus' early-stage entrepreneurial activity

**Figure 3.4:** Percentage of the population, personally know an entrepreneur

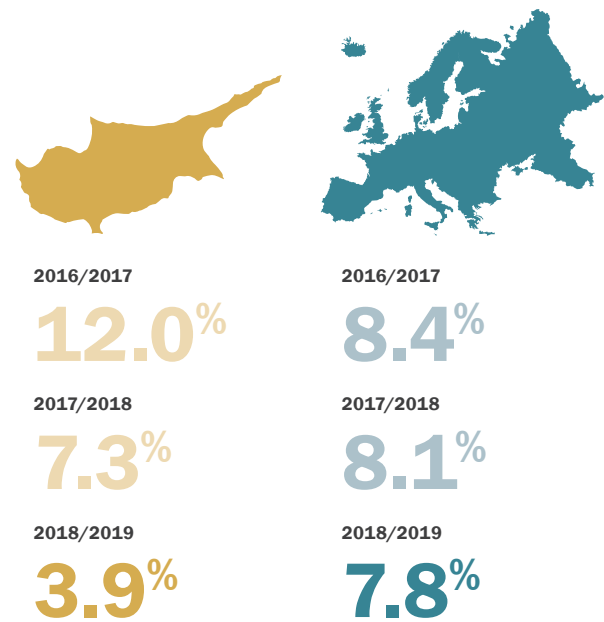


Personally know an entrepreneur 2018/2019

is weaker. Other European countries with notably low TEA value are Italy, Germany and Poland, whereas the higher TEA values were recorded in Turkey, the Netherlands and Slovak Republic. Figure 3.6 summarizes the TEA Index levels of all the European countries participating in GEM 2018/2019 as well as the Index levels of selected countries from other geographical regions. More information on the TEA level of other countries is included in Appendix 1.

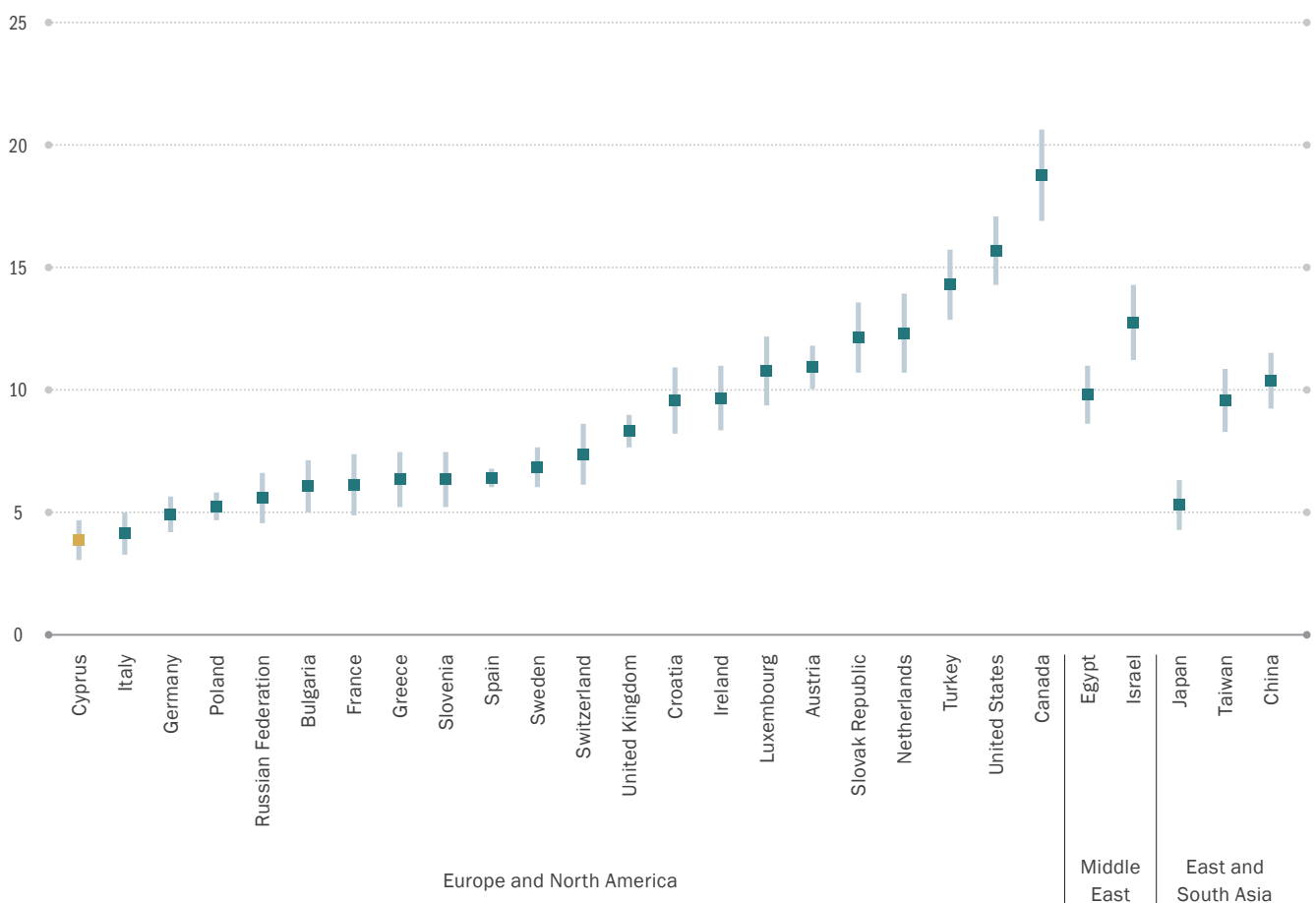
The reduction of Cyprus' TEA index rate across the years could be attributed to a plethora of reasons. The improved economic conditions in Cyprus over the past years contributed to extending the population's career options and perception of job security. This is aligned with evidence provided by Eurostat<sup>3</sup>, demonstrating a remarkable reduction of Cyprus' unemployment rates in the past three years. More specifically, Cyprus' unemployment rates have

**Figure 3.5:** Total Early-stage Entrepreneurship (TEA) in Cyprus and Europe



3 Eurostat Unemployment Statistic - [http://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment\\_statistic](http://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistic)

**Figure 3.6:** Total Early-Stage Entrepreneurial Activity (TEA) Index levels<sup>4</sup>



dropped from 13.1% in 2016, to 11.1% in 2017, to 7% in 2018. Thus, the increase of job opportunities is likely to have led a part of Cyprus' early-staged entrepreneurs to abandon their entrepreneurial activity. This is also supported by evidence presented later in this section, showing that the reduction recorded in this year's TEA is largely due to the reduction of the number of nascent entrepreneurs. This might also signal the lack of adequate mechanisms such as financial support and mentoring, which could potentially assist nascent entrepreneurs in persisting on their entrepreneurial endeavors.

### 3.2.1 Nascent entrepreneurs

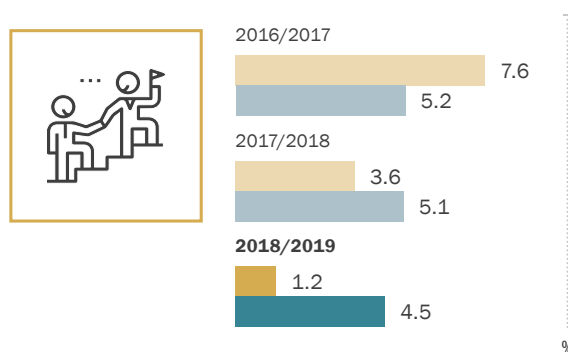
GEM defines nascent entrepreneurs as very early-stage entrepreneurs who are currently active in setting up a new business, have part-time or full-time involvement in this activity and will have at least partial ownership of the new business. Nascent entrepreneurship regards new endeavors that have not paid any wages or salaries for the past three months. Over the past three years, nascent entrepreneurship in Cyprus has been reduced from 7.6% of the population in 2016/2018, to 3.6% 2017/2018, to 1.2% in 2018/2019. As illustrated in Figure 3.7, the European average rate for nascent entrepreneurial activity also tends to drop across the years. However, although nascent entrepreneurial activity is shrinking both in Cyprus and in Europe, Cyprus' nascent entrepreneurship has been reduced to a larger extent. Hence, the lower rate of TEA in Cyprus in 2018/2019 is mainly due to the significant drop in the rate of nascent entrepreneurial activity. This could be partly attributed to the fact that nascent entrepreneurial activity concerns ventures that are at the concept-definition stage. At this stage, the venture is still immature and entrepreneurs have not invested a large amount of their time and effort in the venture yet. Thus, as economy in Cyprus is improving potential, nascent entrepreneurs are not likely to start a venture, but rather prefer more secure employment options.

### 3.2.2 New business owners with significant growth potential

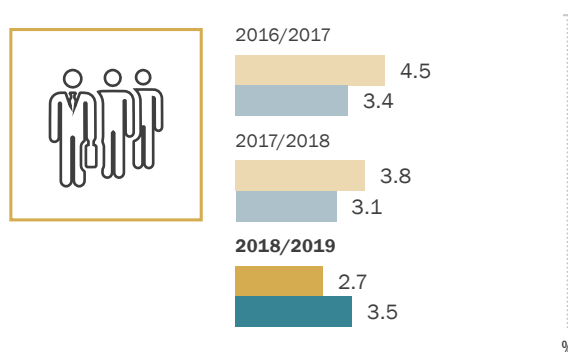
GEM considers new business owners as early-stage entrepreneurs who are owners and managers of new firms that have been set up, are younger than 42 months old and have paid some salaries or wages. In Cyprus, in 2018/2019, 2.7% of the population are identified as new business owners. This is lower than the rate of new

business owners recorded in the previous years (3.8% in 2017/2018, 4.5% in 2016/2017). This year's new business ownership is lower than the corresponding European average value (3.5%). GEM research results show that both new business ownership and nascent entrepreneurship in Cyprus tend to drop across the recent years. However, nascent entrepreneurship's rate of reduction is larger than that of new business owners. In particular, from 2018/2017 to 2018/2019, nascent

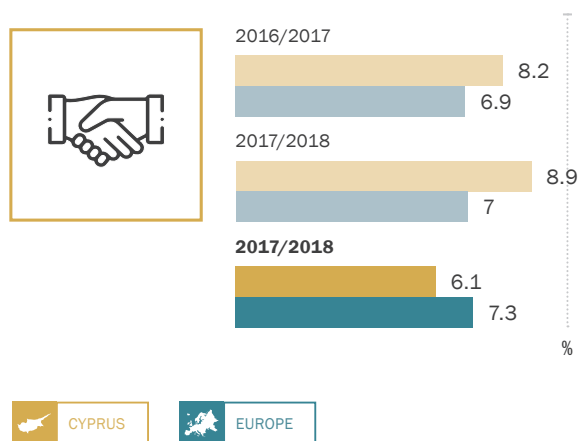
**Figure 3.7:** Nascent Entrepreneurs in Cyprus and Europe



**Figure 3.8:** New business owners in Cyprus and Europe



**Figure 3.9:** Established business ownership in Cyprus and Europe



4 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 2018/2019 GEM report. Cyprus collected 2000 responses and its margin error is +/- 1.4%.



entrepreneurship has been reduced by 2.4%, whereas new business ownership was reduced by 1.1%. This might indicate that young business ventures at the conceptual stage, are more likely to be abandoned for other career options, compared to more mature business ventures. Mechanisms that will support nascent entrepreneurs in overcoming financial and other obstacles could help early stage entrepreneurs to maintain and mature their entrepreneurial activity.

### 3.3 ESTABLISHED BUSINESS OWNERS

Beyond TEA, which includes nascent entrepreneurs and new business owners, the GEM methodology also encapsulates established business owners. These are entrepreneurs, owners and managers of established firms older than 42 months old and who have already provided salaries or wages. In Cyprus, the rate of established business owners is 2018/2019 is 6.1%, which is lower than the 2017/2018 (8.9%) and 2016/2017 (8.2%) rates. This year's rate is lower than the European average rate (7.3%) and thus, for 2018/2019 Cyprus is ranked 13<sup>th</sup> in Europe in terms of the rate of established business owners, while the rate recorded (8.9%) is higher than the European average rate (7%). The highest rate of established business owners is found in Poland (13%), the Netherlands (12%), and Switzerland (11.5%).

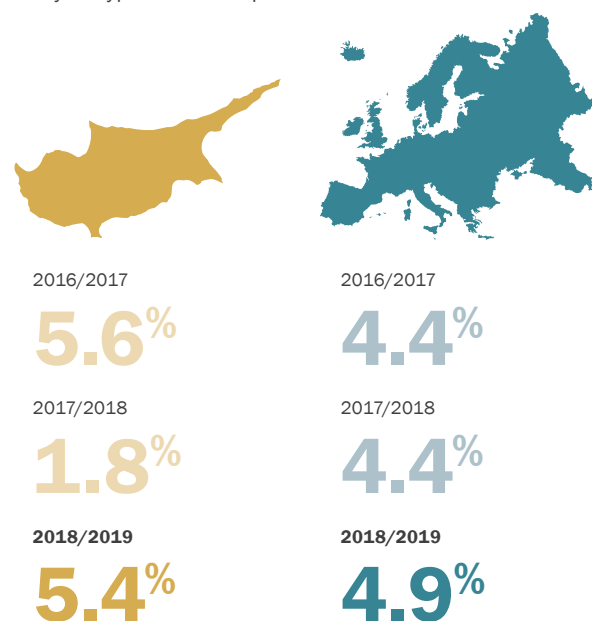
### 3.4 EMPLOYEE ENTREPRENEURIAL ACTIVITY

Another type of entrepreneurial activity is conducted within organizations. This regards the entrepreneurial activity of employees of organizations. Intrapreneurs are individuals who initiate and are involved in new business activities in the frame of their employment. In Cyprus, in 2018/2019, 5.4% of the population are involved in such entrepreneurial activity. As illustrated in Figure 3.10, employee entrepreneurial activity rate in Cyprus seems to vary across the years, as the rate recorded in 2017/2018 was 1.8% while in 2016/2017 it was 5.6%. Cyprus' entrepreneurial activity is higher than the corresponding 4.9% European average rate.

### 3.5 BUSINESS DISCONTINUANCE

The GEM methodology goes beyond the rates and types of entrepreneurial activity as it also provides insights on business discontinuance. In this year, the rate of business discontinuance in Cyprus was 2.3%, 1.1% lower than the corresponding European average rate (3.4%). Compared to last year, although European average business discontinuance rate has increased by 0.5%, Cyprus has managed to reduce its rate of business discontinuance by 2%. Beyond recording business discontinuance rates,

**Figure 3.10:** Employee entrepreneurial activity in Cyprus and Europe



GEM also accounts for the reasons that lead to businesses shutting down. As illustrated in Figure 3.11, beyond family/ personal reasons (27.1%), about one in four (25.2%) businesses that were discontinued in Cyprus owed that to problems of getting access to finance. Problems in accessing finance (25.2%) has remarkably increased this year, urging the need for enhancing financial support policies. Equally notable is the fact that in 2018/2019, 20.8% of business discontinuance in Cyprus (lower than the EU), was attributed to the businesses not being profitable. The corresponding European average for this reason was 25.7%. Such reasons indicate the need for assisting businesses in overcoming problems in getting finance and also for training potential entrepreneurs in improving their business models so as to enhance the profitability of their businesses and accessing international markets.

Cyprus' business discontinuance due to an opportunity to sell the business seems to be constantly improving, as 7% of the businesses that have been discontinued in 2018/2019 were associated with opportunity to sell. This rate seems to be constantly improving across the years, as in 2016/2017 only 1.3% of the business continuance were due to opportunity to sell, whereas this was increased to 4.7% in 2017/2018.

Overall, the continuous improvement in the financial conditions in Cyprus is reflected in the business discontinuance results, as a lower number of business discontinuance is recorded in 2018/2019 compared to the previous years. Another indication is also the increasing number of businesses changing hands.

**Figure 3.11:** Reasons for business discontinuance in Cyprus and Europe

	CYPRUS			EUROPE		
	2016/2017	2017/2018	2018/2019	2016/2017	2017/2018	2018/2019
Opportunity to sell	1.3%	4.3%	7%	4.7%	5.3%	5.7%
Business not profitable	46.3%	33.7%	20.8%	39.8%	29.6%	25.7%
Problems getting finance	18.8%	10.7%	25.2%	7%	12.2%	28.3%
Another job or business opportunity	8.8%	12.3%	4.6%	12%	11.2%	30.1%
Exit was planned in advance	2.5%	5.9%	0%	3.6%	5.3%	4.5%
Family or personal reasons	16.3%	16.6%	27.1%	22.9%	18.4%	18.3%
Government/Tax Policy/Bureaucracy	6.3%	7.7%	7.5%	0%	11.5%	21.1%

### 3.6 PROFILE OF ENTREPRENEURS IN CYPRUS

Every year, GEM provides insights on the profile of the entrepreneurs in each economy participating in the study. This includes information regarding age, gender, motives and education. Shedding light on the profile of entrepreneurs provides a more thorough understanding of how entrepreneurial activity is triggered and shaped.

#### Age distribution

GEM's APS sample size includes adults between 18 to 64 years and thus it can provide information on the extent to which different age cohorts engage in early-stage entrepreneurial activity. According to this year's results, the 45-54 age cohort is the age group with the highest involvement in TEA (5.2%), followed by the 25-34 (4%) and 35-44 (4%) age cohorts. This year's results show that all age cohorts include lower rates of entrepreneurial activity which is the result of the lower TEA rate recorded this year. However, some age cohorts display a disproportional reduction when compared to last year. Compared to the 2016/2017 and 2017/2018 results, the 2018/2019 rate of TEA involvement of younger age groups has been reduced. In particular, in the previous years the highest TEA involvement was recorded among the 25-34 age group (17.7% in 2016/2017 and 10.5% in 2017/2018). However, in 2018/2019, the 25-34 age cohort's involvement in TEA has been reduced by more than 50%. Compared to the European average rate, Cyprus' entrepreneurial activity is also notably lower for young age groups of the population. While the highest involvement TEA in Europe is recorded by the 25-34 (11.2%) and the 35-44 age cohort (8.8%), in Cyprus the TEA rate of these age cohorts is remarkably

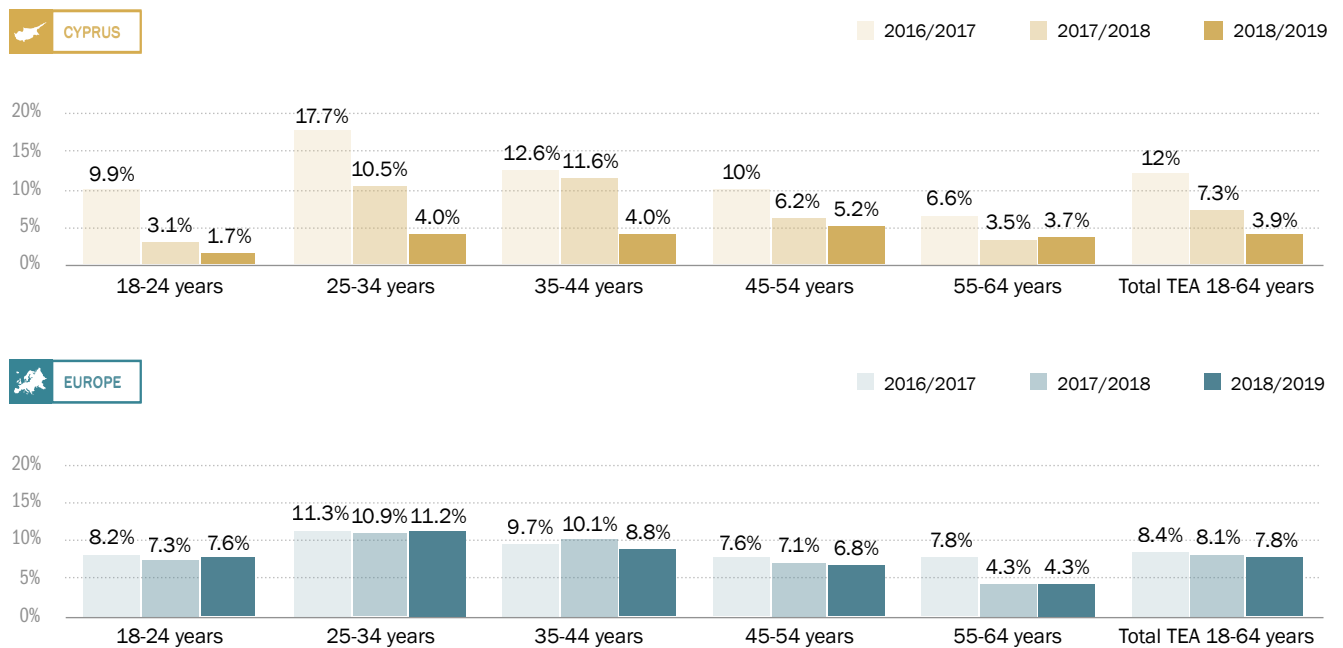
lower. Similarly, in 2018/2019 the lowest rate of early-stage entrepreneurial activity in Cyprus is recorded among the youngest age group (18-24 years old). Overall, this year's results show that the involvement of younger age cohorts in TEA is shrinking. Although for the 18-24 age group this low involvement could be partly attributed to the male compulsory military service and the high engagement of youth in tertiary education, the involvement of youth in early-stage entrepreneurial activity in Cyprus is notably lower than the corresponding European average value. The involvement of younger generations in a country's entrepreneurial activity brings fresh ideas and can significantly contribute in extending a nation's innovation capacity.

