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The Ecosystem of Startups in Greece: An Explorative Study

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“The Ecosystem of Startups in Greece: An Explorative Study”

Senior Project Submitted to
The Division of Social Studies of Bard College

by
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Annandale-on-Hudson, New York

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Dedication

This senior project is dedicated to my **parents (Antonis & Marina)**, my **sister (Melina-Anastasia)** and **grandparents (Petros & Riki)** for their support and love throughout my college experience and my life in general. My accomplishments would not have been possible without you.

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Abstract

Given that technology and innovation are rapidly rising the last few decades at excessively high rates, people tend to become more creative, searching for new ideas that, through their entrepreneurial spirit, transform into businesses, known as startups. This process of transforming an idea into an actual business that becomes productive and profitable sets the basis for entrepreneurship. Being interested in startups and the idea of creating an enterprise from scratch, I decided for my senior project to focus on these new well-known enterprises and, more specifically to zoom in on the startup ecosystem of Greece, which seems to have great potential of economic growth for the country, but also faces a significant number of challenges, nowadays. This project aims to present the structure of the Greek startup ecosystem, the importance that it has for the Greek economy, as well as the most important challenges that startups face in the market. Through the conduction of a questionnaire and recorded interviews I was able to validate the odds that entrepreneurs have to face in Greece and separate them into four different aspects: 1) Regulatory Framework / Bureaucracy, 2) Government Involvement and Provision of Appropriate Incentives, 3) Taxation, 4) Team Development and Performance. I hope that this research will contribute to highlighting the importance and the potential of the Greek startup ecosystem, thus sending a message to the Greek government to redefine some of the measures that currently harming the startups, and provide the right incentives for them with the ultimate goal of creating a startup 'nation'.

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Introduction

Entrepreneurship – Startups Vs. Older firms

Entrepreneurship is a significant source of innovation and economic development. Countries should encourage the formation and growth of startups to compete in the global economy.¹ By motivating companies to transmit innovation to the general public, the speed of innovation accelerates and creates an appropriate environment for youth to add value to the economic value chains. With entrepreneurship and technological development, the definition of the term company has evolved throughout time. As a result, the fundamental implications of a corporate company and a startup are significantly different. "A company is a legal entity formed by a group of individuals to engage in and operate a business—commercial or industrial—enterprise."²

On the other hand, startups are entities created by a small number of individuals, have tech-based goods and services primarily, and promote a culture of autonomy, empowerment, and innovation. This relatively new era of organizations has the power to transform industries and trends by posing a threat to old corporations that fail to capitalize on technology while attempting to maintain their aged approaches. During the 2000s, the most valued corporations were often automobiles and financial institutions such as *General Motors* and *Citibank*. However, in the 2020s era, they were displaced by high-tech corporations such as *Amazon*, *Apple*, and *Microsoft* originally referred to as startups.

¹ Can Selcuki and Dilan Tulan, "The New Economy: Startups," THE STATE AND FUTURE OF TURKEY AND GERMANY RELATIONS: (Centre for Economics and Foreign Policy Studies, 2021), 45, <https://www.jstor.org/stable/resrep34156.6>.

² Kenton, Will. "Company." Company Definition. Investopedia, September 10, 2021. <https://www.investopedia.com/terms/c/company.asp>.

Overview of the startup ecosystem worldwide

Recently, ' entrepreneur' and 'startup' have become synonymous with job creation and economic growth. In today's context, great emphasis has been placed on new enterprises' capability to prosper in challenging economic circumstances, whether local or national. In his attempt to discover the relationship between a firms' age and its responsiveness to local investment opportunities, *Robinson* explored the belief that young enterprises are more capable than older organizations in dealing with external adjustments in the local business environment because they are less bureaucratic and more flexible. In comparison, older firms are more stable and have easier access to capital than their younger counterparts; hence it is often assumed that older enterprises are better prepared to deal with external economic shocks³.

In addition to *Robinson's* exploration of startups, earlier findings of *Mills* and *Schumann* (1985)⁴ showed that small enterprises account for a more significant percentage of economic activity during booms and a reduced share during recessions. They both argued that small enterprises fulfilled an essential economic purpose by introducing productive flexibility into an economy, which absorbs macroeconomic volatility, based on the theories given by *Stiegler* (1939), *Marschak*, and *Nelson* (1962).

³ Adelino , Manuel, Song Ma, and David T. Robinson. "Firm Age, Investment Opportunities and Job Creation." *National Bureau of Economic Research*, Working Paper 19845, January 2014. https://www.nber.org/system/files/working_papers/w19845/w19845.pdf.