#### Gender distribution and motives

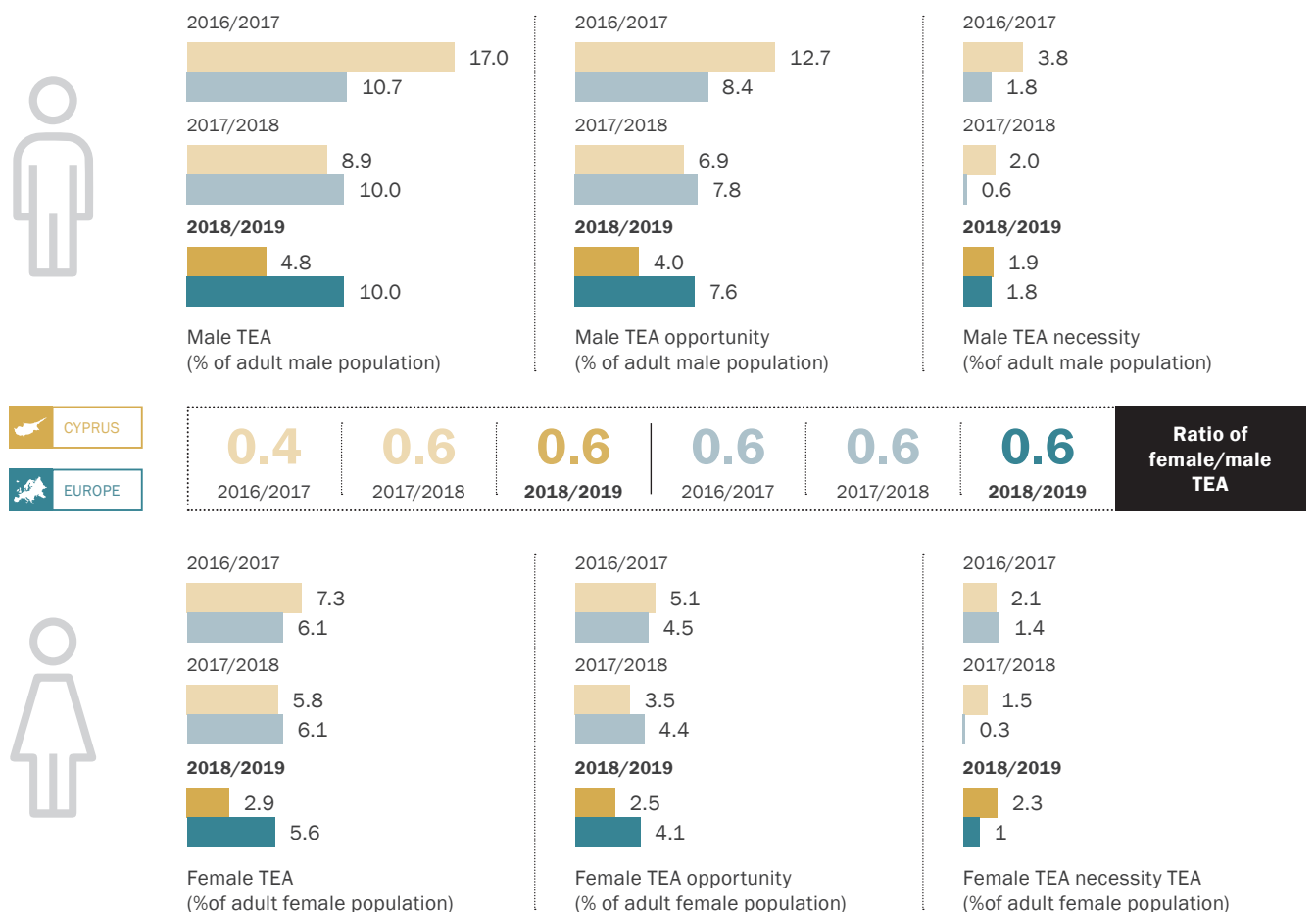
Aligned with the results of the previous years, this year's results show that in Cyprus as well as in Europe, males tend to be more involved in TEA compared to females. Although the overall TEA rate in Cyprus has been decreased in 2018/2019, the results indicate that both female and male early-stage entrepreneurial activity has been reduced by approximately 50%. Also, in 2018/2019 the female to men ratio of involvement in TEA is 0.6, which is aligned with the 2017/2018 ratio and higher than the 2016/2017 ratio (0.4). This year's female to male TEA involvement ratio is also aligned with the corresponding European average rate (0.6). These results highlight that although gender distribution in TEA activity has been improved in the past two years, there is need for further action in order to support and promote entrepreneurship among females in Cyprus.

Beside the rates of male and female early-stage entrepreneurial activity in Cyprus and in Europe, Figure 3.13

**Figure 3.12:** Total Early-Stage Entrepreneurial Activity (TEA) rates by age group in Cyprus and Europe



**Figure 3.13:** Total Early-Stage Entrepreneurial Activity (TEA) rates by gender and motivation in Cyprus and Europe



also includes the motives driving their entrepreneurial activity. In 2018/2019 Cyprus, the majority of the individuals involved in TEA associate their entrepreneurial activity to opportunity motives. However, compared to males, females in Cyprus are more likely to engage in entrepreneurial activity because of necessity. This trend is similar to the gender-motive imbalance identified across the European countries participating in GEM as opportunity-driven entrepreneurship is higher for males than females and necessity-driven entrepreneurship is higher for females than males.

In Cyprus in 2018/2019, 4.8% of postgraduate or doctoral degree and 4.3% of undergraduate/college degree holders are involved in TEA. In Europe, this year's results show that 9.9% of postgraduate and doctoral degree holders and 6.8% of undergraduate/college degree holders are involved in TEA. In particular, in 2016/2017, 14% of postgraduate/doctoral degree and 12.9% of college/undergraduate degree holders were involved in TEA, whereas in 2018/2017, 9.2% of postgraduate/doctoral degree and 9.9% college/undergraduate degree holders were involved in TEA. As summarized in Figure 3.14, the most remarkable reduction across the years is recorded in the population group which has received high-school education or lower.

### 3.7 ENTREPRENEURIAL IMPACT

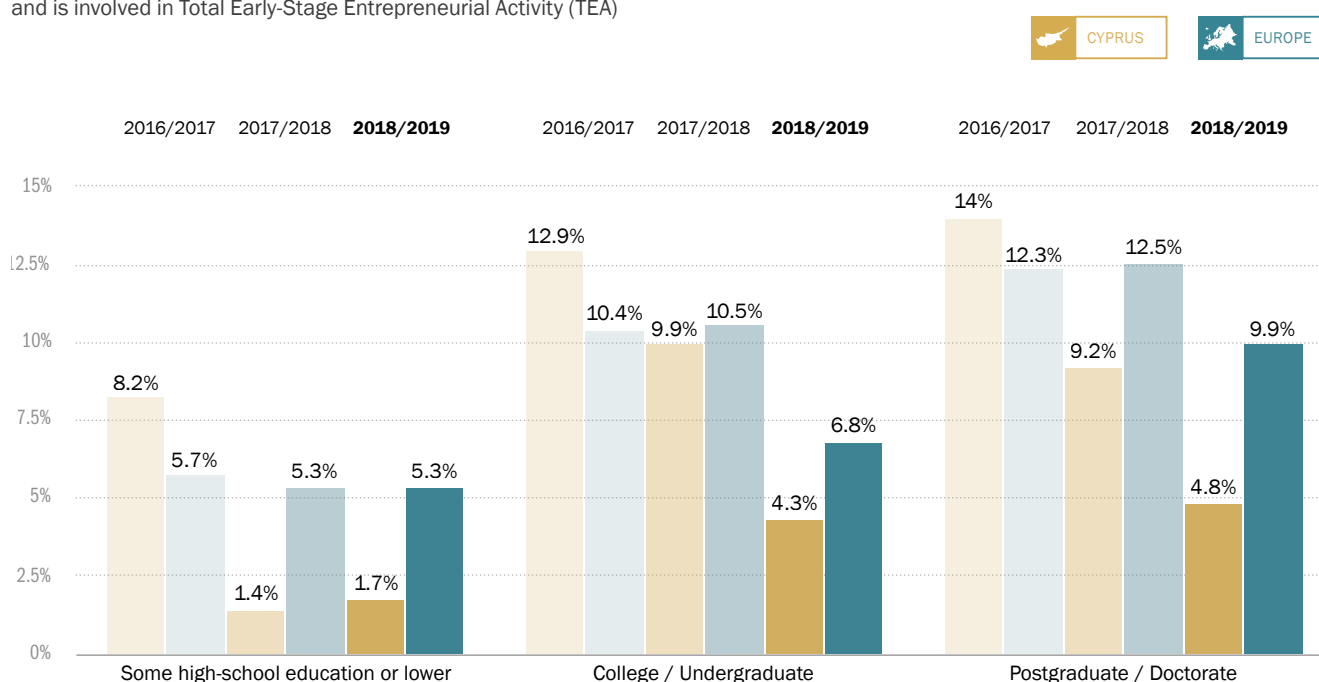
GEM also encapsulates questions that regard entrepreneurial impact, i.e., the results of the entrepreneurial activity recorded in each participating economy each year. Recording the impact of entrepreneurial activity is important, as this can serve as a proxy of the

expected development and growth of the country, including economy growth of different industry sectors, expected job creation, innovation level and international orientation. This section analyzes industry, job creation, innovation and international orientation of Cyprus across the years, and compares these indexes with the relevant European averages.

#### Industry

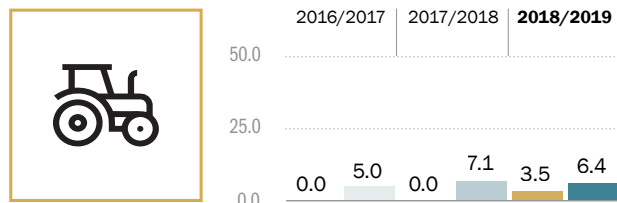
The majority of Cyprus 2018/2019 TEA is active in the Wholesale and Retail sector. In particular, in 2018/2019, 46.1% of Cyprus' early-stage entrepreneurs are active in Wholesale and Retail sector, whereas in Europe the corresponding rate is 31.5%. The second most popular sector in Cyprus is Health, Education, Government and Social Services as 13.6% of Cyprus' TEA is active in this sector. In Europe, 17.5% of TEA is involved in this sector. Personal and Consumer Services sector accounts for 9.3% of Cyprus' TEA and Professional Services sector accounts for 8.7%. In Europe, the corresponding values are 3.4% for the Personal and Consumer Services sector and 9.7% for the Professional Services sector. Compared to the European average rate, TEA Cyprus has a higher involvement in the Wholesale and Retail, Personal and Consumer Services and Finance industrial sectors, whereas it has a lower involvement in other important sectors of the economy such as Information and Communication Technologies, Health, Education, Government and Social Services, and Manufacturing. Indicatively, only 4% of Cyprus' TEA is active in the Information and Communication Technology sector whereas the corresponding European average value for this sector is 6.1%. Similarly, only 2.6% of Cyprus'

**Figure 3.14:** Percentage of the population that received corresponding education and is involved in Total Early-Stage Entrepreneurial Activity (TEA)

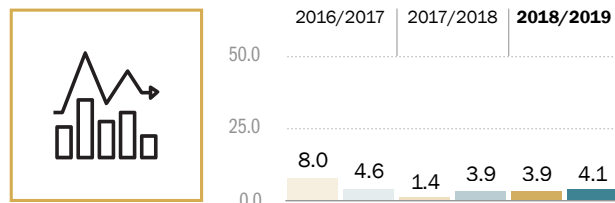


**Figure 3.15:** Total Early-Stage Entrepreneurial Activity (TEA) and industry sectors in Cyprus and in Europe

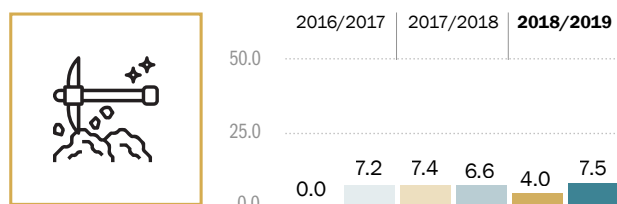
#### Agriculture



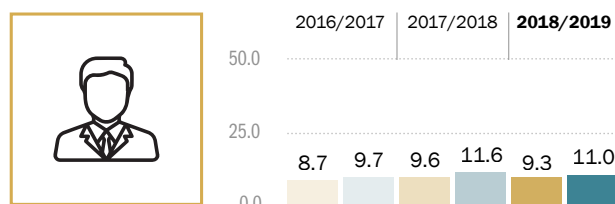
#### Finance



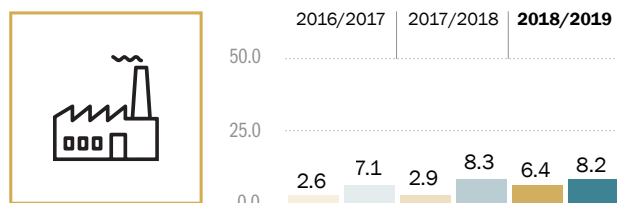
#### Mining



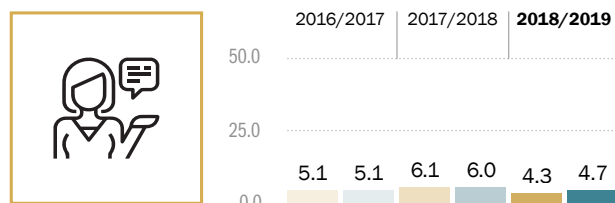
#### Professional Services



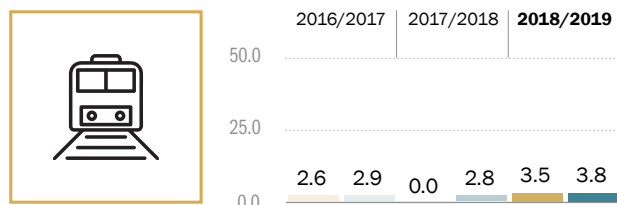
#### Manufacturing



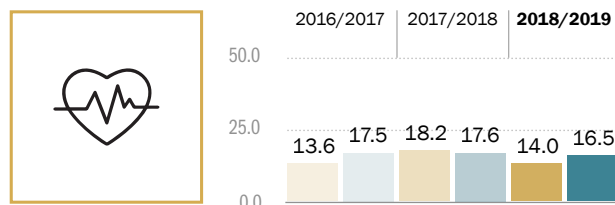
#### Administrative Services



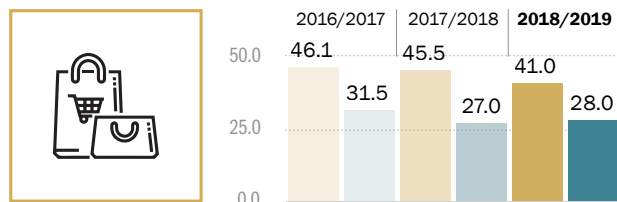
#### Transportation



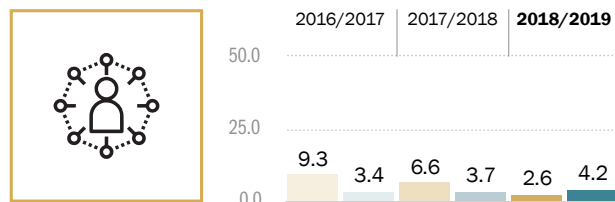
#### Health, Education, Government & Social Services



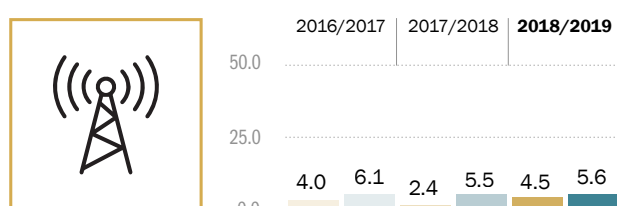
#### Wholesale/Retail



#### Personal/Consumer Services



#### Info/Communications Tech



TEA is involved in the Manufacturing sector, whereas in Europe the corresponding value is 7.1%. However, taking a retrospective view on Cyprus' activity in these sectors, there has been an encouraging increase of its activity across the years, as TEA activity in the Information and Communication Technology sector was 2.4% in 2017/2018 and 6.1% in 2018/2019. Figure 3.15 illustrates Cyprus' and Europe TEA activity with respect to each industrial sector.

## Job creation

One of the most important impacts of new entrepreneurial activity for the economy is the extent to which it will influence the job market through creating new job positions. To derive useful insights in this respect, GEM includes questions on the number of new job positions expected in the following years as a result of new entrepreneurial endeavors. In Cyprus, early-stage entrepreneurs seem to become more optimistic about the impact of their entrepreneurial activity with respect to new job openings. Compared to the previous years, this year's results demonstrate an increase in the number of the new job openings expected. More specifically, in 2018/2019, 43.6% of early-stage entrepreneurs denoted that they are not expecting their entrepreneurial activity to create any jobs in the next five years. However, in 2016/2017, 47.9% of TEA did not expect any job openings, whereas in 2017/2018 the corresponding value was 46.6%. This decrease is also reflected in the number of expected new job positions as the result of Cyprus' TEA. In 2018/2019, 22.4% expect more than six new job openings in the next five years as a result of their entrepreneurial activity. This is remarkably higher than the expectations recorded in the previous years as in 2017/2018, only 8% expected that their entrepreneurial activity would create more than six new job positions in the next five years. Compared to the corresponding European average rates, Cypriot early-stage entrepreneurs' expectations regarding new job positions are encouraging. In 2018/2019, in Cyprus 34% of TEA expects one to five new job positions in the next five years as a result of their entrepreneurial activity, whereas the corresponding European average rate is 30%. Similarly, compared to Europe, Cypriot entrepreneurs have higher expectations regarding more than six new job openings in the next five years, as 22.4% of Cyprus' TEA belongs to this category whereas the corresponding European average value is 20.6%. Overall, the results show that Cyprus' TEA is optimistic about the results of its activity and foresee growth of its entrepreneurial endeavors in the form of new job positions.

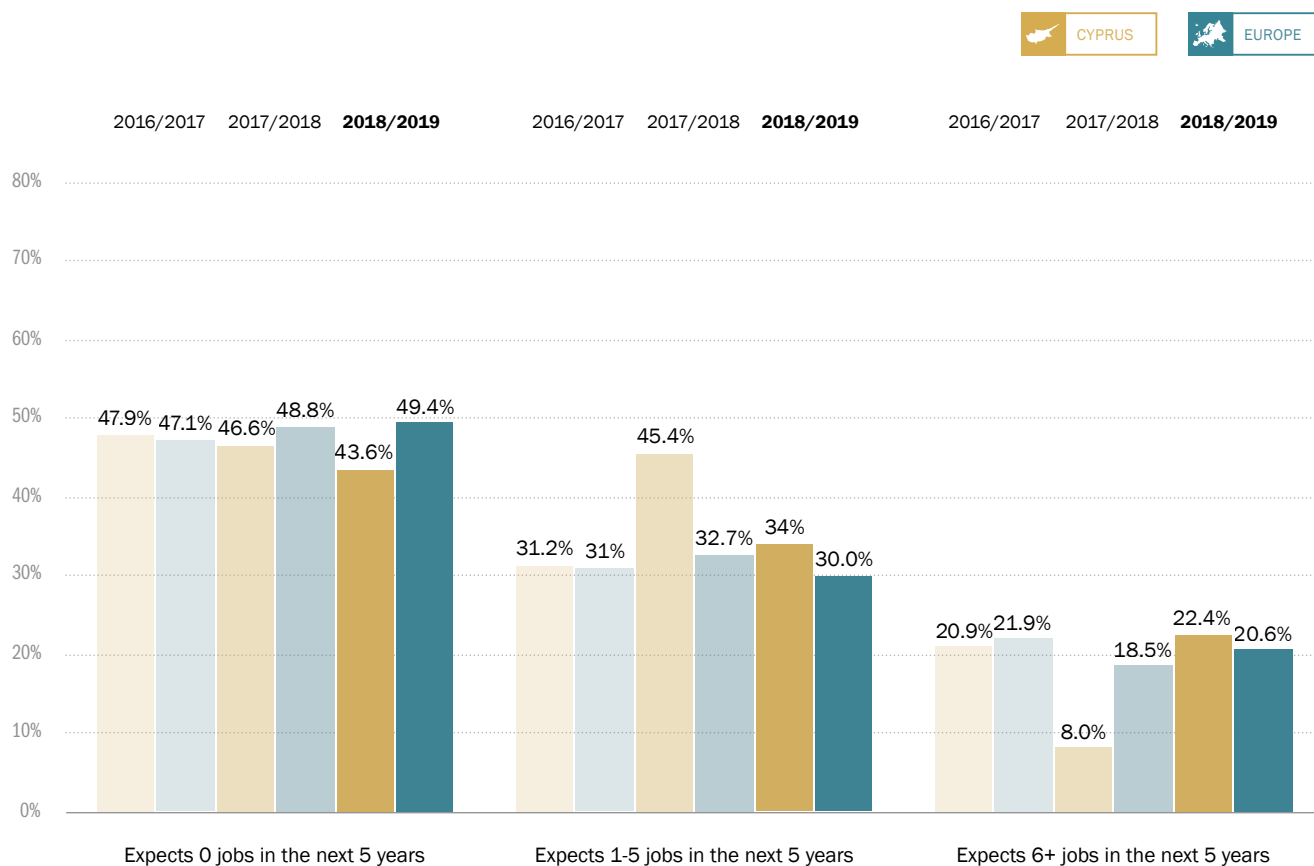
## Innovation and international orientation

Product innovation and extensive activity or use of high-tech are some of the factors indicating the potential of a start-ups ecosystem to make an impact on a country's economy. In 2018/2019, 38.6% of Cyprus' TEA considers that the product is innovative, i.e., the product is new to all or some customers and there are few or no competitors

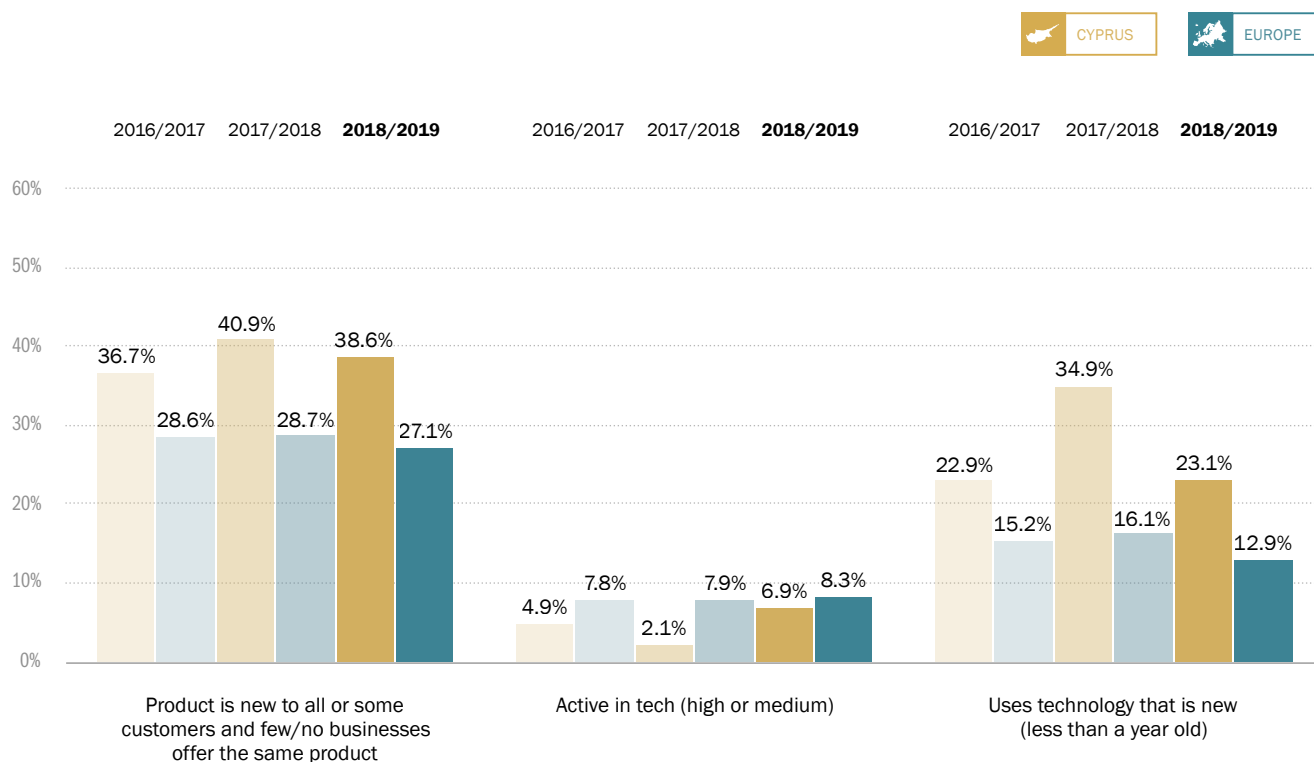
offering the same product. This rate is higher than the average European value concerning product innovation (27.1%). Cyprus' product innovation rate is slightly lower than last year's rate. In 2017/2018, in Cyprus, 40.9% of TEA entrepreneurs considered that their product was new to all or some of their customers, and few or no other businesses offer the same product whereas in 2016/2017, 36.7% of Cyprus' TEA shared the same belief that their product is new to all or some customers and that they have few competitors (Figure 3.16). Based on its product innovation rate, Cyprus is ranked 2nd among the countries of the European region. GEM also accounts for the use of high-tech, i.e., technology that is less than a year old. In 2018/2019, 23.1% of Cyprus' TEA uses high-tech as part of their entrepreneurial activity. Compared to the corresponding European average rate (12.9%), Cyprus' use of high-tech is higher by 10.2%. Along the same lines, GEM also records entrepreneurial activity relevant to tech. Even though only 6.9% of Cyprus' TEA is active in medium or high tech in 2018/2019, this is a number that has been increased across the years. In particular, Cyprus' TEA activity in tech was 2.1% in 2017/2018 and 4.9% in 2016/2017. Overall, GEM results are encouraging with respect to the level of product innovation associated with early-staged entrepreneurial activity. At the same time, Cyprus TEA activity is slowly becoming more tech-oriented, which may widen the country's potential to reach international markets.

This Section reported on the entrepreneurial activity of Cyprus across the past three years. Drawing on the insights extracted by other economies participating in this year's GEM, it compared findings with average values arising by all countries of the European regional area. Overall, the results demonstrate that Cyprus' TEA rate has been reduced. However, the reduction of the TEA rate is mainly due to the reduction in the rate of nascent entrepreneurs. Along the same lines, results indicate that compared to the previous years, there has been a larger number of exits due to an opportunity to sell. The majority of Cyprus' TEA is driven by opportunity and has received University education. Results also indicated that the number of early-stage entrepreneurs involved in medium/high tech tends to increase. Thus, it could be concluded that entrepreneurship in Cyprus is becoming more mature and, to some extent, is of higher quality.

**Figure 3.15:** Expected new job openings in Cyprus and Europe



**Figure 3.16:** Innovation and international orientation of entrepreneurial activity in Cyprus and Europe



## TYPICAL EARLY-STAGE ENTREPRENEUR IN CYPRUS 2018/2019

**3.9%**  
TEA INDEX

EXPECTS AT LEAST ONE JOB  
POSITION TO BE CREATED  
IN THE NEXT 5 YEARS

**56.4%**

ACTIVE IN THE WHOLESALE  
AND RETAIL SECTORS

**41.0%**

OF TEA

CONSIDERS PRODUCT AS NEW

**38.6%**

OF TEA

INVOLVED IN MEDIUM/HIGH TECH

**6.9%**

OF TEA

45-54 YEARS OLD:  
THE AGE COHORT WITH LARGEST INVOLVEMENT IN TEA

**5.2%**

INVOLVED IN TEA



INVOLVED IN TEA

RATIO OF  
FEMALE/MALE  
IN TEA

**0.6**



# COUNTRY PROFILE - CYPRUS 2018/2019



**Population:** 0.9 million (2018)

**GDP growth:** 3.9% (2017, annual % change)

**GDP per capita:** 37.2 thous. (2017; PPP, international \$)

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

**World Bank Ease Of Doing Business Rating (2018):** 71.71/100; **Rank:** 57/190

**World Bank Starting a Business Rating (2018):** 91.24/100; **Rank:** 52/190

**World Economic Forum Global Competitiveness Rating (2018):** 44/140

**World Economic Forum Income Group Average (2018):** High

## Composite Index

	Value
Entrepreneurial Spirit Index	0.03

## Self-Perceptions About Entrepreneurship

	Value %
Perceived opportunities	45.9
Perceived capabilities	45.9
Fear of failure	48.5
Entrepreneurial intentions	15.3

## Activity

	Value %
Total Early-stage Entrepreneurial Activity (TEA)	
TEA 2018/2019	3.9
TEA 2017/2018	7.3
TEA 2016/2017	12.0
Established business ownership rate	6.1
Entrepreneurial Employee Activity – EEA	5.4

## Motivational Index

	Value %
Improvement-Driven Opportunity/Necessity Motive	5.7

## Gender Equality

	Value
Female/Male TEA Ratio	0.60
Female/Male Opportunity Ratio	1.04

## Entrepreneurship Impact

	Value %
Job expectations (6+)	22.4
Innovation	38.6
Industry (% in Business Services Sector)	25.4

## Societal Value About Entrepreneurship

	Value %
High status to entrepreneurs	67.6
Entrepreneurship a good career choice	69.9

## Strengths of Cyprus' Entrepreneurship Ecosystem

	Value
Physical infrastructure	7.2
Commercial and legal infrastructure	5.9
Internal market burdens or entry regulation	5.9

Source: GEM 2018/2019

# THE ENTREPRENEURSHIP ECOSYSTEM

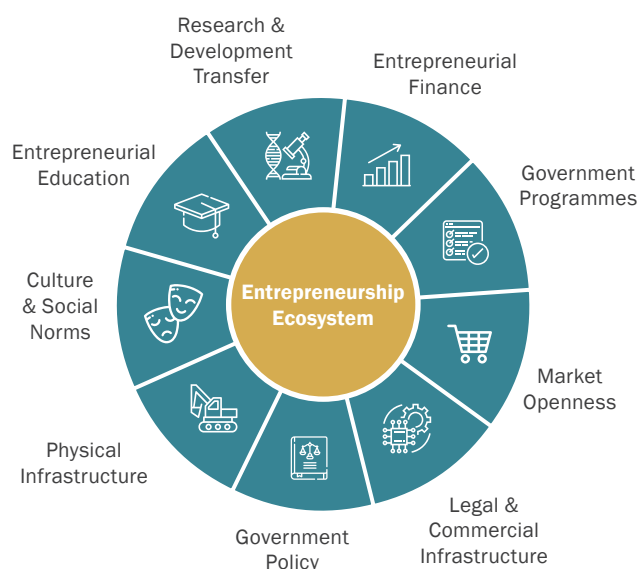


Untitled by Martin Petrossian

To provide an integrated understanding of the entrepreneurship landscape in each economy, beyond the APS, GEM methodology also includes the National Expert Survey (NES). While APS captures the views and perceptions of the population on entrepreneurship, NES invites experts to evaluate specific national conditions with respect to the entrepreneurship ecosystem. In particular, it captures different environmental features of the ecosystem as these could serve as proxies on understanding entrepreneurial attitude and activity. The Entrepreneurial Framework Conditions (EFCs) framing the survey include questions on entrepreneurial finance, government policies, taxes and bureaucracy, government programs, school and 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 illustrates the EFCs included in NES 2018/2019. This section presents the informed opinions of Cyprus' national experts regarding the entrepreneurship ecosystem in Cyprus. NES invites respondents to reflect on the conditions that foster (or constrain) entrepreneurial activity and development, following a 9-likert scale. Then, the rate of each framework condition can be determined, based on the average of the responses. More information on the NES methodology followed, can be found in Section 2 of this report. Table 4.1 summarizes the mean scores for each of the nine entrepreneurial framework conditions in Cyprus and in Europe.

NES results show that the Entrepreneurship Framework of Cyprus includes both strengths and weaknesses. The survey shows that physical infrastructure and access to commercial and legal infrastructure are the strongest framework conditions of Cyprus' ecosystem. This conclusion has been consistent across the years. According to the national experts, perceptions about the quality of the physical infrastructure are constantly improving with time. In 2018/2019, physical infrastructure's rating is 7.2 out of 9, which is higher than the previous two years (6.6 out of 9 in 2017/2018, 6.2 out of 9 in 2016/2017). Similarly, the quality of commercial and legal infrastructure has improved as this year's rating is 5.9, 0.8 higher than the previous years (5.1 out of 9 in both 2016/2017 and 2017/2018). Cyprus' level of physical infrastructure, commercial and legal infrastructure scores are relatively aligned with European rates, as the average rating of the physical infrastructure framework condition in Europe is 7.3, and the rating of its commercial and legal infrastructure is 5.8 points. These conclusions provide evidence for the high-quality level of Cyprus' physical, commercial and legal infrastructure. Entrepreneurial education at post-school level is another strength of the ecosystem, as this year's rating is 5.9 points. Cyprus' entrepreneurial education seems to have been remarkably improved compared to last year, as the rate has increased by 1.1 points. Compared to the European

**Figure 4.1:** Entrepreneurial Framework Conditions (EFCs)<sup>5</sup>



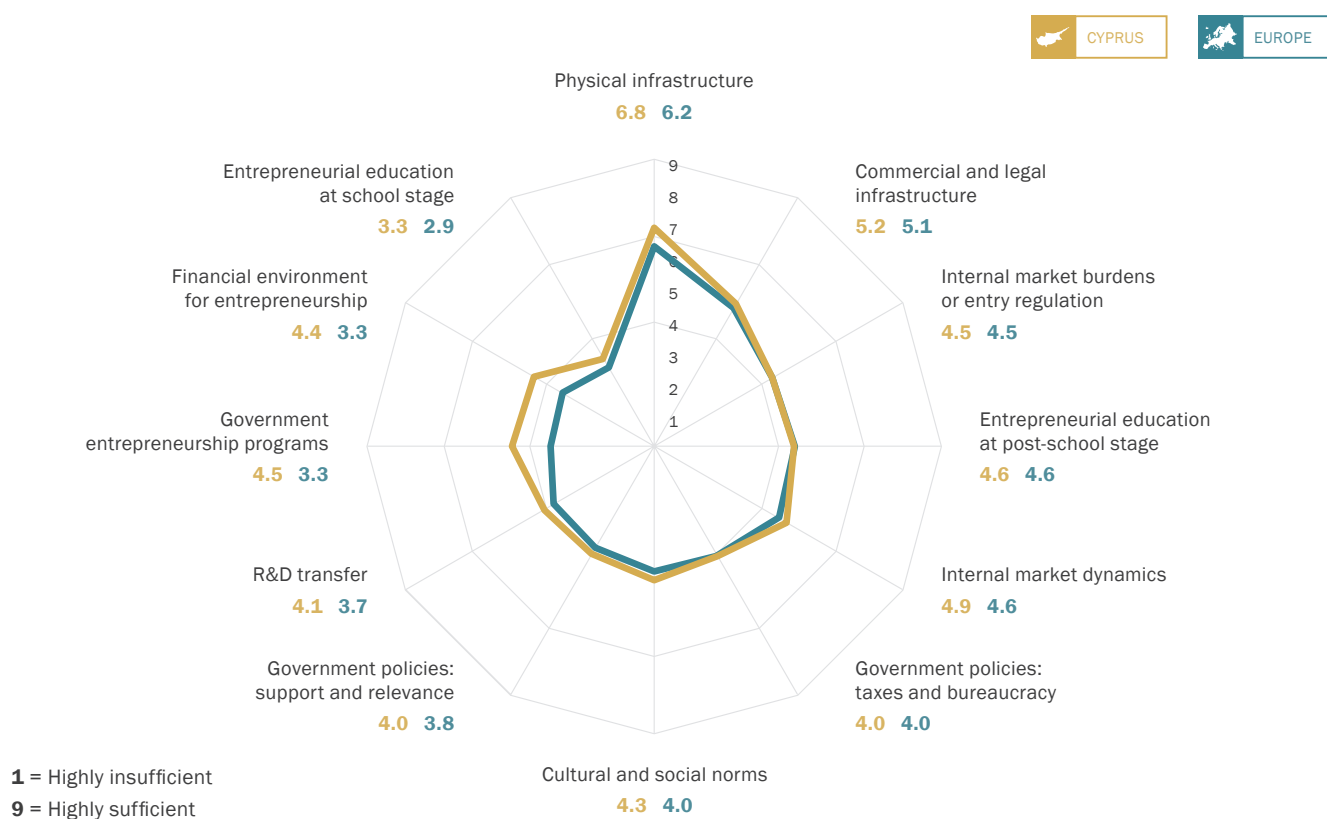
average rate, this rate is higher by 0.6. Along the same lines, conditions relevant to government policies regarding taxes and bureaucracy have been improved. In particular, in 2018/2019 the framework condition rating is 5.7, 1.6 points higher compared to last year's rating. Another strength of the ecosystem are government policies with regards to support and relevance. Compared to the previous years, in 2018/2019, the rate of government policies on support and relevance has been increased to 5.2 out of 9 (1.1 points rise since last year). The rate of this framework condition is higher compared to the corresponding European average value (4.7 out of 9).

NES also identified the weaknesses of the entrepreneurship ecosystem of Cyprus for 2018/2019. The most important weakness is entrepreneurial education at the school stage. Even though this condition has improved compared to the previous years, it remains the main weakness of the Cypriot entrepreneurial ecosystem. In particular, this year's rate is 3.6 out of 9, whereas it was 2.9 out of 9 in 2016/2017 and 3.1 out of 9 in 2017/2018. Other key weaknesses are the limited government entrepreneurship programs and the financial environment for entrepreneurship. Regarding government entrepreneurship programs, despite the fact that the condition has been improved compared to last year (4.1 in 2018/2019, 3.4 in 2017/2018 and 3.3 in 2016/2017), the rate is still lower than the 4.5 points threshold as well as the corresponding European average value (5.2 out of 9). Similarly, the financial environment for entrepreneurship has been improved compared to the previous year (4.2 in 2018/2019, 3.3 in 2017/2018 and 2016/2017). These framework conditions are the core weaknesses of Cyprus' entrepreneurship ecosystem. The scores for each of these categories are lower than the corresponding European benchmark rates as illustrated in Figure 4.4. Figures 4.2-4.4 and 4.3 provide a graphical representation for the rates recorded across the last three years.

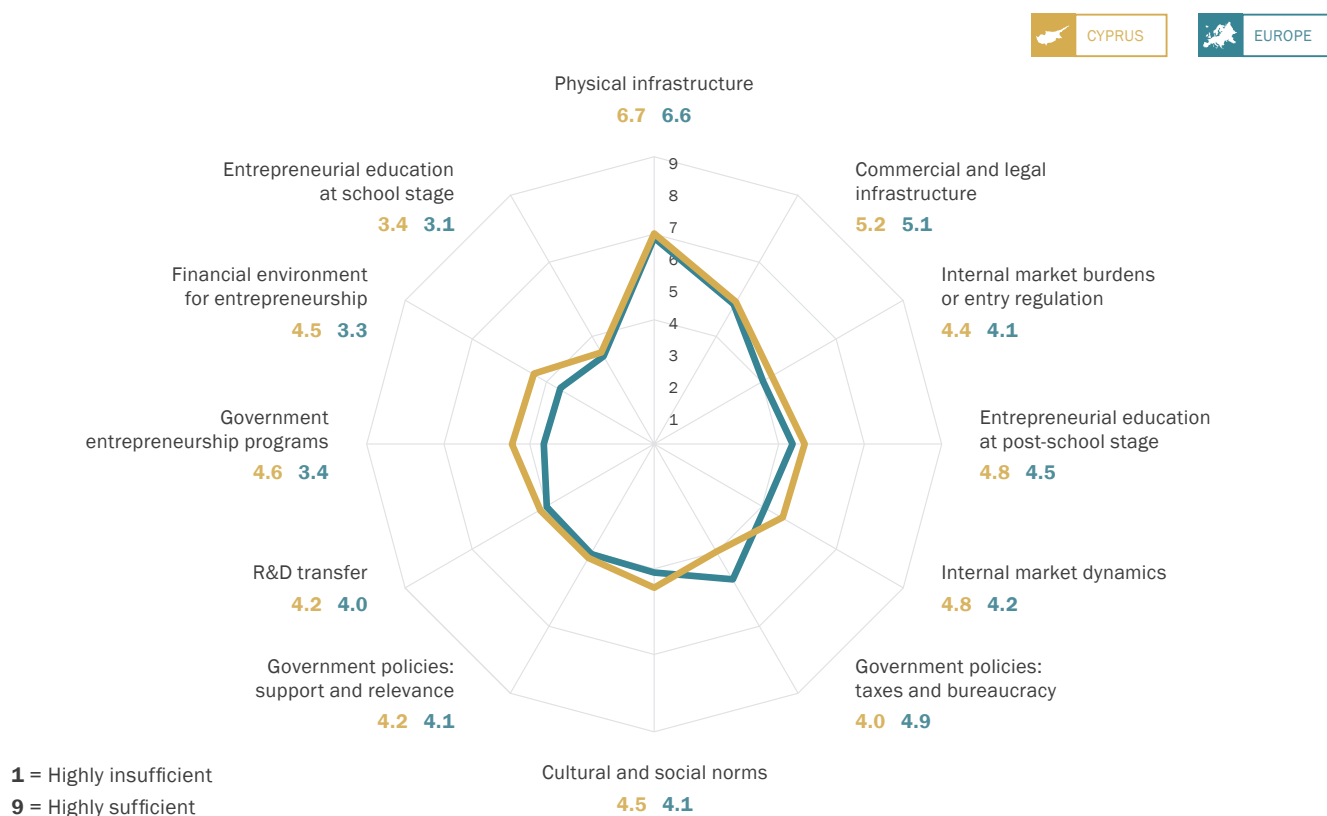
5 Global Entrepreneurship Monitor (GEM) Report 2018/2019