⁴ Koellinger, Philipp D., and A. Roy Thurik. "ENTREPRENEURSHIP AND THE BUSINESS CYCLE." *The Review of Economics and Statistics* 94, no. 4 (2012): 1143–56. <http://www.jstor.org/stable/23355346>.

Goal

My primary goal for this project is to show the critical characteristics of startups by initially presenting a comprehensive global picture of them and then zooming in on my country, Greece, depicting the most important values and qualities that exist in the ecosystem and the potential that it has. This research was conducted with the support of a questionnaire sent to incubators, such as *Orange Grove* and *E.G.G.*, who promoted it to the different startups that work in their co-working spaces. The questionnaire mainly consisted of qualitative questions, aiming to estimate some of the most important factors of starting a startup in Greece. This will be accomplished by showing the opportunities and threats of the market, which can be summarized in respect of the access to available finance, government support, regulatory framework, taxation, and bureaucracy, as well as the support of third parties like incubators.

Why Greece?

Historically, Greece is a country that has implemented innovation and developed entrepreneurship throughout the years, starting from Ancient Greece and moving forward to today's world. It is important to note that Greeks have remained open-minded and innovative, always looking for new ideas that could fulfill a gap in the existing market. However, there have been times that Greek entrepreneurship had faced difficulties, with the most recent one being a decade ago when the country was enticed into a tight, centralized, bureaucratic system that promised easy money and stress-free long-term employment. The Greek economy entered a recession, causing the diminishing of Greek entrepreneurship. For years, an unfriendly business climate resulted in the private entrepreneurial sector's apathy. Greek administrations raised excessive taxes in order to fund an unsustainable public sector and a brand-new welfare state. At

the same time, public workers received lucrative salaries despite poor job performance, which was formerly called the "Greek Dream" for many.⁵ As a result, Greek entrepreneurship declined as Greeks sought the state for work.

The loss of trust in the public sector made Greeks realize that they could no longer rely on it. This new situation resulted in the resurgence of Greek entrepreneurship, forming a reasonably healthy startup ecosystem. In this ecosystem, incubators, accelerators, and technology parks are sprouting up throughout Greece. Early after the crisis, startups like *Skroutz* and *Beat* have been developed, bringing foreign investors into the country and showing the opportunity that such a market has. More recently, and as of 2020, Greece accomplished the highest startup exit. Specifically, *Delivery Hero*, a worldwide online food-delivery business based in Berlin, Germany, paid \$360 million for the acquisition of the Greek startup *Instashop*.

1.5 Map out the project

The following chapter presents the literature review of startups, giving an overview of examples similar to Greece geographically and economically. Exploratory studies from Belgium, Italy, and the U.S. are presented in that chapter to observe similarities that these countries have and see what further implementations can be done and can actually work with the culture and the mindset that Greece has in respect of startups.

The second chapter represents the landscape of startups in Greece, showing the progress of entrepreneurship during the last decade, before and after the economic crisis of 2008. By observing the crisis it can be shown that this period worked as a 'wake-up' call for Greek

⁵ Institute of Entrepreneurship Development. "The Transformation of Greek Entrepreneurship," February 9, 2021. <https://ied.eu/blog/the-transformation-of-greek-entrepreneurship/>.

entrepreneurship, which has been mainly generated during the post-crisis years and has a great potential to thrive and grow even more. The availability and access to financing for the Greek new ventures are presented here, as well as the different sources of financing available for Greek startups, in general.

Moving forward to the third chapter, which consists more of data and critical analysis, the results from the questionnaire are presented, showing the different graphs from the selected variables and focusing on the major issues that need to be addressed, but also fixed in the Greek startups' market.

Finally, the project ends with the final chapter, which presents the major conclusions and results. The conclusions include some criticism regarding the Greek startup ecosystem, as well as some recommendations and policy changes that can take place in the short and long term for the benefit of Greek entrepreneurship, with the ultimate goal of transforming Greece into a startup 'nation'.

Chapter 1: Literature Review

While I was researching the economics of startups, trying to find a model that specifies an exact and proper path for the development of successful startups, I ended up having a collection of sources that helped me understand to a greater extent some background information on my topic, as well as assisted me to organize my literature review. After collecting and analyzing my sources, I had to decide on arranging them the right way to present them correctly and have a smooth flow. The way that I chose to follow was to present my literature review in chronological order, initially focusing on a broader content, providing the model that it will be used, and then starting zooming into different examples similar to Greece (i.e., an explorative study in Belgium), which helped me introduce the literature review of startups domestically.