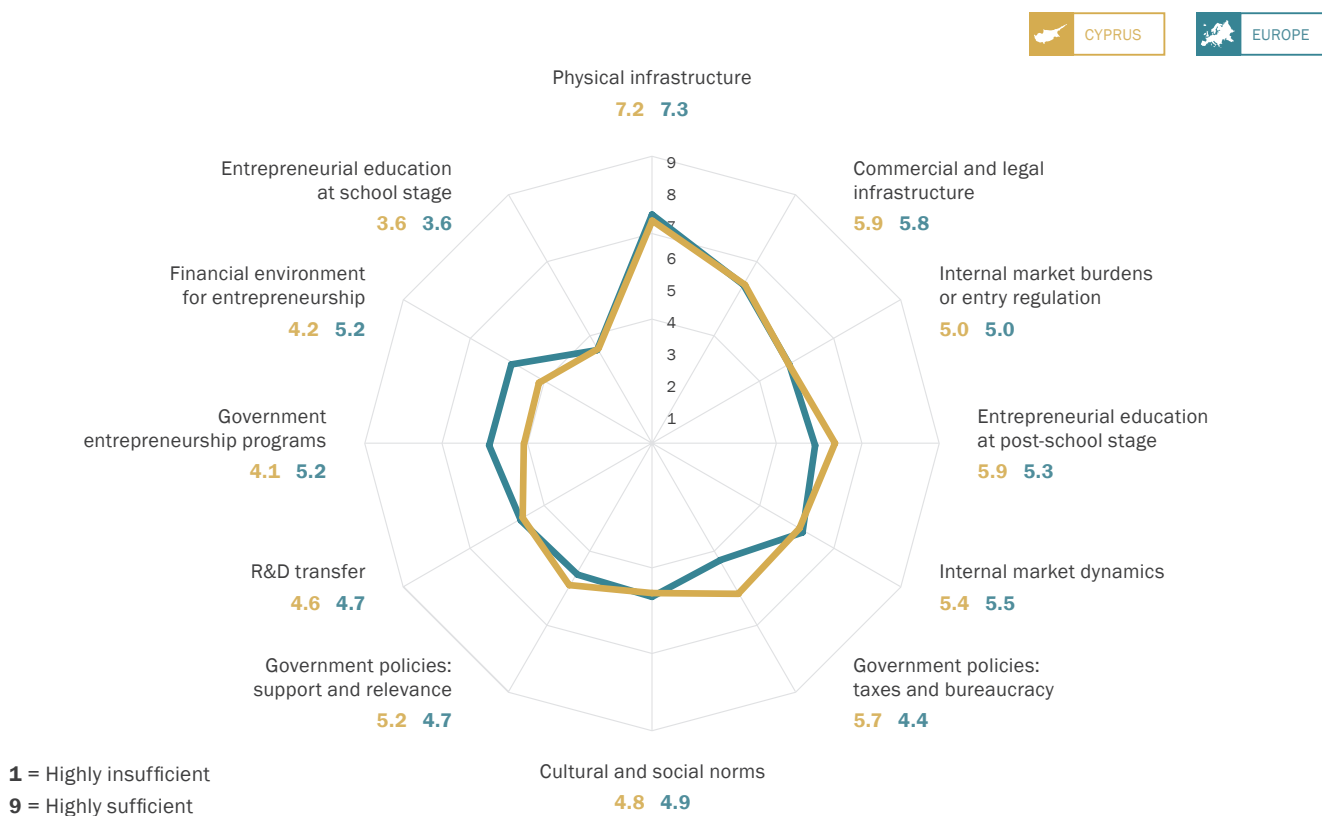
**Figure 4.2:** Entrepreneurial framework condition scores for Cyprus and Europe in 2016/2017<sup>6</sup>



**Figure 4.3:** Entrepreneurial framework condition scores for Cyprus and Europe in 2017/2018<sup>7</sup>



**Figure 4.4:** Entrepreneurial framework condition scores for Cyprus and Europe in 2018/2019



## 4.1 STRENGTHS AND LIMITATIONS OF THE ENTREPRENEURIAL ECOSYSTEM IN CYPRUS

### Physical Infrastructure

Cyprus features an advanced and modern physical infrastructure that includes sophisticated road, air and sea transport solutions and services. Consistently during the last three years, the physical infrastructure is regarded as the most important strength of its entrepreneurial ecosystem. NES results show that Cyprus' infrastructure is improving. Regarding the perception that Cyprus' physical infrastructure (roads, utilities, communications, water disposal) provides good support for new and growing firms, experts view that the infrastructure is a strength of the ecosystem (6.3 out of

9 in 2018/2019, 6.4 out of 9 in 2017/2018). Similarly, they perceive that new businesses are able to quickly gain good access to communications (telephone, internet, etc.) with a rating of 7.2 out of 9 in 2018/2019 and that new businesses can gain good access to utilities (gas, water, electricity, sewer) within a month (7.3 out of 9 in 2018/2019). Despite the high quality of the infrastructure, experts view that one of the major reasons preventing entrepreneurial activity is "the limited transport options for going abroad".

### Commercial and services infrastructure

A country's commercial and services infrastructure is a proxy of the quality of services available in its business ecosystem. According to Eurostat, 57.1% of Cyprus' human capital (aged 30-34 years old) has received tertiary education. Therefore, Cyprus ranks second in the EU in terms of proportion of the population with tertiary education<sup>8</sup>. Featuring highly trained human resources alongside with a large number of legal offices and top accounting firms, Cyprus can claim a high-quality commercial and services infrastructure. This is also reflected in the results of NES. National experts view that it is easy for new and growing firms to get good, professional legal and accounting services (6.1 out of 9 in 2018/2019). Similarly, they perceive that getting good banking services (checking accounts, foreign exchange transactions, letters of credit) in Cyprus is easy (6.1 out of 9). While the ecosystem

6 Global Entrepreneurship Monitor (GEM) Report 2016/2017

7 Global Entrepreneurship Monitor (GEM) Report 2017/2018

8 Europe educational attainment statistics 2019, Eurostat, 1 September 2019

encapsulates sufficient subcontractors, suppliers and consultants to support new and growing firms (5.5 out of 9), in alignment with last year's results, subcontracting, supplying and consulting services are considered costly for new or growing firms (4.1 out of 9). As highlighted by the experts, Cyprus offers "high quality professional services which are accessible for the majority of the businesses". Table 4.2 summarizes the questions framing the commercial and service infrastructure condition.

### Entrepreneurial education and training

According to Eurostat, Cyprus holds a highly educated human

capital compared to the rest of the countries in the European Union (EU). In particular, it is ranked third in the EU in terms of proportion of the population with tertiary education with regards to the 30 to 34 age group. The government has formulated several policies that regard the enhancement of education from an entrepreneurial perspective. For example, the Ministry of Education promotes entrepreneurial activities and competition at school and university levels to raise awareness on entrepreneurship, build creativity, critical thinking and other related skills and competencies to students of all ages (e.g. "Digital Entrepreneurship Competition", "Student Enterprise", "Spending Smart" etc.).

**Table 4.1:** Physical Infrastructure<sup>9</sup>

	CYPRUS		EUROPE	
	2016/2017	2017/2018	2018/2019	
The physical infrastructure (roads, utilities, communications, water disposal) provides good support for new and growing firms.	5.9	6.2	6.4	6.0
It is not too expensive for a new or growing firm to get good access to communications (phone, Internet, etc.).	5.0	7.0	5.8	6.7
A new or growing firm can get good access to communications (telephone, internet, etc.) in about a week.	7.2	7.0	7.2	6.9
New and growing firms can afford the cost of basic utilities (gas, water, electricity, sewer).	5.3	6.6	6.0	6.6
New or growing firms can get good access to utilities (gas, water, electricity, sewer) in about a month.	7.1	6.7	7.1	6.8

(scale: 1=completely false, 9=completely true)

**Table 4.2:** Commercial and services infrastructure<sup>9</sup>

	CYPRUS		EUROPE	
	2016/2017	2017/2018	2018/2019	
There are enough subcontractors, suppliers, and consultants to support new and growing firms.	5.1	5.9	5.2	5.9
New and growing firms can afford the cost of using subcontractors, suppliers, and consultants.	3.5	4.0	3.6	4.1
It is easy for new and growing firms to get good subcontractors, suppliers, and consultants.	4.9	4.7	4.5	4.7
It is easy for new and growing firms to get good, professional legal and accounting services.	6.3	5.9	6.4	5.8
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	5.9	5.8

(scale: 1=completely false, 9=completely true)

However, national experts stress the need to further improve entrepreneurial education. Reflecting on primary and secondary education in Cyprus, they consider that it does not include activities or courses that encourage creativity, self-sufficiency and personal initiative (3.0 out of 9 in 2016/2017, 3.2 out of 9 in 2017/2018), it does not provide adequate instruction in market economic principles (3.0 out of 9 in 2016/2017 and 3.4 out of 9 in 2017/2018), nor does it provide adequate attention to entrepreneurship and new firm creation (2.0 out of 9 in 2016/2017 and 2.8 out of 9 in 2017/2018). Similarly, experts perceive that post-school entrepreneurial education is limited. In particular, they stress that at post-school level, there is limited business and management education (5.5 out of 9 in 2016/2017, 5 out of 9 in 2017/2018) and limited vocational, professional and continuing education (5.0 out of 9 in 2016/2017 and 3.9 out of 9 in 2017/2018). Likewise, they perceive that universities provide limited preparation to individuals for proceeding with entrepreneurial endeavors and growing new firms after their studies. Table 4.6 reflects on the perceptions of national experts about school and post-school education with respect to entrepreneurship in Cyprus and in Europe, in both 2016/2017 and 2017/2018. Although experts' perceptions towards entrepreneurial education at school

level have improved compared to last year's results, their perceptions towards entrepreneurial post-school education remained stable or have decreased. Overall, it could be concluded that primary and secondary education in Cyprus provides limited orientation towards entrepreneurship and places limited emphasis on the development of the skills necessary for proceeding with entrepreneurial endeavors. As one of the experts noted, there is an "education gap - lack of education on entrepreneurship from early ages. Children need to be channeled towards creativeness-innovation-entrepreneurship-creation from early stages - away from the safety of an employee salary".

### Government policies

Government policies on the legal and tax schemes largely contribute in formatting an attractive environment for new businesses. Cyprus offers an attractive, transparent and stable tax regime. With one of the lowest corporate income tax rates in the European Union (12.5%), it can serve as a reliable and affordable host for new business endeavors. Across the years, national experts agree that Cyprus' tax scheme is supportive for new entrepreneurial endeavors as they view that the amount of taxes applicable to new businesses is not a burden for new and growing enterprises. This opinion is becoming stronger across the years as the mean rating for this question is 7.1 out of 9 in 2018/2019, 6.5 out of 9 in 2017/2018 and 6.1 out of 9 in 2016/2017. Experts also agree that taxes and other government regulations are applied to new and growing firms in a



9 Item average values are not weighted

**Table 4.3: Government Policies<sup>9</sup>**

Government policies	CYPRUS		EUROPE	
	2016/2017	2017/2018	2018/2019	
Government policies (e.g., public procurement) consistently favor new firms.	3.4	3.1	3.8	3.4
The support for new and growing firms is a high priority for policy at the national government level.	4.4	4.5	4.9	4.7
The support for new and growing firms is a high priority for policy at the local government level.	3.4	4.3	3.5	4.5
New firms can get most of the required permits and licenses in about a week.	1.9	3.6	2.1	3.3
The amount of taxes is NOT a burden for new and growing firms.	6.1	4.0	6.5	4.1
Taxes and other government regulations are applied to new and growing firms in a predictable and consistent way.	5.3	4.4	6.6	4.5
Coping with government bureaucracy, regulations, and licensing requirements is not unduly difficult for new and growing firms.	3.2	3.9	4.2	3.9

(scale: 1=completely false, 9=completely true)

**Table 4.4:** Entrepreneurial education<sup>9</sup>

				 CYPRUS	 EUROPE	
School education						
Teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative.	3.0	3.6	3.2	3.6	3.3	3.5
Teaching in primary and secondary education provides adequate instruction in market economic principles.	3.0	3.3	3.4	3.4	3.6	3.3
Teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation.	2.0	2.9	2.8	3.1	2.8	2.9
Post-school education						
Colleges and universities provide good and adequate preparation for starting up and growing new firms.	4.5	4.3	4.5	4.4	5.2	4.4
The level of business and management education provides good and adequate preparation for starting up and growing new firms.	5.5	4.9	5.0	5.1	6.1	5.1
The vocational, professional, and continuing education systems provide good and adequate preparation for starting up and growing new firms.	5.0	4.6	3.9	4.7	4.4	4.8
				2016/2017	2017/2018	2018/2019

(scale: 1=completely false, 9=completely true)

predictable and consistent way (6.6 out of 9). Although experts perceive that support for new and growing firms is a high priority at government level (5.4 out of 9), they believe that it is not a high priority at local government level (4.1 out of 9). Experts also persist on their opinion that it is difficult for new firms to get the required permits and licenses within a week (2.4 out of 9), despite the fact that the process of setting up a business in Cyprus requires approximately seven to twelve working days.

### Entrepreneurial education and training

The 2018/2019 NES results show that entrepreneurial education at post-school level in Cyprus has improved. Experts perceive that the business and management education provided at post-school level is adequate for preparing the population for start-ups and growing firms. In particular, their perception regarding education across the years is improving (6.1 out of 9 in 2018/2019, 5.0 out of 9 in 2017/2018). Along the same lines, experts perceive that colleges and universities are adequately preparing students for starting up and growing new firms (5.2 out of 9 in 2018/2019, 4.5 out of 9 in 2017/2018). While the post-school entrepreneurial educational landscape is improved, the quality of entrepreneurial education at school level remains low. Experts perceive that primary and secondary education in Cyprus lack sufficient activities and courses that encourage creativity, self-sufficiency and personal initiative (3.3 out of 9 in 2018/2019, 3.2 out of 9 in 2017/2018, 3.0 out of 9 in 2016/2017). As one of

the experts highlighted, there is “lack of national strategy or guidance regarding skills that need to be developed within the country”. Similarly, experts view that school-level education does not provide adequate instruction in market economic principles (3.6 out of 9 in 2018/2019, 3.4 out of 9 in 2017/2018, 3.0 out of 9 in 2016/2017), nor does it provide adequate attention to entrepreneurship and new firm creation (2.8 out of 9 in 2018/2019, 2.8 out of 9 in 2017/2018, 2.0 out of 9 in 2016/2017). Table 4.4 summarizes the perceptions of national experts about school and post-school entrepreneurial education in Cyprus and in Europe. Overall, this year’s results record an improvement on the entrepreneurial education provided at post-school level. The improved perceptions of the experts contributed to transforming the entrepreneurial education at post-school level into a strength of the ecosystem for 2018/2019. However, aligned with the results of the previous years, this year’s results show that entrepreneurial education at school-level is limited. Despite the small increase, the rates of all questions relevant to primary and secondary school education are below average, signifying in this way that primary and secondary education in Cyprus does not sufficiently orient pupils towards entrepreneurship and does not focus on the development of the skills necessary for proceeding with entrepreneurial endeavors.



**Table 4.5: Government entrepreneurship program<sup>9</sup>****Government entrepreneurship programs**

A wide range of government assistance for new and growing firms can be obtained through contact with a single agency.

2.8 4.1 2.9 4.1 3.5 4.2

Science parks and business incubators provide effective support for new and growing firms.

3.1 5.3 3.2 5.5 3.5 5.5

There is an adequate number of government programs for new and growing businesses.

3.9 4.9 3.8 5.0 4.1 5.1

The people working for government agencies are competent and effective in supporting new and growing firms.

3.2 4.4 3.5 4.6 3.5 4.6

Almost anyone who needs help from a government program for a new or growing business can find what they need.

3.1 4.1 3.2 4.2 3.4 4.2

Government programs aimed at supporting new and growing firms are effective.

3.1 4.2 3.6 4.4 3.9 4.5

2016/2017 2017/2018 2018/2019

(scale: 1=completely false, 9=completely true)

**Table 4.6: Access to finance<sup>9</sup>****Access to finance**

There is sufficient equity funding available for new and growing firms.

3.3 4.6 3.4 4.6 4.0 4.8

There is sufficient debt funding available for new and growing firms.

3.5 4.7 3.7 4.9 4.4 4.8

There is sufficient government subsidies available for new and growing firms.

4.8 5.0 4.3 5.1 4.9 5.2

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 5.0 4.9 5.1 5.0

There is sufficient professional Business Angels funding available for new and growing firms.

4.0 4.5 4.2 4.6 4.2 4.8

There is sufficient venture capitalist funding available for new and growing firms.

2.3 4.5 2.5 4.5 3.2 4.7

There is sufficient funding available through initial public offerings (IPOs) for new and growing firms.

2.3 3.5 2.4 3.5 2.7 3.8

There is sufficient private lenders' funding (crowdfunding) available for new and growing firms.

2.1 4.3 2.7 4.5 2.8 4.7

2016/2017 2017/2018 2018/2019

(scale: 1=completely false, 9=completely true)

**Table 4.7:** Cultural and social norm<sup>9</sup>

Cultural and social norms	CYPRUS		EUROPE	
	2016/2017	2017/2018	2018/2019	2018/2019
The national culture is highly supportive of individual success achieved through own personal efforts.	4.6	4.4	4.7	4.8
The national culture emphasizes self-sufficiency, autonomy, and personal initiative.	4.5	4.4	4.5	4.6
The national culture encourages entrepreneurial risk-taking.	3.2	3.5	3.3	3.9
The national culture encourages creativity and innovativeness.	3.6	4.6	3.8	4.7
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	4.2	4.6

(scale: 1=completely false, 9=completely true)

### Government entrepreneurship programs

Government entrepreneurship programs is a weakness of the entrepreneurial ecosystem in Cyprus. Experts perceive that government assistance for new and growing firms - which can be obtained through contact with a single agency - remains limited, despite the slight improvement across the years (3.5 out of 9 in 2018/2019, 2.9 out of 9 in 2017/2018 and 2.8 out of 9 in 2016/2017). There are similar perceptions regarding the support provided by science parks and business incubators (3.5 out of 9 in 2018/2019, 3.2 out of 9 in 2017/2018 and 3.1 out of 9 in 2016/2017). Government programs for new and growing firms are also a weakness of the ecosystem (4.1 out of 9 in 2018/2019, 3.8 out of 9 in 2017/2018 and 3.9 out of 9 in 2016/2017). Experts perceive that it is difficult for anyone who needs help from a government program for a new or growing business to find what they need (3.4 out of 9 in 2018/2019, 3.2 out of 9 in 2017/2018 and 3.1 out of 9 in 2016/2017). Despite the lack of adequate government entrepreneurship programs, there are private initiatives that can support entrepreneurship. As one of the experts noted, "The existence of infrastructure and services offered by the private sector (e.g., incubators, accelerators etc.) is a strength of the ecosystem". Table 4.6 summarizes all items used for measuring the government entrepreneurship programs condition. Although results concerning government entrepreneurship programs have



slightly improved compared to the previous years, they remain low, indicating that Cyprus needs to take further action in order to improve its government-supported entrepreneurship programs.

### Financial environment for entrepreneurship

The financial environment for entrepreneurship is of vital importance for the existence and growth of entrepreneurial activities. Compared to last year, financial environment for entrepreneurship has improved by 0.9. However, it remains a weakness of the entrepreneurial ecosystem in Cyprus. Similar evidence was extracted by the APS regarding business discontinuance, as about one in four business shutdowns was associated to problems in accessing finance (Figure 3.11). Similarly to the previous years, experts perceive that new and growing businesses are able to access relatively sufficient financial support by informal investors such as family members, friends or colleagues (5.1 out of 9 in 2018/2019, 5.0 out of 9 in 2017/2018 and 4.4 out of 9 in 2016/2017) and consider this as a strength of the financial environment condition. Experts perceive that government-sponsored financial support offered mainly through subsidies such as the "Support Aid for Young Entrepreneurs"<sup>10</sup> is also a positive aspect of this condition (4.9 out of 9 in 2018/2019, 4.2 out of 9 in 2017/2018 and 4.8 out of 9 in 2016/2017). However, they perceive that access to finance provided by the private sector, although improving, remains very limited and lower than the relevant European average values. In particular, there is limited equity funding (4.0 out of 9 in 2016/2017 and 3.4 out of 9 in 2017/2018 and 3.3 out of 9 in 2016/2017), debt funding (4.4 out of 9 in 2018/2019, 3.7 out of 9 in 2017/2018 and 3.5 out of 9 in 2016/2017), funding by business angels (4.2 out of 9 in 2018/2019, 4.2 out of 9 in 2017/2018 and

<sup>10</sup> Support Scheme for Youth Entrepreneurship, Ministry of Energy, Commerce, Industry and Tourism

**Table 4.8:** Internal market dynamics and burdens<sup>9</sup>

Internal market dynamics and burdens		 CYPRUS		 EUROPE		
The markets for consumer goods and services change dramatically from year to year.	4.6	5.0	4.2	4.8	4.9	5.0
The markets for business-to-business goods and services change dramatically from year to year.	4.6	4.8	4.3	4.8	4.8	4.9
New and growing firms can easily enter new markets.	4.0	4.5	4.4	4.6	4.6	4.6
New and growing firms can afford the cost of market entry.	3.6	4.0	3.5	4.0	3.9	4.1
New and growing firms can enter markets without being unfairly blocked by established firms.	4.2	4.5	4.0	4.4	4.4	4.5
The anti-trust legislation is effective and well enforced.	4.8	4.8	4.9	4.8	5.1	4.8
	2016/2017		2017/2018		2018/2019	

(scale: 1=completely false, 9=completely true)

4.0 out of 9 in 2016/2017) and venture capital funding (3.2 out of 9 in 2018/2019, 2.5 out of 9 in 2017/2018 and 2.3 out of 9 in 2016/2017). Along the same lines, there is limited funding available for new and growing businesses in Cyprus, in the form of initial public offerings (IPOs) (2.7 out of 9 in 2018/2019, 2.4 out of 9 in 2017/2018 and 2.3 out of 9 in 2016/2017) and private lenders' funding (crowdfunding) (2.8 out of 9 in 2018/2019, 2.7 out of 9 in 2017/2018 and 2.1 out of 9 in 2016/2017). Table 4.6 summarizes the mean scores for the questions measuring access to finance.