In his attempt to explain the entrepreneurial ecosystem of Silicon Valley, *Ester* established a model emphasizing the interdependence of cultural and institutional factors at the micro, meso, and macro levels of this high-tech region. The Silicon Valley example represents "a well-integrated and balanced ecosystem in which all constituting elements are lined up to promote and sustain leading-edge innovation and pioneering entrepreneurship."⁶ This success is based on establishing some fundamental values that have tight ties with the cultural mindset and resource availability, which promotes and fortifies innovation and the introduction of new ventures. Overall, the startup environment in Silicon Valley fosters a pro-innovation and entrepreneurial mindset, facilitating the transformation of new ideas into enterprises via a well-oriented network that provides access to talent, expertise, funding, mentoring, and legal

⁶ Ester, Peter & Arne Maas (2016). *Silicon Valley: Planet Startup. Disruptive innovation, passionate entrepreneurship & hightech startups*. Amsterdam: Amsterdam University Press.

advice as accelerators. In addition, the ecosystem encourages competition, innovative thinking, and it assists startup teams in pursuing their goals and marketing their new company ideas. It is an environment that fosters the rapid expansion of current businesses and has resulted in a thriving startup economy that many other locations across the world want to emulate.

The model developed in the study depicts the ecosystem approach, which is a handy tool in analyzing innovative regions such as Silicon Valley. It gives an integrative and systematic understanding of the traits that matter for regions to become and remain creative and entrepreneurial, taking cultural and institutional criteria into account⁷. Furthermore, it is highly interdisciplinary and helpful for policymakers to measure national or regional innovation capability, entrepreneurial effectiveness, and startup attractiveness.

Figure 1 depicts the Silicon Valley Innovation and Startup Model, identifying three interconnected areas of this startup ecosystem. These three aspects are separated into levels, the *micro-level* (inner ring/center block of the figure), the *meso* level (inner ring/outer blocks), and the *macro-level* (outer ring). Starting from the interior and going outwards, the *micro-level* highlights three significant aspects relating to how projected startup success is portrayed in Silicon Valley: (1) the startup must be formed initially around a 'Big Idea' that will have an impact and change the market (Product: Big Idea), (2) the startups must be led by a strong team that successfully hires the best and most skilled/talented human capital available (Organization: Team & Talent), and (3) when conditions suddenly change, the founders must be capable to pivoting their initial starting business plan on time, adjusting to changes (Marketing: Pivot & Perseverance).

⁷ Porter, Michael (1990). *The competitive advantage of nations*. New York: The Free Press.

Porter, Michael (1998). 'Clusters and the new economics of competition'. *Harvard Business Review* Nov.-Dec.: 77-90.