### Cultural and social norms



Despite the encouraging results regarding societal values and entrepreneurship captured by APS (Figure 3.1), NES results are less encouraging as they indicate the need for further action regarding cultural and social norms relevant to entrepreneurship. Overall, Cyprus' cultural and social perception towards entrepreneurship encapsulates signs of improvement when compared to previous years. For instance, experts' view that cultural support is lower than desired for successful entrepreneurs who have achieved through their own personal efforts has slightly improved (4.9 out of 9 in 2018/2019, 4.7 out of 9 in 2017/2018 and 4.6 out of 9 in 2016/2017). Similarly, the view regarding whether the national culture emphasizes on self-sufficiency, autonomy, and personal initiative is also slightly improved (4.7 out of 9 in 2018/2019, 4.5 out of 9 in 2017/2018 and 4.5 out of 9 in 2016/2017). However, the propensity to entrepreneurial risk-taking remains low (3.6 out of 9 in 2018/2019, 3.3 out of 9 in 2017/2018 and 3.2 out of 9 in 2016/2017) and there is limited encouragement for entrepreneurial creativity and innovativeness (4.1 out of 9

in 2018/2019, 3.8 out of 9 in 2017/2018 and 3.1 out of 9 in 2016/2017). This could be linked with the high rate of fear of failure recorded in Cyprus (c.f. Figure 3.3) as well as the overall culture of the society and youngsters. As one of the experts noted, "Culture and mindset of young Cypriots and society are towards safe employment rather than entrepreneurship. As a nation, we lack confidence that yes, we can do it". Another expert even considered that "The financial crisis has helped the young to see beyond banking and government positions". Table 4.8 summarizes the average values for each item related to cultural and social norms for Cyprus and Europe.

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

NES also measures the internal market dynamics and internal market burdens or entry regulation in each economy participating in the study, as these can serve as a useful proxy for understanding market dynamics and openness. Experts are positive regarding whether new and growing firms can easily enter new markets (4.6 out of 9 in 2018/2019, 4.4 out of 9 in 2017/2018 and 4.0 out of 9 in 2016/2017). However, they were pessimistic regarding whether new and growing firms can afford the cost of new market entry (3.9 out of 9 in 2018/2019, 3.5 out of 9 in 2017/2018 and 3.6 out of 9 in 2016/2017). The change in markets of consumer goods and services is not dramatic this year (4.9 out of 9 in 2018/2019, 4.3 out of 9 in 2017/2018 and 4.6 out of 9 in 2016/2017) and the experts agree that the anti-trust legislation is effective and well enforced; in fact, results show that it is improving across the years (5.1 out of 9

**Table 4.9:** Research and Development Transfer<sup>16</sup>

Research and Development Transfer		 CYPRUS		 EUROPE		
New technology, science, and other knowledge are efficiently transferred from universities and public research centers to new and growing firms.	3.1	4.0	3.5	4.0	3.6	4.2
New and growing firms have just as much access to new research and technology as large, established firms.	3.2	3.8	3.5	3.8	4.1	3.9
New and growing firms can afford the latest technology.	5.0	3.8	5.3	3.9	5.5	3.7
There are adequate government subsidies for new and growing firms to acquire new technology.	4.0	4.2	3.7	4.1	4.1	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	4.4	4.9	4.2	4.9
There is good support available for engineers and scientists to have their ideas commercialized through new and growing firms.	3.0	4.3	3.0	4.4	3.5	4.5
	2016/2017		2017/2018		2018/2019	

(scale: 1=completely false, 9=completely true)

in 2018/2019, 4.9 out of 9 in 2017/2018 and 4.8 out of 9 in 2016/2017). Table 4.8 summarizes the results regarding the internal market dynamics, internal market burdens and entry regulation condition.

### Research and Development (R&D) Transfer

Connecting research results with industry increases the potential of the economy to innovate. Thus, measuring the transfer of the research and development results from academia to industry and the ability to exploit research results is an important proxy of the state of the entrepreneurial ecosystem. The latest technology is becoming more affordable for new and growing firms in Cyprus (5.5 out of 9 in 2018/2019, 5.3 out of 9 in 2017/2018 and 5.0 out of 9 in 2016/2017). However, despite its small improvement, new technology, science, and other knowledge are not efficiently transferred from universities and public research centers to new and growing firms (3.6 out of 9 in 2018/2019, 3.5 out of 9 in 2017/2018 and 3.1 out of 9 in 2016/2017). Moreover, the support provided to engineers and scientists to commercialize their results is limited (3.5 out of 9 in 2018/2019, 3.0 out of 9 in 2017/2018 and 3.0 out of 9 in 2016/2017). Also the support provided by the science and technology base on the creation of world-class new technology-based ventures in at least one area is insufficient (4.2 out of 9 in 2018/2019, 4.4 out of 9 in 2017/2018 and 3.6 out of 9 in 2016/2017). Concerning technology access, national experts disagree with the view that new and growing firms have equal access to new research and technology as large firms (4.1 out of 9 in 2018/2019, 3.5 out of 9 in 2017/2018 and 3.2 out of 9 in 2016/2017). Table 4.9 includes the questions employed for measuring research and development transfer.

## 4.2 FAMILY BUSINESS AND DIGITAL PLATFORMS

Beyond the nine entrepreneurial conditions included in the framework of the NES, the 2018/2019 survey also included questions relevant to some additional aspects of the entrepreneurial ecosystem, the family business and digital platforms included in the economy. Table 4.10 summarizes the results regarding these aspects of the ecosystem.

Overall, experts' perceptions regarding the ecosystem and family business are neutral, as the Family Business aspect of the ecosystem was rated as 4.4 out of 9, whereas in Europe the corresponding value is slightly higher (4.8 out of 9). In particular, experts consider that the associations of family-businesses in Cyprus are promoting the needs of family businesses (5.8 out of 9). While they view that people in Cyprus trust family businesses more than non-family ones (4.7 out of 9), they also view that people believe that businesses are run better by teams of professionals than by family members (6.1 out of 9). Scarcity of laws and regulations to specifically promote family businesses (2.3 out of 9) was also noted, whereas views that family businesses are not adequately supported by public policies and programs (3.1 out of 9) also exist. As one of the experts noted, "Cyprus' tradition in family businesses" is a strength of the ecosystem.



The NES results show a positive perception regarding digital platforms as the experts' rating regarding this aspect is 6.1 out of 9. This value is higher than the corresponding European average value (5.8 out of 9). More specifically, experts view that businesses or organizations frequently use digital platforms to acquire services or obtain access

to services (6.4 out of 9) and that digital platforms are currently an important element in the national economy (5.1 out of 9). Similarly, they view that national policies enable digital platforms (7.1 out of 9) and expect the use of digital platforms by entrepreneurs to increase over the next decade (8.2 out of 9).

NES enhances the GEM methodology by drawing on expert opinions regarding the strengths and limitations of the entrepreneurial ecosystem. In this section, the conditions framing the entrepreneurial conditions in Cyprus were discussed. The section included the results of the last three years, thus enabling the longitudinal comparison of the conditions. It also included the relevant European average rates, offering in this way the comparability between Cyprus results and European rates. Aligned with the results of the previous years, the NES results demonstrate that

the physical infrastructure and commercial and legal infrastructure remain the most important strengths of the local entrepreneurial ecosystem. In 2018/2019, the study also demonstrated that post-school entrepreneurial education is a strength of the ecosystem. The results also revealed that the strongest burdens of this ecosystem remained unchanged compared to the previous years. These included the entrepreneurial education provided at school stage, the lack of access to finance for startups, and the limited government entrepreneurship programs. This year's NES survey also derived insights on family businesses and the digital platforms. In particular, the experts have positive perceptions about digital platforms and their adoption by the ecosystem of Cyprus, whereas they have neutral views regarding family businesses. The following section outlines related policy making recommendations as arising by the results of the APS and the NES.

**Table 4.10: Family Business and Digital Platforms**

	 CYPRUS	 EUROPE
<b>Family Business</b>	<b>4.4</b>	<b>4.8</b>
In my country, associations of family-businesses have been very important for promoting conditions for family businesses	5.8	5.1
In my country, laws and regulations exist to specifically promote succession and transfer of a family business to the next generation	4.1	4.5
In my country, succession and transfer of a family business to the next generation is often helped by legal experts and other professionals with expertise in family businesses	4.3	5.3
In my country, people trust family businesses more than non-family businesses	4.7	5.8
In my country, laws and regulations exist to specifically promote family businesses	2.3	3.7
In my country, family businesses are well supported by public policies and programs	3.1	3.8
In my country, people believe that businesses are run better by team of professionals than by a family	6.6	5.2
<b>Digital Platforms</b>	<b>6.1</b>	<b>5.8</b>
In my country, digital platforms are currently an important element in the national economy	5.1	5.7
In my country, businesses or organizations frequently use digital platforms to acquire services or obtain access to services	6.4	5.9
In my country, digital platforms put the social protection of employees and retirees under pressure	3.6	4.7
In my country, digital platforms are enabled by national policies	7.1	4.9
In my country, I expect the use of digital platforms by entrepreneurs to increase over the next decade	8.2	7.9
<b>2018/2019</b>		

(scale: 1=completely false, 9=completely true)

# SUCCESSFUL CYPRIOT ENTREPRENEURS



UCY Entrepreneur Award 2019

## Company Name

### IMPACT TECH LTD

## Team members

Georgios Larkou CEO, George Nikolaides CTO, Ioannis Kourouklides Head of AI, Marios Konstantinou Head of CRM, George Matheou Head of Telecoms, Anthony Papaevagorou Head of Sales

## Name of Entrepreneur and position in the company

Georgios Larkou, CEO

## Short description of the business

Impact Tech Ltd offers an innovative suite of solutions. Our core product is **Impact CRM** and is the platform upon which our other products can be deployed, although they can be integrated with other platforms.

Our AI-driven CRM enables a business to take control of the customer journey and changes the way it interacts with its customers.

It channels all the data from phone calls, live chat, emails, chatbots, PPC, payments and social media campaigns to get the most accurate understanding of each customer.

This data is used to personalize the entire customer journey and improves critical business KPIs. New leads/customers are also acquired more efficiently, while the Cost Per Lead (CPL) and Cost Per Acquisition (CPA) is reduced. It increases

conversions and more easily identifies selling opportunities to boost customer lifetime value (CLV) and minimize churn rate.

Automated Lead Scoring and Automated Lead Distribution are both driven by AI and determine which leads are the most qualified and segments them to the team best suited to convert. Additionally, our AI accurately predicts churn risk by identifying patterns that reflect loss of brand confidence.

**Impact Telecom** is built into Impact CRM and can also be offered as a stand-alone solution. The cloud-based PBX offers business class unified communications features and a high-quality communication platform that reduces call costs.

**Impact AI** is also built into Impact CRM and added as modules. Impact AI provides Signal Processing, Natural Language Processing (NLP) and Sales Intelligence solutions that offer our clients a game-changing opportunity to increase both customer conversion and retention.

## Describe products/services of the company that are innovative

All three of our core products are examples of cutting-edge innovation. However, a significant focus of our R&D is on developing artificial intelligence to create Business Intelligence tools.

These are collectively referred to as **Conversational Intelligence Platforms** (CIPs) that are designed to enhanced customer experience (CX) by providing a personalized customer journey through various channels and touchpoints.

Every interaction with the company is recorded and analysed to provide automated intelligent workflows, suggestions and recommendations. Through **Machine Learning** our goal is to personalize every customer's journey and improve the quality of the services/products offered. The combination of offering a more personalized customer journey with better quality services and products results in increased customer satisfaction, increased loyalty which yields greater customer lifetime value (CLV) and reduces churn rate.

CIPs consists of two sub-platforms, the **Customers Intelligence Platform** responsible for enhancing CX and the **Sales Intelligence Platform** responsible for providing



intelligent suggestions and recommendations to the sales team of the company.

**NLP** efficiently monitors interactions between agents and customers at scale and identifies the most positive which become the model all agents can use to improve their interactions and in turn enhance brand reputation.

Additionally, businesses that are subject to regulation face fines and damage to brand reputation if their agents fail to meet compliance standards. NLP identifies these infringements to prevent repetition and increase compliance efficiency.

**Sentiment Analysis** determines the mood of a customer during an interaction. These insights identify what makes customers happy and improve retention and CLV by increasing understanding about what actions lead to sales.

#### **Have you received any related awards?**

Impact Tech LTD received the award for 'Best Automated Performance Tool' in November 2018 at London Summit 2018 an annual event organized by Finance Magnates that brings together businesses and expertise from the Finance industry. Additionally, Impact Tech LTD was one of 10 selected Artificial Intelligence Innovators that presented at the Microsoft Summit in Athens, Greece in May 2019.

We also received the UCY Entrepreneur Award 2019, 4th Innovation & Entrepreneurship Forum (IEF2019) "4th Industrial Revolution: Technology and Society", University of Cyprus.

#### **Provide an overview on your company's vision/future plans**

Our vision is to enable our customers to move towards data-driven decision making (DDDM) by using cutting-edge Distributed Systems technologies and state-of-the-art Machine Learning methods in our solutions. This will be achieved over two phases. Phase one is to apply these Machine Learning methods to the real-life datasets we have gathered. Then in phase two, integrate them into our existing products (Impact CRM and Impact Telecom). The CIP will address two key business problems of retention and conversion using state-of-the-art Signal Processing methods in addition to Machine Learning in order to provide Automatic Speech Recognition (ASR). Furthermore, it will make use of state-of-the-art NLP techniques to also provide Sentiment Analysis, Compliance Analysis, Emotion Recognition, Topic Modelling and Text Summarization based on the calls, which have been converted to text using ASR.

Impact Tech's revenue model is Software as a Service (SaaS). We have products that are already in the market and are constantly updated with new features and technology we are developing.

According to Gartner's, "2019 Strategic Roadmap for CRM Technologies", more than 70% of CRM software was deployed as SaaS in 2018. The debate about cloud versus on premises is over for the majority of organizations. In 2020, SaaS-based CRM applications will be the first choice for most organizations when they make software replacement and deployment decisions.

#### **Why did you choose to set up your business in Cyprus? What are the benefits of Cyprus' entrepreneurial environment/ecosystem?**

For co-founder George Nikolaides and I, as Cypriots, the opportunity to create a successful tech business in Cyprus was both an opportunity and challenge. Having come through the education system in Cyprus and our first-hand experience of the quality of the educational facilities here we were confident that we could source the young talent required to make a success of Impact Tech LTD.

Our internship program has been highly successful and proof of the talent that exists in this country and how it thrives when the right environment is provided. In fact, talent constitutes Cyprus' most compelling advantage as it possesses a well-trained and versatile labour force and has the youngest population and workforce in the EU. Cypriots are not only among the most highly educated in Europe (ranked third by Eurostat in comparison to other EU countries in terms of proportion of the population with tertiary education with regards to the 30 to 34 age group) they are also multilingual.

In addition, the cost for technical and professional talents is lower than in other major EU capitals. In comparison Cyprus's average hourly rate is at €16 and is approximately half of the hourly rates in Germany (€33,0) and the Netherlands (€33,3).

Cyprus is also recognised as an international centre of excellence for the provision of a wide range of professional services, with highly qualified and experienced professionals offering efficient legal, accounting, auditing, consulting and other specialised services, at competitive costs.

Additionally, Cyprus offers a number of tax incentives both to entrepreneurs as well as start-up enterprises. The Cyprus tax system is straightforward, competitive and compliant with EU law and OECD standards.



# SUCCESSFUL CYPRIOT ENTREPRENEURS



UCY Entrepreneur Award 2019

## Company Name

**PHOEBE RESEARCH AND INNOVATION LTD**

## Team members

Giorgios Milis, Demetris Stavrou, Demetrios Eliades

## Name of Entrepreneur and position in the company

Demetrios Eliades, Founder, Project Coordinator

## Short description of the business

PHOEBE Research and Innovation Ltd (PHOEBE) is a Small-Medium Enterprise (SME) located in Cyprus, which develops and deploys innovative systems and services for industrial systems and critical infrastructures. The company is comprised of a dynamic team of high-profile scientists and engineers (majority are PhD holders) with long experience in research and technological innovation, specifically in the areas of monitoring and control of large-scale systems, cyber-physical security, fault event diagnosis, robotics and 3D printing, semantic interoperability and reasoning, embedded systems design, as well as optimization and machine learning. The team has expertise in the development of cloud-based software platforms integrating Internet-of-Things (IoT) sensors and actuators with data analytics and event diagnosis algorithms.

## Describe products/services of the company that are innovative

**SEMIoTICS Platform:** An IoT platform with real AI capabilities based on the SEMIoTICS architecture. This core cloud-enabled software platform offering IoT integration (sensors, actuators, other processing functions) and facilitating the real-time

monitoring and control of large-scale systems. The platform supports semantic reasoning using declarative knowledge models and deductive reasoning techniques from the artificial intelligence (AI) area. SEMIoTICS has been designed to be FIWARE-compatible and is currently being used in various projects.

**Domognostics™:** A cyber-physical system for the monitoring of building environment (e.g. heating, ventilation and air-conditioning/air-quality) and detection of anomalies, using machine learning and artificial intelligence techniques. The current product version is available for building operators/owners and/or building automation solutions' integrators using commercial sensors or BMS data.

**LeakRisk™:** A smart reporting engine for water distribution network operators, based on real-time system monitoring using low-cost water-flow sensors. It analyzes heterogeneous system data and produces reports indicating the risk of a leakage present in the system. The current product version is ready for contract signature and subsequent deployment to customers.

## Have you received any related awards?

UCY Entrepreneur Award 2019, 4th Innovation & Entrepreneurship Forum (IEF2019) "4th Industrial Revolution: Technology and Society", University of Cyprus

## Provide an overview on your company's vision/future plans

The company's vision is to make smart technologies accessible to industrial operators, and its mission is to design cloud-based software and hardware solutions by combining state-of-the-art research in the areas of Monitoring and Control, coupled with Artificial Intelligence and Machine Learning, towards addressing challenges related to resource efficiency, waste reduction and security enhancement.

## Why did you choose to set up your business in Cyprus? What are the benefits of Cyprus' entrepreneurial environment/ecosystem?

Cyprus is a challenging environment for developing a start-up company, due to the lack of innovation culture as well as the small number of investment opportunities. On the other hand, we have the opportunity to work together with universities and research institutes for generating new intellectual property, and to directly communicate with large clients. Due to the island's small size, there is less competition, and it is easier to conduct pilots, giving us sufficient time to develop our products.

# EXISTING POLICIES AND FUTURE POLICY RECOMENDATIONS



Young rose tree on a structure in May by Andreas Ladammatos

The Republic of Cyprus identifies entrepreneurship and innovation as an important contributor to the economy. In particular, it considers entrepreneurship and innovation as one of the major driving forces of economic growth and beyond its economic impact, it foresees additional positive impacts on a socio-economic level. Thus, a plethora of actions have already been implemented, aiming to elevate and support the entrepreneurial ecosystem of the country.

The government's determination towards this direction is indicated by the recent appointment of the first Chief Scientist for Research and Innovation in Cyprus. Through the role of the Chief Scientist, the government aims to develop a national strategy for promoting research and innovation at a national level and design the country's future development in the digital age. Through the 2019-2023 Research and Innovation Strategy Framework<sup>11</sup>, the National Board for Research and Innovation aims to boost the country's research and innovation potential. Along the same lines, in the previous years, the Ministry of Energy, Commerce and Industry has formulated a National Policy Statement for the Entrepreneurial Ecosystem<sup>12</sup>, a multi-annual plan aiming to orchestrate and enhance existing entrepreneurial activity in Cyprus. The National Policy aims to cultivate the entrepreneurial culture, especially among the young generation, improve the business environment, update the relevant legal framework and provide additional funding opportunities for businesses. The Cyprus Presidency has also formulated the 'Start-up Visa' scheme aiming to encourage talented entrepreneurs from countries outside the European Union and the European Economic Area (EEA) to enter, reside and work in Cyprus and develop entrepreneurial activity with a high growth potential. The Ministry of Education has formulated a series of activities aiming at orienting students of all ages towards entrepreneurship and creativity. Several governmental and non-governmental organizations and networks support this effort through yearly entrepreneurial competitions, whereas Universities have also enhanced their curriculums from an

entrepreneurial perspective, offering certificates and minor degrees in entrepreneurship. The teaching portfolio of the Cyprus Pedagogical Institute also includes training teachers on expanding their entrepreneurial and communication skills and introduces tools for the development of creative thinking, innovative ideas, participation and self-confidence among their pupils<sup>13</sup>. An e-government strategy is also implemented, working towards the simplification of the legal procedures required to register a company. At present, the existing legal framework is also being refined, in order to enable the creation of spin-offs through public universities. Numerous research and innovation funding schemes have been formulated to increase funding access for the creation startups, support the protection intellectual property rights and extend research and development activities. The Ministry of Energy, Commerce and Industry also offers a funding scheme to youngsters and women entrepreneurs to create their own new businesses.

## POLICY RECOMMENDATIONS

Public and private organizations are already implementing several actions aiming at supporting Cyprus' entrepreneurship and education. Every year, the country's participation to GEM provides insights on the status, the characteristics and the impact of Cyprus' entrepreneurial activity in order to deliver additional policy-making suggestions that would contribute in elevating and improving its entrepreneurial ecosystem. Similarly to this report, the GEM Cyprus 2016/2017 and 2017/2018 reports drew on GEM results and derived a list of policy-making recommendations. Thus, this Section draws on the Cyprus' GEM results of 2018/2019 to propose policy making recommendations that could improve the entrepreneurship ecosystem of the country. To some extent, results and recommendations remain consistent in the last three years. Therefore, in the policy recommendations that follow, we highlight both new and repeating policy making recommendations.

## EDUCATION AND CULTURE

The National Policy Statement for the Entrepreneurial Ecosystem includes a plethora of actions related to education. Reflecting on these actions as well as on the emerging need to enhance and elevate the level of entrepreneurial education, the Universities and the government have recently implemented measures in this respect. In particular, from the Universities' perspective, the Center for Entrepreneurship (C4E) of the University of Cyprus is currently coordinating a number of curricular and co-curricular training activities given by invited experts and academics on topics related to innovation and

---

11 National Research and Innovation Strategy, released by the National Board for Research and Innovation. Available at: <https://www.nbri.gov.cy/strategy-plan/>

12 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

13 Report by Dr. Constandinos Georgiou, Inspector of Secondary Technical and Vocational Education, Ministry of Education and Culture & Mrs Kalypso Apergi, Cyprus Pedagogical Institute



entrepreneurship. Furthermore, C4E also offers to students the option to acquire the Certificate of Entrepreneurship by completing a series of courses, a practicum and a presentation. From the school-level education perspective, the Ministry of Education has enhanced the training offered to teachers with respect to entrepreneurship. This regarded training for entrepreneurship in education as a topic in the compulsory course of an in-service training program for school leaders, training through workshops, offering of the entrepreneurship in education as a topic in the primary and secondary Teachers' Day of Empowerment, and other similar actions<sup>13</sup>. Along the same lines, students and pupils had the opportunity to participate in entrepreneurial competitions such as the Digital Championship organized by the Digital Champion for Cyprus, the Junior Achievement and other competitions. The results of such actions are reflected in the 2018/2019 GEM results, showing an improvement on entrepreneurial training at post-school level which is now considered as a strength of Cyprus' entrepreneurial ecosystem. Despite these positive outcomes, this year's results are similar to the results of the past two years, highlight the urgent need for further action, especially towards entrepreneurial education at school level. The national experts urge for the need to modify the existing educational system and highlight that entrepreneurial and tech training should become part of Cyprus' policy on education. Through the open-ended questions, experts were able to provide recommendations relevant to education. These include:

#### Similar to the previous years:

- Promoting Science, Technology, Engineering and Mathematics (STEM) training from a young age and especially towards female students.
- Implementing changes in the primary and secondary education to cultivate research, entrepreneurial, and innovation culture from a young age and promote entrepreneurial action.
- Modifying the structure of school-level training to assist individuals in identifying their capabilities and talents, and formulating the necessary procedures that will allow teachers to promote talented individuals towards additional entrepreneurial training from an early stage.
- Providing training to the local business community on how to invest in new business ideas and training on how to support their employees in their intrapreneurial activity.

#### New:

- Enhancing and elevating the training offered to school teachers on topics relevant to creativity and entrepreneurship. Training them on how to transfer such knowledge in the classroom.
- Promoting successful Cypriot entrepreneurs as role models for the younger generations, highlighting their achievements as well as their struggles and failures.

- Delivering seminars that will enable young adults to develop skills (e.g., coding skills) for which there is currently high-demand by the start-up community. Formulating a scholarships program which will support young adults in extending their skill set in this respect.
- Establishing a strategy for promoting entrepreneurship as well as digital professions as a possible career option among the youngsters and the young adult groups (i.e., 18-24 and 25-34 age cohorts).
- Enhancing army service training schemes with entrepreneurship education and encouraging young males to participate in entrepreneurship competitions as part of their army service.

## GOVERNMENT PROCESSES

Despite the fact that procedures for setting-up a business in Cyprus takes approximately 9-12 days, the 2018/2019 results show that that government procedures may be slowing down the progress of entrepreneurial activity in Cyprus. The perceptions of national experts, as accounted in NES across the years, highlight that coping with government bureaucracy, regulations, and licensing requirements, is difficult for new and growing firms. Such results urge the need for accelerating and digitalizing government procedures. More specifically, recommendations include:

#### Similar to the previous years

- Enabling transparency of public sector processes.
- Promoting the wide use of digital signature.

#### New:

- Developing a strategy for the digitalization of the public sector and the wide deployment of e-government services for all procedures used by new and growing firms
- Formulating processes for enabling and promoting the active involvement of government employees in intrapreneurial activities.
- Simplifying the legal framework to enable new businesses to set-up and operate faster.
- Releasing a legal framework that will enable and encourage academics and public universities to commercialize research results through the creation of spin-off companies.

## FINANCIAL SUPPORT

The Republic of Cyprus has already implemented new policies for enhancing the financial support provided to startups through various actions. These include the raise of research and development funds through Cypriot citizenship by investment program<sup>14</sup>, funding schemes released by the

Research and Innovation Foundation targeted explicitly for startups (such as the seed funding scheme to support the development of innovative products and services)<sup>15</sup> and many others. Despite these actions, this year's results show that problems in getting finance is one of the main reasons for business discontinuance in Cyprus. In particular, the results of the APS demonstrate a dramatic increase in business discontinuance because of problems in accessing finance. The views of the national experts are aligned with the APS results, as NES results also show that financial support is one of the main burdens of entrepreneurial activity in Cyprus. The views of the experts regarding financial support persist across the years, signaling in this way the urgent need for policy-making action and suggesting additional policy-making measures. These include:

#### Similar to the previous years:

- Establishing or attracting investment funds for startups of different maturity levels, including pre-seed, seed and more mature businesses that seek to access Series A/B investments. The Government could collaborate with private investors so as to provide funds and also administrate the assessment and monitoring committees.
- Encouraging members of the local business community to become angel investors.
- Providing tax incentives and other benefits to large businesses for providing early-stage pre-seed funding to new businesses in their area.
- Extending existing funding schemes and training programs targeted to women so as to foster the reintroduction of women that have been on long maternity/child-care leaves in the labor force and orient them towards entrepreneurship.

#### New:

- Enhancing government support in the form of actual funding, mentoring, and access to services, to very early stage startups.
- Co-creating funding agency for start-up funding supported by the government and the private sector.
- Enhancing the Cyprus citizenship program with additional schemes that will encourage applicants to invest in Cyprus-based start-up companies.
- Providing tax incentives and growth vouchers to businesses offering their professional services to

new and growing businesses.

- Organizing all government programs targeted towards start-up funding under one authority and improving the promotion of such programs towards the relevant audience

## BUSINESS SUPPORT

This year's results are encouraging, as TEA entrepreneurs expect enhanced growth in terms of the job-creation potential of their business. Along the same lines, there is an increased rate of TEA associated to tech (6.9% in 2018/2019). NES results also persistently indicate that Cyprus' physical and commercial services infrastructure is supportive towards new and growing businesses. However, TEA has been noticeably reduced in 2018/2019, the gender gap with regards to new entrepreneurial activity in Cyprus persists, and government entrepreneurship programs are one of the weaknesses of the country's entrepreneurship ecosystem. These highlight the underlining need for further policy-making action for supporting new entrepreneurial activity in Cyprus. Possible policy-making recommendations include:

#### Similar to the previous years:

- Supporting the closer collaboration between academia and industry so as to exchange know-how, co-use of R&D infrastructures and prototyping facilities.
- Promoting female entrepreneurship by providing additional incentives, e.g. female participation as a parameter for enhancing the funding possibility for new enterprises, and encouraging the media to promote successful female entrepreneurs.
- Formulating schemes to encourage airlines to connect Cyprus with the rest of the world, so as to foster a closer collaboration with entrepreneurs, investors and mentors from other countries, and contribute towards transforming Cyprus into the innovation hub between Europe, Middle-East and Africa

#### New:

- Supporting and providing incentives to existing companies, in order to create a Research and Development department, and formulating intrapreneurship schemes for their employees.
- Encouraging municipalities to invest in the creation of co-working spaces and incubators to host new and growing firms.
- Formulating schemes for attracting foreign human resources and talent for areas greatly in need e.g., tech sector.
- Formulating a national entrepreneurship strategy towards specific industrial sectors, e.g. maritime, fintech etc., and defining specific KPIS for measuring the policy impact.

14 Invest Cyprus- Cyprus Investment Programme, Retrieved from: <https://investcyprus.org.cy/investor-s-guide/cyprus-investment-programme>

15 Source: IRIS Portal, Research and Innovation Foundation, Cyprus.



**Table A<sup>16</sup>:** Entrepreneurial Activity Type in selected countries, GEM 2018/2019 – Percentage of Population Aged 18 – 64 years

 <b>Region</b>	Nascent entrepreneurship rate	New business ownership rate	Early-stage entrepreneurial activity (TEA)	EEA	Established business ownership rate	Discontinuation of businesses
	Score	Score	Score	Score	Score	Score
	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>14</b>
Angola	22.8	19.5	40.8	3.2	15.2	25.5
Argentina	4.9	4.3	9.1	1.5	9.1	3.9
Austria	6.8	4.4	10.9	6.4	6.5	5.0
Brazil	1.7	16.4	17.9	0.7	20.3	4.3
Bulgaria	2.4	3.7	6.0	0.4	8.4	1.8
Canada	11.2	8.9	18.7	8.6	7.5	8.6
Chile	16.0	10.1	25.1	4.2	8.5	7.1
China	4.7	5.9	10.4	1.0	3.2	2.5
Colombia	15.7	5.8	21.2	2.0	6.5	4.7
Croatia	5.8	3.9	9.6	5.3	4.2	3.4
Cyprus	1.2	2.7	3.9	5.4	6.1	2.3
Egypt	4.0	5.9	9.8	2.1	4.5	7.6
France	4.0	2.3	6.1	4.3	2.5	2.9
Germany	2.7	2.4	5.0	5.2	7.5	1.6
Greece	4.2	2.3	6.4	1.8	10.8	3.4
Guatemala	13.7	15.0	27.5	2.0	11.2	7.4
India	8.8	2.7	11.4	0.8	7.0	4.9
Indonesia	3.1	11.1	14.1	1.3	11.8	1.4
Iran	4.1	5.7	9.7	0.9	12.3	6.1
Ireland	6.5	3.2	9.6	8.6	6.8	3.8
Israel	7.9	4.8	12.7	7.2	4.2	5.0
Italy	2.7	1.6	4.2	3.2	6.4	1.6
Japan	3.3	2.2	5.3	2.2	6.2	1.8
Korea Rep.	6.8	7.9	14.7	3.6	12.5	2.5
Lebanon	6.9	17.6	24.1	1.7	21.6	8.0
Luxembourg	7.1	3.7	10.7	7.1	3.4	3.7
Madagascar	10.3	10.9	20.7	0.6	22.4	4.3
Morocco	3.3	3.5	6.7	4.8	4.2	10.4
Netherlands	6.0	6.5	12.3	7.9	12.0	2.5
Panama	7.4	6.6	13.8	0.0	6.4	3.4

Peru	17.5	5.8	22.4	1.5	8.4	7.6
Poland	4.1	1.1	5.2	1.9	13.0	2.4
Puerto Rico	9.1	2.6	11.6	1.9	1.9	3.1
Qatar	5.0	3.6	8.5	6.3	4.2	3.0
Russian Federation	2.7	2.9	5.6	0.7	4.9	1.6
Saudi Arabia	5.3	6.9	12.1	2.8	3.1	8.5
Slovak Republic	9.2	3.1	12.1	4.4	4.6	3.6
Slovenia	2.8	3.6	6.4	5.9	6.8	2.4
Spain	2.7	3.8	6.4	1.7	6.1	1.7
Sudan	10.3	12.6	22.2	4.3	10.2	17.3
Sweden	4.6	2.5	6.8	6.8	5.3	3.7
Switzerland	4.1	3.4	7.4	6.3	11.5	2.0
Taiwan	3.2	6.5	9.5	4.2	13.9	5.4
Thailand	7.3	13.2	19.7	2.4	19.6	8.1
Turkey	7.4	7.1	14.2	3.2	8.7	5.2
United Arab Emirates	7.1	3.9	10.7	6.3	2.6	5.1
United Kingdom	4.2	4.2	8.2	7.3	6.4	2.7
United States	10.5	5.3	15.6	8.0	7.9	4.7
Uruguay	11.1	4.9	15.7	3.5	5.6	6.6



## AUTHORS

**Ariana Polyviou** is a Lecturer at the School of Business of the University of Nicosia and a Postdoctoral Fellow at the Center of Entrepreneurship of the University of Cyprus. She holds a PhD in Management of Information Systems (Athens University of Economic and Business), MSc in Human-Computer Interaction (University College London) and BEng in Computer Science (University of York). In the past she has been a Visiting Researcher at the London School of Economics and Political Science (LSE) and an Adjunct Lecturer, at the University of Cyprus and the Cyprus University of Technology. Her teaching portfolio includes MBA and undergraduate courses on e-commerce, entrepreneurship and innovation, new business models and management of information systems. Ariana has been as a Marie Skłodowska-Curie Fellow during her doctoral studies and has received several awards and scholarships for her doctoral and postdoctoral research. Her research interests are relevant to business analytics, digital business strategy, digital transformation and entrepreneurship. Her research has appeared in leading information systems outlets and she has co-authored a paper that received award in the 2016 Mediterranean Conference of Information Systems. She has extensive experience in leading and contributing to research projects and she has participated in numerous research projects funded by the European Union (FP7, H2020, Erasmus+). She often serves as an evaluator and reviewer for proposals submitted to the European Union. She has served as conference chair, member of the program committee, track chair and associate editor in several international academic conferences. She is a member of the national Digital Champion organizing committee and a member Cyprus' Global Entrepreneurship Monitor (GEM) national team.

**Pantelitsa Eteokleous** works as an Operation Manager at the Centre for Entrepreneurship (C4E) of the University of Cyprus since January 2017. She had previously worked as a research officer in the Research and International Relations Service of the University of Cyprus since April 2010. She holds a Bachelor in Public and Business Administration (University of Cyprus) and Master Degrees in European Law (University of Edinburgh) and European Studies and Diplomacy (University of Macedonia). In 2016, she received her PhD from the University of Leeds in the field of marketing/management. Her research interests concentrate on the fields of social responsibility, ethics, environmental and international marketing, and consumer behavior. Her work has appeared in the International Marketing Review Journal, chapters in international marketing books and proceedings of several well-known Marketing Conferences. She was also a consortium fellow in the 3rd AIM-AMA Sheth Foundation Doctoral Consortium. Her teaching portfolio includes undergraduate course such as Marketing Research, Business Research Methods, Issues, Crisis Management and Corporate Social Responsibility. She participated in a number of European funded projects in the field of education and training, and she is a member of Cyprus' Global Entrepreneurship Monitor (GEM) national team.

**Marios D. Dikaiakos** is Professor of Computer Science at the University of Cyprus. He serves as founding Director of the Center

for Entrepreneurship of the University, since January 2015. He was Head of the Computer Science Department between 2010-2014. He is also the founding Director of the Laboratory for Internet Computing (2001-today). Dikaiakos received a Ph.D. in Computer Science from Princeton University (1994). He has been a principal institutional investigator or principal investigator for numerous projects funded by the European Union and the Research Promotion Foundation of Cyprus, has published over 170 papers in books, international scientific journals and refereed conference proceedings, and was in charge of the development of several research software systems released internationally. He has co-authored papers that received awards in the 2016 IEEE International Conference on Big Data and in the 2014 International Conference on Service-Oriented Computing.

He is Associate Editor of the Computing journal of Springer and has served as: program chair, co-chair and program committee member in numerous international scientific conferences; independent evaluator of European academic and research institutions; reviewer and evaluator for research proposals submitted to the E.U. and to several national European science foundations, and independent observer of proposal evaluation exercises of the E.U. under Framework Program 7. He is a Senior Member of the Association for Computing Machinery (ACM) and was a member of ACM's Distinguished Speakers Program (2012-2015). More details can be found under: <http://www.cs.ucy.ac.cy/mdd/>.

**Kassinis George** is an Associate Professor of Strategy at the Department of Business & Public Administration of the University of Cyprus, where he teaches strategic management to professional MBA and undergraduate students. He was educated at Princeton University (MA, PhD), the Massachusetts Institute of Technology/MIT (Master in City Planning/MCP) and Cornell University (AB and BS). His research focuses on the strategic choices organizations make in dynamic environments and the implications of these choices on competitiveness and performance. Specific research interests include: corporate governance; sustainability; social entrepreneurship; corporate social responsibility; energy; health care management; social networks; industrial ecology. He taught at Princeton and MIT as a graduate teaching fellow, held research positions at Princeton and consulted for the World Bank and a variety of private, public-sector, and non-profit organizations, in Cyprus and abroad. He is a founding member of the research Group on Organizations and the Natural Environment (GRONEN), serves on the editorial boards of various academic journals including Organization & Environment (Sage), chairs the board of directors of the University of Cyprus Center for Entrepreneurship (C4E), and serves on the board of the Research Promotion Foundation (Cyprus). His work has been published in leading journals, including The Academy of Management Journal, Strategic Management Journal, The Journal of Business Ethics, The Journal of Business Research, Industrial and Corporate Change, Production and Operations Management, and in edited volumes and handbooks.

## SPONSORS

Ministry of Energy, Commerce and Industry  
PwC Cyprus  
(Former) Cooperative Bank

## ACKNOWLEDGEMENTS

We would like to thank the following experts for their participation in National Expert Survey (NES) 2018/2019:

**Ammerman Philip**, Numenor Capital Partners IHS Ltd  
**Andreou Panayiotis**, University of Central Lancashire  
**Antanakoudi Anixi**, KIOS Centre of Excellence  
**Apergi Kalypso**, Cyprus Pedagogical Institute  
**Argyrou Argyris**, Ideas 2 Life Ltd  
**Charalambides Alexandros**, Cyprus University of Technology  
**Chimonas Stelios**, Ministry of Energy, Commerce and Tourism  
**Christou Christos**, CYTA  
**Chrysanthou Yiorgos**, University of Cyprus  
**Constantinou Anastasia**, University of Cyprus  
**Demetriades Marios**, University of Cyprus  
**Demetriou Panayiotis**, Ecofy  
**Dikaiaikos Marios**, University of Cyprus  
**Diola Christiana**, Institute of Chartered Accountants in England & Wales (ICAEW)  
**Economou Michael**, Ideas 2 Life Ltd  
**Georghiou Georgios**, Permanent Secretary, Directorate General for European Programmes, Coordination and Development  
**Georgiades Yiannos**, KV Kinisis Ventures LLC  
**Georgiou Konstantinos**, Ministry of Education and Culture  
**Georgoudis Marios**, Cyprus Investment Promotion Agency  
**Ioannidou Monica**, Deloitte Limited  
**Ioannou Nicos**, Ministry of Energy, Commerce and Industry  
**Jacovides Georgia**, M.S. Jacovides & Co. Ltd  
**Karageorgis Constantinos**, Ministry of Energy, Commerce and Industry

**Karantzis John**, iSignthis eMoney Ltd  
**Kassinis George**, University of Cyprus  
**Kassianides Symeon**, Hyperion Systems Engineering  
**Katzis Constantinos**, European University Cyprus  
**Kofteros Stavriana**, Startup Cyprus  
**Komodiki Antigoni**, Junior Achievement Cyprus  
**Koupparis Andreas**, Cyprus Business Angels Network  
**Loucaides Marios**, FMCG Logistics and Distribution  
**Menelaou Menelaos**, Youth Board, Cyprus  
**Michaelides Alexandros**, RT Talos  
**Nicolaou Daina**, University of Cyprus  
**Onoufriou Alexis**, Frederick University  
**Panayiotou Angela**, IDEA Cy  
**Papantoniou Michalis**, Logicom Solutions Ltd  
**Poutziouris Panikkos**, University of Central Lancashire  
**Savvides Demetris**, CPM Corporate Administration Service  
**Sentonas Panayiotis**, Youth Board Cyprus  
**Silva Louis**, Twosumm Software Solutions Ltd  
**Sourianos Daniil**, TraCar  
**Stasopoulos Costas**, Electricity Authority Cyprus  
**Stavrakis Stathis**, Algolisis Ltd  
**Tanou Elena**, Top Kinisis Travel Public  
**Taoushianis Takis**, TTEG & Associates  
**Trillidou Marcia**, Research Promotion Foundation  
**Tsakalos Vassilis**, Research Promotion Foundation  
**Tsiakkas Maria**, Tsiakkastel Office Line Ltd  
**Tsioutsioumi Ioanna**, University of Cyprus  
**Zomeni Elena**, University of Cyprus

## ADVISORY BOARD FOR GEM CYPRUS' NATIONAL TEAM

**Constantinou Charalambos**, EY Cyprus  
**Kambanellas George**, Cyprus Investment Promotion Agency  
**Karagiorgis Constantinos**, Ministry of Energy, Commerce and Industry  
**Kyriacou George**, Central Bank of Cyprus  
**Lanitou Francis**, Ministry of Foreign Affairs  
**Loucaidou Eliza**, Deloitte Cyprus  
**Panayi Stephanie**, Cyprus Investment Promotion Agency  
**Panayiotou Angela**, IDEA Cy

**Stavrides Michael**, PwC Cyprus  
**Theodorou Maria**, Ministry of Energy, Commerce and Industry  
**Tirkides Ioannis**, Bank of Cyprus  
**Trillidou Marcia**, Office of the Chief Scientist  
**Skoufari Leda**, Office of the Chief Scientist  
**Vasiliou Christos**, KPMG Cyprus





A day in Cyprus by Rea Athanasiadou-Bailey

# ENTREPRENEURSHIP IN A POST-CONFLICT REGION: THE UNIQUE CASE OF CYPRUS, THE STORY OF CYPRUSINNO, AND THE PATH FORWARD

## AUTHORS

BURAK BERK DOLUAY, STEVEN W. STAVROU

## EXECUTIVE SUMMARY

Throughout the last three years, CyprusInno, an inter-communal social venture working on building an island-wide startup ecosystem, has engaged with entrepreneurs, aspiring entrepreneurs, academics, students, activists, innovators, policy makers, and others, to discuss challenges facing all communities in Cyprus, including Cyprus-based community members from abroad. All consistently mentioned the same thing, i.e. economic conditions. All communities had suffered in some way from economic crises and high unemployment rates, particularly amongst youth<sup>17</sup>. As a strong driver of economic growth and job creation, entrepreneurship addresses these challenges while also helping bridge the gap between Cypriots on both sides of the island. Furthermore, Cyprus has the potential to serve as a model for peace, stability, and prosperity across the region through collaborative, island-wide entrepreneurship and innovation. In a divided country that has one of the highest unemployment rates amongst youth in the EU<sup>18</sup>, CyprusInno and its activities focus on entrepreneurship as a mechanism that unifies, inspires, and leads to social and economic development.