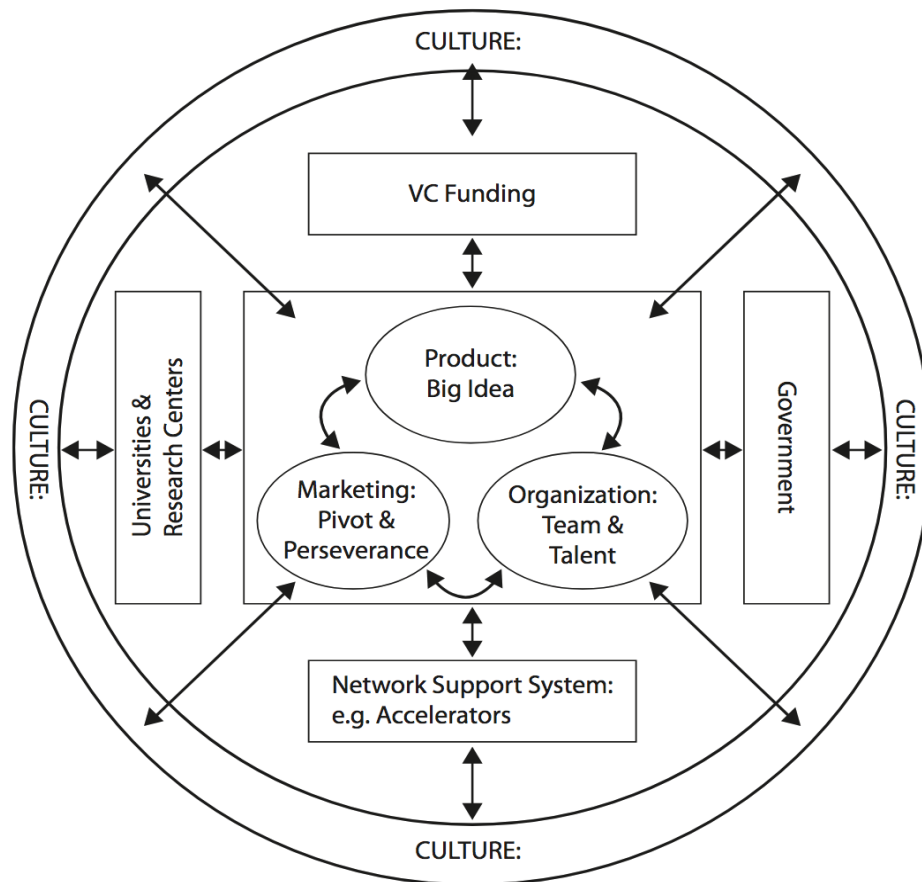


Figure 1: Silicon Valley Innovation and Startup Model⁸

The *meso* level identifies four institutions that have been critical in the development of Silicon Valley's startup ecosystem:

- access to sufficient VC funding
- access to the highest universities and research centers that promote innovation that collaborate closely with industry and actively support new startups

⁸ Ester, Peter. "Innovation and Startups in Silicon Valley: An Ecosystem Approach." In *Accelerators in Silicon Valley*, 38. Amsterdam University Press, 2017. <https://doi.org/10.2307/j.ctt1zrvhk7.7>.

- a government that chose to invest in innovation and acknowledges the startup economy
- the availability of a robust network of startup support organizations, such as accelerators, clusters, and incubators, providing mentoring and legal advice

The *macro-level* represents the traditional Silicon Valley culture, which values entrepreneurship and innovation, encourages the chase of great objectives, promotes openness and learning, is risk-averse and withstands failure, and has the correct startup mindset. This promoted culture has both a direct and an indirect impact on the other two levels.

It should be highlighted that Silicon Valley has spent years developing this well-operating system and that its success is founded on the intelligent integration of all of the ecosystem's fundamental qualities. The Silicon Valley ecosystem is more than the sum of its parts, and as the axiom demonstrates, "selective cherry-picking will not work in an attempt to replicate Silicon Valley's success elsewhere in the world."⁹ Said, it is all or nothing!

Manigart and *Struyf* demonstrated a very similar study to mine during the end of the 90s. This explorative study stresses the importance of available financing for new innovative enterprises, focusing entirely on the high-tech industry of Belgium. Taking into account that Belgium is located in Europe and it represents a lot of similarities with Greece, I believe this source inspired me to create something similar and show that there is a lack of available financing, which depicts one of the values of the meso level in the ecosystem approach model that is depicted in *Figure 1*.

The study's goal was to discover the funding options utilized by high-tech, independent firms during their inception and early growth stages. The authors discuss the significance of the

⁹ Ester, Peter. "Innovation and Startups in Silicon Valley: An Ecosystem Approach." In *Accelerators in Silicon Valley*, 39. Amsterdam University Press, 2017. <https://doi.org/10.2307/j.ctt1zrvhk7.7>.

primary sources of finance, which are the venture capital sector, banks, private investors, and the government, as well as their function and influence on the various demands of startups. The study indicates the reasons for what motivates entrepreneurs to select one source of funding over another, demonstrating the significance of each source and the sensitivity that they have in the formation and success of a new startup. The study's flaws appear to be its erroneous sampling approach since enterprises that use high-tech procedures are omitted from the sample and the study's bias because it only comprised companies currently surviving.

Therefore, qualitative research was carried out in 1995 with 18 high-tech companies found at most ten years ago. This research was conducted with the provision of a questionnaire, in addition to the structured interviews that took place with some of the entrepreneurs, which had a vital role in understanding their motives of choosing between the different sources of financing. The questionnaire's purpose was to gather primarily qualitative information about the sample of startups that it was selected for, such as the sector of the startup, the year that the startup began, the number of entrepreneurs, the initial startup capital, as well as the first year's earnings and sales. In addition, the questionnaire helped in showing how the financing was allocated between the startups in the sample, which helped the researchers to come up with some conclusions and results. The results of the study are summarized in *Table 1* below:

Table 1: Results of the Explorative Study in Belgium (1995)	
<i>Primary Sources Of Financing</i>	
Entrepreneurs	Most essential providers of financial resources at the startup; only two companies did not choose to have a personal investment.
Banks	Second most crucial provider; a most important source of financing for early growth (all companies used it in the early phase); half of the companies got some long-term loan; collateral is required (only one company did not have to do collateral due to the bank's unique financing program for startups).
Venture Capital	Provided equity and an enormous amount of financing; played a complementary role; invested in later stages, and had a positive impact on the further evolution of the company. (Increase sales and growth of sales).
Private Investors	Provided equity capital, not loans; the most considerable amount of capital after VC; Invested in the biggest companies on the startup; Investors were found through "word of mouth."
<i>Other Sources Of Financing</i>	
Universities	Limited administrative support; Facility usage (i.e., laboratories).
Family & Friends	Symbolic Participation; others did not want to mix their private with business matters.
Investment Companies & Institutional Investors	Not used in this sample.
Government	Unimportant role; only indirect role by funding large venture capital companies; provision of subsidies was not easily accessible; bureaucratic processes that take too long to complete.
'Bootstrap Finance'	Not heavily considered in the study; one company used it and helped get a small part of the company's equity.