## Introduction

According to the 2018 Global Peace Index, conflict has a significant economic impact. In fact, when measuring the cost of violence as a share of GDP, Cyprus ranks 7th in the

world<sup>19</sup>. Economics is a driver of positive peace. Historically, low peace nations that have made significant improvements in positive peace, have seen the strongest economic returns. Similarly, GDP growth has been three times higher in highly peaceful countries vs. countries with low levels of peace<sup>20</sup>. The International Labour Office states that, “In fragile states, lack of jobs and slow economic growth pose real threats to social cohesion and peace<sup>21</sup>.” Aside from being an important driver of economic development, entrepreneurship is also an instrumental peace-building mechanism. Peace through commerce can be achieved via accessible entrepreneurial capitalism, a key success factor for entrepreneurship that is lacking in many post-conflict regions. Entrepreneurship is a “shot in the arm” that creates jobs and income sources in post-conflict regions, laying the foundation for further growth. Job creation demands skilled workers, and demand for skilled workers means increased skill-building, leading to a more talented population. All these factors reduce poverty and unemployment, which helps avoid and curtail conflict and instability<sup>22</sup>.

Entrepreneurs drive technological, social, and political innovation by challenging what exists and asking, “what’s next?” Regardless of culture, religion, ethnicity, politics, ideologies, etc., entrepreneurs care most about innovating and growing their businesses, networking and building relationships with various stakeholders, including prospective partners, customers, investors, and more. Entrepreneurs

**DISCLAIMER:** The information and views set out in this section are those of the authors and do not necessarily reflect the official opinion of the GEM Cyprus national team. Neither the GEM Cyprus, nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein.

want to collaborate with one another, learn from one another, and grow together. They simply get along, valuing productivity over difference, making entrepreneurship a connecting force amongst diverse groups<sup>23</sup>. It is this mindset of an entrepreneur that not only creates economic opportunity, but that also brings about social change. As the single largest job creator worldwide, entrepreneurship provides new and abundant employment opportunities, leading to a more stable society.

Youth unemployment and conflict have also been found to be directly related, as a lack of economic opportunity and freedom has been associated with increased vulnerability among youth to participate in violence, crime, and other violent activities, potentially leading to unstable states<sup>24</sup>. It has been suggested that high unemployment rates amongst youth can make countries unstable and more vulnerable to conflict<sup>25</sup>. Therefore, young people can be a significant force for change in conflict and post-conflict nations, both positively and negatively.

CyprusInno, a social startup venture founded by a young Greek-Cypriot and Turkish-Cypriot mixed team, has challenged the status quo on the island by developing a bi-zonal, inter-communal entrepreneurial ecosystem, using entrepreneurship and technology as peace-building and collaborative mechanisms, and entrepreneurs as peacemakers<sup>26</sup>. By creating and sustaining an island-wide startup ecosystem, CyprusInno, through a portfolio of digital tools and live events, provides resources for entrepreneurs in Cyprus to cooperate, grow, succeed, and build trust. The team's vision for global impact is to replicate its model in other post-conflict regions worldwide.

As young entrepreneurs in a divided country, the team behind CyprusInno considered how to best develop a collaborative entrepreneurial ecosystem that would help Cypriots across the island build sustainable business together and, ultimately, sustainable peace<sup>27</sup>. Together, the team sat down and thought profoundly about what exactly was happening at our island - what was dividing us and what was holding us back economically - as well as what was being done to solve it. CyprusInno realized that, in order to be able to create continuous economic and social impact through cooperation while also building sustainable peace, we needed to shift our focus and direct our efforts on tackling issues that were common to all communities where the impact could be multiplied through cooperation. The team identified economic conditions (and as part of that, unemployment), as one of the largest, most challenging common problems faced by all communities. In 2016, when CyprusInno was launched, Cyprus as a whole had one of the highest unemployment rates in the EU<sup>28</sup>. By increasing business collaboration between all Cypriots and Cyprus-based community members island-wide, CyprusInno hopes to create a path towards a more peaceful and prosperous nation.

### Launching CyprusInno

In mid-2016, Greek-Cypriot Steven Stavrou and Turkish-Cypriot Burak Doluay connected online after Stavrou read an

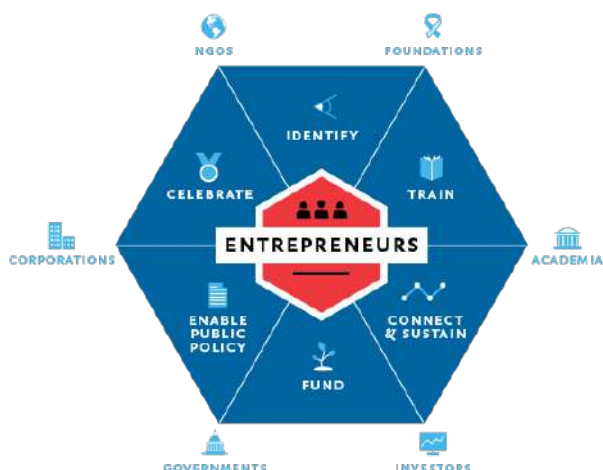
article about Doluay and his launch of the first online island wide startup community. The two exchanged emails and, after realizing they had both been exploring a similar idea of supporting and promoting inter-communal business with the two sharing the same vision, those emails turned into frequent Skype sessions until they built and launched the first iteration of CyprusInno.com in September of 2016. The two grew the platform by collaborating virtually, eventually meeting in person for the first time at their own Inter-Communal Business Mixer in December of 2016, which they both organized as CyprusInno's first event in the UN Buffer Zone<sup>29</sup>. Three years later, seeing continued growth and success with their venture, both Doluay and Stavrou hope to serve as an example to other Cypriot youth, that amazing things can be achieved when we reach across the divide and work together. The CyprusInno team is often viewed as a success story of its own model.

CyprusInno is the first and largest island-wide platform connecting Cypriot and other Cyprus-based entrepreneurs, startups, and innovators through a portfolio of digital tools and live events. Now run by an inter-communal team, CyprusInno operates under the common vision of using entrepreneurship and innovation to bring communities together with a shared belief that economic freedom and entrepreneurial capital could be highly-effective, peace-building mechanisms. By providing tools and resources for entrepreneurs across Cyprus to connect, network, collaborate, and exchange knowledge, CyprusInno has laid the groundwork for an island-wide startup ecosystem to help lead the social and economic growth of the island, as well as help bridge the divide through business<sup>30</sup>. This has helped CyprusInno prepare all communities for the idea of doing business together, ultimately turning this into a reality through various inter-communal business initiatives in Cyprus, but with a long-term vision of replicated the model in other post-conflict regions globally.

### Establishing an Island-Wide Entrepreneurial Ecosystem: The CyprusInno Model

CyprusInno's model employs a multi-disciplinary approach to entrepreneurship ecosystem building and peace-building, with a primary focus on people and the economy. CyprusInno's model aligns closely with Steven Koltai's Six+Six Entrepreneurship Ecosystem Model to develop an inter-communal entrepreneurial ecosystem in Cyprus. The model consists of 6 main stakeholders and 6 priority support areas, with entrepreneurs always in the middle as the focal point. To be able to create a truly functioning entrepreneurial ecosystem, the first step is to identify entrepreneurs and their needs in order to provide them relevant public policies, funding opportunities, trainings, and knowledge/mentorship for sustaining their businesses. Additionally, the ecosystem should connect entrepreneurs with each other and all other relevant stakeholders, so as to celebrate their success and create awareness for entrepreneurship and encouragement for all entrepreneurs. The second crucial element of creating and sustaining a successful ecosystem, is cooperation between NGOS, Foundations, Corporations, Academia,





Governments, and Investors. Entrepreneurs prosper when all stakeholders collaborate with each other in order to develop a supportive, dynamic, and growing ecosystem<sup>31</sup>.

The following section employs each of the six priority areas of the Six+Six Model as a framework and a guide, and aligns them with CyprusInno's activities, key metrics, and success stories, while also showing how the six main stakeholders contribute to strengthening the ecosystem through partnership and collaboration.

## 1&2. IDENTIFY & CONNECT

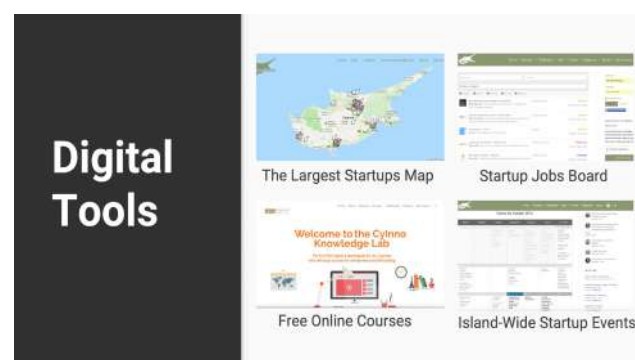
### Digital Tools

CyprusInno began with the launch of its online platform, which is the first and still the largest bi-zonal, inter-communal digital platform connecting Cypriot entrepreneurs, startups, and innovators. At its core, CyprusInno is a digital platform offering Cypriot entrepreneurs and problem-solvers the chance to connect with like-minded innovators. Users can register and create a profile, submit startups, events, jobs, articles, or even take courses. CyprusInno also features the largest database of startups in Cyprus and is the first to map start ups from both communities, presenting a united Cyprus through entrepreneurship. The website also hosts a startup jobs board (part of an effort to battle high unemployment among youth) and a curated calendar of island-wide business events. CyprusInno's blog/online magazine shares success stories, the latest news from Cyprus' startup ecosystem, and global opportunities for entrepreneurs. Additionally, CyprusInno's email newsletter is distributed to subscribers/ members with the latest Cyprus startup news, featured startups, new jobs, articles, announcements, and new opportunities. CyprusInno also runs its own digital projects, such as a visual series using infographics to show the economic benefits of a united economy, which has reached over 30,000 people on social media.

CyprusInno also uses digital media to connect with

entrepreneurs and other stakeholders island-wide. Cyprus v.U, a new media platform launched by CyprusInno in early 2019, features live broadcasts on Facebook with thought leaders and influencers from Cyprus and around the world, covering relevant topics in Cyprus and abroad and delivering insights into new ideas and challenges while identifying opportunities. The live streams are interactive, allowing for questions from the audience, which are answered live by the speakers. The speakers are also presented with a challenge based on the topic discussed, that they are asked to solve together live on the air, without knowing that challenge beforehand. For inter-communal panels, this serves as a perfect example of how we can work better together to solve our common challenges.

Garnering nearly 5,000 views, the first episode of Cyprus v.U tackled social entrepreneurship and innovation across the island (particularly for youth), drawing from the experiences of both Demetris Hadjisofocli of the Center for Social Innovation (CSI) in Nicosia and Ismail Bayramoglu of Kyrenia's Girne Gençlik Gelişim Merkezi (GİGEM). The discussion focused on opportunities and challenges for social innovation in Cyprus common to the entire island, with perspectives from both communities in Cyprus, and tackled one of those shared challenges live on air<sup>32</sup>. Cyprus v.U's second episode featured entrepreneur, change maker, and growth strategist Daniel Applewhite from the U.S., who had been on an ecosystem visit in Cyprus with CyprusInno as part of U.S. State Department's Young Transatlantic Innovation Leaders Initiative (YTILI) Reverse Exchange Program, implemented by The German Marshall Fund of the United States (GMFUS). Applewhite shared his experiences in entrepreneurial ecosystems in the U.S. and abroad, his thoughts on Cyprus from his visit and advice and opportunities for Cypriot entrepreneurs, challenges with growing our island ecosystem (including the realities of fundraising and venture capital in Cyprus), his thoughts on entrepreneurship in post-conflict communities and how we can work together island-wide to create a unified entrepreneurial ecosystem, similarities between New Orleans post-Katrina and Cyprus post-2013, defining social entrepreneurship and innovation, his experiences working with and launching incredible early-stage startup accelerators in the U.S., advice for youth, and much more<sup>33</sup>.





## Live Events

With the success of connecting individuals and communities via entrepreneurship online, CyprusInno saw an opportunity to translate these digital initiatives by then bringing people together at events and programs such as its Inter-Communal Business Mixers, engaging Greek- and Turkish- Cypriots and other Cyprus-based community members from across the island. Over the past three years, CyprusInno's business mixers have hosted hundreds of individuals from both all over Cyprus for networking, resources, and the opportunity to create lasting business relationships over light snacks and drinks. CyprusInno also raffles giveaways for resources such as free co-working space, free marketing and mentorship services, free consultation, and more.

CyprusInno's first Inter-Communal Business Mixer took place in December 2016 at the Home for Cooperation Cafe in the UN Buffer Zone and saw a humble attendance of 30-40 entrepreneurs who showed great passion and commitment to their work and to meeting new people for collaboration. Shortly after this first event, stories of collaboration began to come to fruition. A few weeks after their first event, CyprusInno's co-founders had also been invited to a joint training event by two entrepreneurs, one from the Turkish Cypriot community and another from the Greek Cypriot community, who had both met for the first time at the mixer. By January 2018, just over a year later, CyprusInno's Inter-Communal Business Mixer was host to over 100 entrepreneurs from all over Cyprus, and at the time was considered to be one of the largest inter-communal business networking events in the island's history.

CyprusInno hosted its first ever Inter-Communal Business Forum + Mixer in August 2018, combining networking with an

upfront panel session. Over 150 entrepreneurs, innovators, and business professionals gathered in the Buffer Zone at the Home for Cooperation for the forum. Another 2,000+ viewers tuned in online for the live stream. The forum featured talks from four expert speakers with the objective of discussing theoretical, political, and practical applications of inter-communal business - including benefits, challenges, and real-life examples. The Green Line Regulation in Cyprus were also discussed. The Green Line Regulation enables cross-border trade, but can also serve as an obstacle by applying strict regulatory specifications for products and services<sup>34</sup>. The four expert speakers were Ms. Fiona Mullen (Director, Sapienta Economics Ltd), Mr. Mete Hatay (Sr. Research Consultant, PRIO Cyprus), Mr. Manthos Mavrommatis (Honorary President, Cyprus Chamber of Commerce and Industry), Mr. İzzet Adiloğlu (Trade Development Specialist, Turkish Cypriot Chamber of Commerce), and CyprusInno co-founders Steven Stavrou and Burak Doluay as moderators. The talks were followed by a Q&A session right before the mixer networking event.

The mixer networking portion of the event featured the soft-launch of Colive, a premium olive oil company and an inter-communal startup in Cyprus with a social mission. Colive, founded by Turkish-Cypriot Hasan Siber and Greek-Cypriot Alexandros Philippides, works with family farms across the island to harvest unique local flavors, and their olives are the first to ever cross the border-divided Cyprus<sup>35</sup>. Colive is currently one of the best examples of inter-communal business in Cyprus, with both an inter-communal product and team.

In 2019, two more mixer events followed, featuring the upfront panel format. The first, titled SDGs in Business + 5th Business Mixer, took place in March at the Ledra Palace Hotel in the Buffer Zone. The event focused on how to integrate the UN Sustainable Development Goals into daily business





operations and their benefits for businesses, as well as the importance of entrepreneurship and social innovation via the SDGs for all Cypriots. With an increase in interest for social innovation in Cyprus, this gathering was part of an effort to introduce the SDGs to Cypriot and Cyprus-based entrepreneurs, showing them how to integrate the SDGs into their business models and furthermore encouraging them to work together on the SDGs through their businesses. The event opened with remarks from the UN's Special Representative to the Secretary General in Cyprus and Head of the UN Peacekeeping Forces, Ms. Elizabeth Spehar<sup>36</sup>.

The mixer portion of the event featured local Cypriot health food shop and company O-LIVE, which served attendees Drink for Peace beer, a collaboration between O-LIVE founder and craft brewer Orcun Cananoglu (Turkish-Cypriot) and pub owner and fellow craft brewer Costas Siahinian (Greek-Cypriot). The beer is an excellent example of inter-communal product development and business collaboration<sup>37</sup>.

Successful outcomes of the event included various collaborations amongst Cypriots on the SDGs, particularly amongst participants who met for the first time. These included bi-communal training courses and networking on the SDGs, as well as other initiatives to bring Cypriots from across the island together to exchange ideas and collaborate.

In June of 2019, CyprusInno hosted two international experts, Glenn Robinson and Cliff Zintgraff, from the University of

Texas, at Austin's IC2 Center for a panel and mixer event titled Developing an Entrepreneurial Ecosystem: Harnessing Experience from 40+ Countries + 6th Business Mixer. Moderated by CyprusInno co-founders Steven Stavrou and Burak Doluay, the panel drew from the experts' entrepreneurial experiences in more than 40 countries, in transferring new technology to the market, advising researchers on the steps necessary to make the transition from the lab to the market, and working with governments and institutions in each country to create conditions that favor innovation and entrepreneurship. The panel focused on the steps to creating a robust and competitive entrepreneurial ecosystem and answered questions about overcoming challenges, bringing ideas to market, and developing an island-wide entrepreneurial ecosystem in Cyprus. Both the panel and audience spoke openly and honestly about many of our entrepreneurial challenges in Cyprus, the unique context of our island, how we work together to build a unified ecosystem, and how our stories hold unique inspiration for one another to move forward together - tackling head on the role of government in creating a vibrant innovation ecosystem and furthermore sharing examples of young, successful ecosystems in Medellín (Colombia), Bhutan, and elsewhere around the world. The event opened with remarks from Mrs. Judith G. Garber, U.S. Ambassador to Cyprus.



The growth of CyprusInno's flagship mixer event from 30 attendees in 2016 to now over 150, shows the willingness and openness of Cypriots and others based in Cyprus, to cooperate in the spirit of business and entrepreneurship. It is inspiring to witness how many people from various backgrounds and ideologies continue to find common ground to unite and address Cyprus' shared challenges, and how entrepreneurship can be the driving force for both social and economic development island-wide. It is important to note that as the events grew in attendance and impact, so did the number of partners. Over the past three years, the number of partners on CyprusInno events and initiatives grew from just a few to over 40 island-wide, including private sector players, public sector players, governments, accelerators, incubators, investors/ VCs, academia (universities), youth organizations, co-working



spaces, media, and other non-governmental organizations island-wide, such as the Chambers of Commerce<sup>38</sup>.

### Sample Metrics

All of these initiatives have resulted in the following statistics:

#### Digital Initiatives:

**2500<sup>+</sup>**

Community (members/  
subscribers)

**200<sup>+</sup>**

Startups Mapped

**590<sup>+</sup>**

Events Posted

**220<sup>+</sup>**

Jobs Listed

**25.000<sup>+</sup>**

Followers/  
Social Media Reach

#### Physical Initiatives:

**15<sup>+</sup>**

CyprusInno Events

**500<sup>+</sup>**

Attendees

**5<sup>+</sup>**

Inter-communal Partnerships  
Leveraged

**10<sup>+</sup>**

Expert speakers

certificates of completion, unlock achievements, and get badges in their profiles upon course completion, giving them access to exclusive events and perks in the future that will further connect them with entrepreneurs across the divide.

CyprusInno also co-organizes various trainings and bootcamps, one example being the 2017 Entrepreneurship Series in collaboration with the Cypriot Enterprise Link, which taught basic entrepreneurial skills to Greek- and Turkish- Cypriots, narrowing the education gap and providing tools to launch new businesses. CyprusInno and the Cypriot Enterprise Link continue their partnership today with a joint initiative called LEAD Cyprus, which aims to connect and engage the ecosystem of professionals and innovators in Cyprus to promote business dialogue and democracy by providing an inclusive space in which Cypriots and all relevant stakeholders island-wide can work together to solve common economic and social challenges. LEAD Cyprus' first summer camp kicked-off in July of 2019 with multiple events in all cities in Cyprus, ending with the first ever island-wide hackathon organized by Hack Cyprus. CyprusInno also conducts local youth entrepreneurship workshops in Kyrenia in partnership with GiGEM, mentors and judges at hackathons and pitch competitions (among other local events), and does one-on-one consulting with young entrepreneurs and/or startup teams in Cyprus from both communities. Throughout the year, CyprusInno supports and partners with entrepreneurship trainings island-wide with a variety of organizations, aiding them in making their initiatives more inter-communal and helping them reach a wider audience.

CyprusInno's Inter-Communal Startup Mentorship Programme, first launched in 2017, is the first of its kind in Cyprus, pairing Greek-Cypriot mentors with Turkish-Cypriot entrepreneurs/startups and Turkish-Cypriot mentors with Greek-Cypriot entrepreneurs/startups to encourage business collaboration and mentorship across the divide. The programme, which has completed two cohorts, offers 3-6 months of free mentorship (one hour per week, virtually or in-person). During the programme, entrepreneurs work with their mentors to tackle business challenges, explore growth opportunities, and seek advice on upcoming initiatives. As a result, entrepreneurs launched new websites, adjusted their pricing strategies, enhanced their social media presence, expanded/launched new product lines, and more<sup>40</sup>.

### Mentorship Testimonials

*"Made another friend that is trying to build something for the different communities in Cyprus."*

*"[Mentor] has been very open in trying to understand the specifics of my startup as well as helping me develop it further. We have discussed the market conditions [...]."*

## 3. FUND

In 2018, CyprusInno soft-launched a beta version of its global database of startup funding opportunities for entrepreneurs in Cyprus, which includes venture capital, angel investors, social impact funds, public funding, EU grants, accelerators/incubators and more, from Europe and abroad. In Nesta's 2019 Paths to Scale report, CyprusInno was identified as a "point of entry" for financing in Cyprus<sup>39</sup>. The CyprusInno team continues to engage with venture capital firms abroad and other early-stage investors to encourage financial investment in Cyprus, and on the community level assists startups and entrepreneurs with pitch development for funding.

## 4. TRAIN & SUSTAIN

In 2018, CyprusInno launched Cyprus's first free digital e-learning lab, known as the Knowledge Lab, with entrepreneurial skill-building coursework for all entrepreneurs in Cyprus. A total of six courses went live, featuring a total of 37 modules, 10 lessons, over 30 hours of coursework, 30 videos, 63 quizzes, 14 practical exercises, local Cypriot case studies (videos of Cypriot entrepreneurs), and much more. The platform is gamified so that learners can receive

*In doing so, [Mentor] has been attentive to the difficulties of launching an enterprise in a society, which is under conditions of lack of contact with the international channels of economy. [Mentor] has been encouraging me to take more action and promote my startup. He has also been very helpful in introducing me to actors [...] and assisting me with establishing my website.”*

Citing frequently the high level of youth unemployment in Cyprus, CyprusInno launched the pilot of STOMP CY in collaboration with the Center for Social Innovation (CSI) in June of 2019. STOMP CY is a youth entrepreneurship programme for young Cypriots and Cyprus-based youth (15-17 years old) from across the island. STOMP CY empowers the youth by giving them entrepreneurial skills through interactive digital gamification. Participants and their peers from other communities learn entrepreneurial skills such as ideation, market research, sales, and pitching while exploring Nicosia, therefore helping develop a culture of peace and co-existence while giving them tools for their future economic freedom, and furthermore aiding in inter-communal communication and cooperation amongst the young people of the communities.

The pilot programme featured a full day of workshops and interactive/gamified sessions where youngsters split into teams to engage with local Cypriot business owners from both communities while completing engaging tasks via a mobile scavenger hunt game so as to learn relevant entrepreneurial skills. The journey began at the Home For Cooperation in the UN Buffer Zone for workshops on ideation, took participants to the vibrant Bandabulya and Büyük Han markets and then back to Ledra Street, finally returning to the Home for Cooperation for food and presentations/pitches, allowing youth to learn about entrepreneurship while also exploring their shared city.

#### STOMP Testimonials

*“It gave us a better point of view on what it was like to work with others from different communities.”*

*“It was enjoyable to meet new people, make sincere friends, and to see that people from different sides are not so different regarding their mindsets.”*

*“Through entrepreneurship, I saw the lives of the two communities were very similar.”*

#### Sample Metrics

All of these initiatives have resulted in the following statistics:

##### E-Learning:

**37**

Modules

**101**

Lessons

**63**

Quizzes

**30**

Videos

**14**

Practical Exercises

**6**

Local Cyprus Case Studies

**30+**

Hours of Coursework

**200+**

Students

##### Mentorship:

**2**

Cohorts

**13**

Mentors

**18**

Teams

**350+**

Hours Mentorship

## 5. CELEBRATE

CyprusInno celebrates the passion and success of all Cypriot entrepreneurs by sharing them through its media channels with over 25,000 followers and through its mailing list of 2,500+ subscribers. CyprusInno also gifts entrepreneurs free resources at its events, such as free co-working space, educational resources, mentorship/advisory services, marketing services, and more.

## 6. ENABLE PUBLIC POLICY

CyprusInno co-founders participate in local and international consultations, helping shape policy regarding entrepreneurship, peace, youth, security, and digitalization. Members of the CyprusInno team have traveled the world, representing Cyprus and making contributions to the following





reports and resolutions (including but not limited to):

- UN Security Council Resolution 2250<sup>41</sup>
- UN Security Council Resolution 2419<sup>42</sup>
- European Union and the Council of Europe Youth Partnership: Young People, Social Inclusion and Digitalization<sup>43</sup>
- UN General Assembly 2018<sup>44</sup>
- UN General Assembly 2019
- UNICEF and the International Chamber of Commerce Intergenerational Dialogue on Business and Climate Action 2019<sup>45</sup>

In September of 2019, CyprusInno participated in a reciprocal intergenerational dialogue between business leaders on accelerating climate action, the future of business, and the jobs of tomorrow. In the midst of the 74th session of the UN General Assembly, this breakfast dialogue was the first meeting of a new platform for a two-way mentorship between business leaders and young entrepreneurs – creating space for constructive, open, and honest discussion where CEOs shared their business experience with young entrepreneurs, and where young entrepreneurs pushed the private sector for greater innovation and ambition in the face of global challenges. The outcomes and conclusions of this roundtable were to be circulated to CEOs in the global ICC network of 45 million businesses around the world.

## Measuring Success

CyprusInno has identified success through various measures that involve both business-oriented results as well as social results. In creating an environment for entrepreneurs to network and collaborate across a divide, it becomes increasingly important to foster business relationships and support those relationships to grow into fruitful co-operations.

**1. Digital/Live Engagement** – This includes the number of users, subscribers, online learners, event attendees, and more.

**2. Economic Success** – There is an economic benefit to success measured by the number of business collaborations CyprusInno is able to achieve (i.e. inter-communal joint ventures) and the monetary value CyprusInno is able to create through inter-communal business partnerships. CyprusInno has witnessed a handful of success stories from Greek- and Turkish-Cypriots who met at the mixer events for the first time and collaborated on their businesses or on a new business shortly thereafter. For example, over 260,000 euros in value have been created through island-wide entrepreneurial collaborations and partnerships within the CyprusInno network.

**3. Social Success** – CyprusInno's social success metrics are measured by cross-border interactions. The initiatives described as part of the CyprusInno model have led to first-time meetings between Greek- and Turkish-Cypriots in the spirit of entrepreneurship, as well as individuals coming to the Buffer Zone for the first time in order to network and/or pitch their business.

CyprusInno has also been the recipient of various local, regional, and international awards and recognitions, including but not limited to:

- 2019 Intercultural Innovation Achievement Award (Government of Austria)
- 2019 Harvard Social Enterprise Conference Featured Startup
- 2018 European Youth Awards Finalists<sup>46</sup>
- 2018 Stelios Bi-Communal Award Winner (Business Category)

## The Path Forward

Creating a truly inclusive and inter-communal entrepreneurial ecosystem in a post-conflict region such as Cyprus requires constant innovation in order to create new methods for cooperation and collaboration. With many unemployed, or in jobs below their skill level, Cyprus is ripe with aspiring entrepreneurs ready to create new opportunities for themselves and for others. We can nurture these aspiring entrepreneurs, and existing entrepreneurs, through a variety of innovative means.

The path forward will rely on gathering more data and new sources of data, and conducting research to identify the real needs and challenges faced by people and in all communities on both micro and macro levels in order to continue searching for innovative solutions to help people grow, collaborate, and communicate. As a country, we must continue to scope out these common challenges and work together to solve them. The presence of a physical divide also requires new supportive legislature and the enablement of proactive and progressive public policy to support inter-communal business collaborations, empowering entrepreneurs to work together across the border through policy improvements.

Over the next six months, CyprusInno will be engaging in an island-wide entrepreneurship research project to understand the needs and challenges of local entrepreneurs in Cyprus, and then bring together organizations and stakeholders who are key players in the ecosystem to engage them and help them facilitate the launch of new initiatives and programmes that will bring the entire ecosystem together and ultimately significantly benefit local entrepreneurs. As a result, the true needs of entrepreneurs, which are often very similar and largely unmet, will be identified. A roadmap for further developing the island-wide entrepreneurial ecosystem in Cyprus through research and stakeholder engagement can significantly increase inter-communal business initiatives, identify and address the needs of local entrepreneurs, and further solidify the island-wide entrepreneurial ecosystem CyprusInno has helped build. The goal is to formally achieve a complete understanding of island-wide entrepreneurial needs and challenges that unify us as a country and an innovation hub with the objective of using this data to inform the ecosystem of needs and gaps and furthermore uniting the ecosystem by bringing together all stakeholders for collaboration.

In this same spirit, as a country we need to continue working on developing our own startup ecosystem – our own unique story – and brand it globally. That ecosystem should highlight the things we are best at based on the resources we have and the expertise we are able to nurture. Some of these things include (but may not be limited to) social innovation, clean tech / sustainability, fintech, blue/green entrepreneurship, maritime/shipping, etc.

In ensuring Cyprus has the resources it needs to support a growing and collaborative entrepreneurial ecosystem, insights and expertise from those outside the island will be required. Therefore, it will be necessary to strengthen connections or create new connections between Cyprus' ecosystem

and ecosystems abroad, particularly with nations in the surrounding region. This will be important for funding as well. A gap in funding opportunities, which makes it difficult for Cypriot startups and entrepreneurs to sustain, will require the development of a hub of funding resources, connecting Cyprus-based entrepreneurs with opportunities across Europe and the world. And not just any funding, but in particular funding from targeted investors who have expertise in specific industries related to the startups they are investing in and who also bring with them a strong and relevant network. More support for early-stage startups will be necessary in order for them to be ready for this type of funding.

The path forward will also require more collaboration amongst those within Cyprus. Not just individuals, but also groups and organizations - breaking down the silos and displaying strength in numbers, especially when it comes to efforts targeting the youth. In 2020, CyprusInno, Kyrenia's Girne Gençlik Gelişim Merkezi (GiGEM), and Nicosia's Center for

Social Innovation will, in partnership, launch the first startup accelerator in Kyrenia. Planning and development are already underway. The opening of this first ever accelerator is a huge milestone for inter-communal entrepreneurial collaboration in Cyprus, and a proud success story of the CyprusInno model for island-wide innovation and ecosystem development.

Creating more opportunities for the youth and also empowering them with the tools needed to succeed in Cyprus, will require increased efforts to engage them and increase their participation in programmes that may benefit them. This will involve more initiatives that target the youth at the high school and university levels. Providing them with the environment to work together from a young age will help foster a culture of cooperation and partnership in the long-term. In early 2020, CyprusInno will launch a new mobile app for connecting entrepreneurs around the island based on skills, specialties, industries, and needs. Upcoming CyprusInno live initiatives related to this also include the second run of STOMP CY, as well as an SDGs hackathon.

Finally, Cyprus needs more success stories. We not only need more inspiring stories of successful startups and entrepreneurs on the island, but also more inspiring success stories of inter-communal business collaborations. There are limited examples of island-wide entrepreneurial collaboration, and this is partly due to the stigma associated with inter-communal cooperation, which can make entrepreneurs wary of sharing their success. It is time we speak more openly about our joint successes to encourage collaboration and show its power.

CyprusInno, entering its third year with a proven model in Cyprus, will begin focusing on expanding to other post-conflict regions around the world and connecting them back to Cyprus. In growing its work in Cyprus and abroad, the team invites all from anywhere on the island to join them and their journey. Together we can help build a stronger economy, a more peaceful society, and a brighter future for all in Cyprus.

## GUEST SECTION CITATIONS

17. TRADING ECONOMICS. (2019, October). TRADING ECONOMICS: 300.00 INDICATORS: 196 COUNTRIES. Retrieved from <https://tradingeconomics.com/cyprus/unemployment-rate>
18. Charalambous, A. (2019, April 12). No jobs for Cyprus' youth. Retrieved from <https://in-cyprus.com/no-jobs-for-cyprus-youth/>
19. McKenna, J. (2018, June 25). This is what violence does to a nation's GDP. Retrieved from <https://www.weforum.org/agenda/2018/06/what-violence-does-to-a-nations-gdp/>
20. Vision of Humanity. (2019, April 12). The world is less peaceful today than at any time in the last decade. Retrieved from <http://visionofhumanity.org/pressrelease/global-peace-index/>
21. International Labour Office, Global Employment Trends for Youth 2012, p.11.
22. Gilpin, Raymond, Koltai, Steven (2012), Using Entrepreneurship to Promote Stability in Fragile Regions. United States Institute of Peace PEACEBRIEF, 134.
23. Koltai, S. R. (2017, July 25). Entrepreneurs Are the Same Person All Over the World. And That's a Good Thing. Retrieved from <https://nextbillion.net/entrepreneurs-all-over-the-world-are-the-same-person-and-thats-a-good-thing/>
24. One World, & The Hague. (2018). One Young World The Hague 2018. Retrieved from <https://oneyoungworldthehague.com/topics/can-solving-youth-unemployment-avert-future-conflicts/>
25. Sebahara, P., Cizero Ntassano, E. 2014. Youth unemployment in the Great Lakes Region: A challenge for peacebuilding and sustainable development. GREAT insights Magazine, Volume 4, Issue 1. December 2014/January 2015.
26. Kaya, Erkut, Burak, & Nadine. (2019, March 8). Entrepreneurial Intentions of Business and Economics Students in Germany and Cyprus: A Cross-Cultural Comparison. Retrieved from <https://www.mdpi.com/2071-1050/11/5/1437>
27. Papavassiliou, S. (2016, December 16). Truly Cypriot Innovation. The Cyprus Weekly, p. 20. <https://cyprusinno.com/wp-content/uploads/2017/12/CyprusInno-Interview.pdf>
28. Eurostat. (2016 June). Euro area unemployment at 10.1%. Retrieved from <https://ec.europa.eu/eurostat/>
- [documents/2995521/7572550/3-29072016-AP-EN.pdf/73014d16-b7c9-44a7-86b7-78bd9c9d6e95](https://ec.europa.eu/eurostat/documents/2995521/7572550/3-29072016-AP-EN.pdf/73014d16-b7c9-44a7-86b7-78bd9c9d6e95)
29. Chrysostomou, A. (2018, November 11). Bicomunal start-up leading the way. Retrieved from <https://cyprus-mail.com/2018/11/11/bicomunal-start-up-leading-the-way/>
30. Michaelides, D. (2018, October 12). Innovation as a Path to Peace. Retrieved from <https://www.innovationexcellence.com/blog/2018/10/12/innovation-as-a-path-to-peace/>
31. KOLTAI, STEVEN R., and MATTHEW MUSPRATT. Peace Through Entrepreneurship: Investing in a Startup Culture for Security and Development. Brookings Institution Press, 2016. JSTOR, [www.jstor.org/stable/10.7864/j.ctt1dgn6g8](http://www.jstor.org/stable/10.7864/j.ctt1dgn6g8)
32. CyprusInno. (2019, February 21). Cyprus v.U Episode #1: Social Entrepreneurship and Innovation for Youth Across Cyprus: A Talk with GiGEM and CSI [Video file]. Retrieved from <https://www.facebook.com/Cyprusv.U/videos/559975611179428/>
33. CyprusInno. (2019, June 4). Cyprus v.U Episode #2 - A Chat with Entrepreneur, Change Maker, and Growth Strategist Daniel Applewhite [Video file]. Retrieved from <https://www.facebook.com/Cyprusv.U/videos/1170032383179270/>
34. Monitoring the Green Line Regulation. (2019, July 18). Retrieved from [https://ec.europa.eu/info/mission-statement-structural-reform-support-service/monitoring-green-line-regulation\\_en](https://ec.europa.eu/info/mission-statement-structural-reform-support-service/monitoring-green-line-regulation_en)
35. D'Ignoti, S. (2019, July 25). Olive oil company unites Cyprus with a 'taste of peace'. Retrieved from <https://www.pri.org/stories/2019-07-25/olive-oil-company-unites-cyprus-taste-peace>
36. CyprusInno. (2019, April 5). SDGs in Business + 5th Business Mixer - March 29, 2019 [Video file]. Retrieved from <https://www.facebook.com/cyprusinno/videos/2037768023011933/>
37. Chrysostomou, A. (2018, June 4). 'The most peaceful beer in the world'. Retrieved from <https://cyprus-mail.com/2018/06/03/the-most-peaceful-beer-in-the-world/>
38. Voice of the Island. (2019, March 29). CyprusInno Announces Gathering of Entrepreneurs, Innovators, and Policy Makers in the Buffer Zone. Retrieved from <https://www.voiceoftheisland.com/en/cyprusinno-announces-gathering-of-entrepreneurs-innovators-and-policy-makers-in-buffer-zone.html>



39. van Blitterswijk, D., Haley, C., & Febvre, J. (2019, March 12). Paths to Scale: Finance lessons from European entrepreneurs. Retrieved from <https://www.nesta.org.uk/report/paths-to-scale/>
40. Gold News. (2017, August 24). BUSINESS. Retrieved from <http://www.goldnews.com.cy/favicon.ico/companies/first-bi-communal-startup-mentorship-programme-connects-across-the-divide>
41. United Nations Security Council. (2015, December 9). Security Council, Unanimously Adopting Resolution 2250 (2015), Urges Member States to Increase Representation of Youth in Decision-Making at All Levels | Meetings Coverage and Press Releases. Retrieved from <https://www.un.org/press/en/2015/sc12149.doc.htm>
42. United Nations Peacebuilding. (2018). Adopting Resolution 2419 (2018), Security Council Calls for Increasing Role of Youth in Negotiating, Implementing Peace Agreements | UNITED NATIONS PEACEBUILDING. Retrieved from <https://www.un.org/peacebuilding/news/adopting-resolution-2419-2018-security-council-calls-increasing-role-youth-negotiating>
43. European Commission and Council of Europe. (2018, November 20). Connecting the Dots: young people, social inclusion and digitalization – Final Report. Retrieved from [https://www.lero.ie/sites/default/files/TR\\_2018\\_05\\_Symposium%20Report\\_Connecting%20the%20Dots.pdf](https://www.lero.ie/sites/default/files/TR_2018_05_Symposium%20Report_Connecting%20the%20Dots.pdf)
44. United Nations General Assembly. (2018, September 24). Working for and with Young People - SDG Media Zone at the 73rd session of United Nations General Assembly. Retrieved from Working for and with Young People - SDG Media Zone at the 73rd session of United Nations General Assembly
45. 7 ways ICC represented business at the United Nations General Assembly - ICC - International Chamber of Commerce. (2019, November 14). Retrieved from <https://iccwbo.org/media-wall/news-speeches/7-ways-icc-represented-business-at-the-united-nations-general-assembly/>
46. Chrysostomou, K. (2018, September 17). Bicommunal digital platform reaches European Youth Award finals. Retrieved from <https://cyprus-mail.com/2018/09/17/bicommunal-digital-platform-reaches-european-youth-award-finals/>



## DISCLAIMER

Although GEM data were used in the preparation of this report, their interpretation and use are the sole responsibility of the authors.

## COPYRIGHT

This report may not be reproduced or published without the express prior permission of the Centre for Entrepreneurship, University of Cyprus. Authors of the special section retain their own copyrights

## ATTRIBUTION

Please cite the work as follows:

Polyviou, A., Eteokleous, P., Dikaiakos M.D. & Kassinis, G. (2020) Entrepreneurship in Cyprus: National Report 2018/2019, C4E-Rep-2020-01 (published by the University of Cyprus, 2020).

## THIRD-PARTY CONTENT

The Centre for Entrepreneurship does not necessarily own each component of the content of this work. The Centre therefore does not warrant that the use of any third-party-owned component (e.g., tables, figures or images) or part contained in the work, will not infringe upon their rights. The re-use of component within this booklet, is the sole responsibility of the entity using it who has to decide on whether permission is needed from the copyright owner.

## ARTWORK

The artwork included in this report is part of the University of Cyprus collection. This includes:

- *Women's Bazaar (Γυναικοπάζαρο)* by Telemachos Kanthos, 1989
- *La Parisienne Minoan Lady (Μινωική Παριζιάννα)* by Andreas Ladommatos, 2002, donated by Mary and Andreas Ladommatos
- *Untitled* by Christos Petrides, 1937, on loan from the State Gallery
- *Untitled* by Martin Petrossian, 1996
- *Young rose tree on a structure in May (Μικρή μαγιάτικη τριανταφυλλιά σε δόμη)*, by Andreas Ladommatos, 1996, donated by Mary and Andreas Ladommatos
- *A Cypriot day (Μια κυπριακή μέρα)*, single part of the 9-fold painting by Rea Athanasiadou-Bailey, 2008, donated by the artist

## MORE INFORMATION

For more information on GEM, please visit [www.gemconsortium.org](http://www.gemconsortium.org) or contact the GEM Executive Director, Aileen Ionescu-Somers, at [asomers@gemconsortium.org](mailto:asomers@gemconsortium.org)

**Coordination, NES data collection, Data analysis, Report write up, Editing**  
Centre for Entrepreneurship

**Market & Social Research Organisation**  
IMR/University of Nicosia™

**Design - Layout**



Corporate Infografica™

ISSN 2547-8532 (print)  
ISSN 2547-8540 (online)

Copyright © 2020 University of Cyprus

SPONSORS



**MINISTRY OF ENERGY  
COMMERCE & INDUSTRY**