Table 1: Results summarized from the Explorative Study in Belgium (1995)¹⁰

¹⁰ Manigart, Sophie, and Carol Struyf. "Financing High Technology Startups in Belgium: An Explorative Study." *Small Business Economics* 9, no. 2 (1997): 128–32. <https://www.jstor.org/stable/40228635>.

After considering the results mentioned above, some significant conclusions arose, summarizing the market structure of high-tech startups in Belgium and the role and potential that they can have. The general conclusion was that the search for capital and financing is poorly planned and organized. For this reason, *Manigart* and *Struyf* proposed a better financing action plan that would enhance the success ratio of startups. For example, a major issue presented in the study is that entrepreneurs are reluctant to open their capital to third parties because they fear losing independence. Having a well-oriented and well-structured system would quickly solve these insecurities and help improve Belgium's bureaucratic and slow system, opening new paths for finding capital and private investors¹¹.

Moving forward from Belgium's ecosystem, another very similar and identical startup ecosystem to one of Greece is the Italian startup ecosystem. *De Angelis'* goal was to explain and criticize public policies like the Italian 2012 Startup Act, for which the author found that effort has not yet produced good results; thus, he proposed some solutions. It is mentioned that public policies have aimed to inspire and incentivize the generation and creation of new startups, but *De Angelis* argues that they have so far produced some mixed results that have led to failure. "This failure is the result of mechanically importing policies that have worked in other countries without understanding (1) what is the true economic policy goal of startup policies and (2) how to adopt policies that have worked elsewhere to the local context in order to achieve said goal."¹²

¹¹ Manigart, Sophie, and Carol Struyf. "Financing High Technology Startups in Belgium: An Explorative Study." *Small Business Economics* 9, no. 2 (1997): 133-34. <https://www.jstor.org/stable/40228635>.

¹² Angelis, Luca de. "When Too Much Is Too Little: Evaluating the Italian Startup Act." *The Journal of Private Equity* 21, no. 4 (2018): 29. <https://www.jstor.org/stable/26497441>.

A country's goal for promoting startups is long-term, and this concerns the boost of its economic growth through innovation and entrepreneurship. In order to improve these aspects, the country must assess its initial local conditions as well as what is attainable from there. Governments have a role to play in startups, as no startup ecosystem has ever been created without government assistance, but the policies they encourage must focus on innovation rather than startups per se, or those incentives will be wasted¹³.

It is also interesting to note that a definition of startup appears in the study, and it is pretty unique and descriptive compared to some other ones that will be discussed later in this project. *De Angelis* says that the definition of a startup is quite lengthy, so he summarized everything in some sentences. He interpreted the “definition of a startup as a firm that:

- Earns less than 5million (euros) in revenues per annum;
- Does not and has not paid out dividends;
- Possesses at least one of the following requisites:
 - At least 15% of the greater between revenues and operating expenses is spent on R&D yearly;
 - At least 1/3 of employees are Ph.D. candidates/doctors or at least 2/3 of employees, shareholders, or collaborators possess a Master's degree;
 - The firm owns or leases a patent or a registered software.”¹⁴

He concluded by criticizing the government act and suggested that a healthy startup ecosystem evaluates how local capital markets might engage with startups to foster innovation.

¹³ Lerner, Josh. “The Government as Venture Capitalist: The Long-Run Impact of the SBIR Program.” *The Journal of Business* 72, no. 3 (1999): 285–318. <https://doi.org/10.1086/209616>.

¹⁴ Angelis, Luca de. “When Too Much Is Too Little: Evaluating the Italian Startup Act.” *The Journal of Private Equity* 21, no. 4 (2018): 30. <https://www.jstor.org/stable/26497441>.

As demonstrated by the Italian instance, government-guaranteed financing is the incorrect sort of funding since it does not encourage startups to improve and instead allows them to fund their ideas regardless of their appeal to investors and customers. Second, a robust startup environment must consider the local skills gap and provide incentives to close it. Some nations may have brilliant entrepreneurs, but without experienced and worldwide mentorship, it will be challenging to find out what works and what does not on their own. Finally, innovation is not born out of anything; it is nurtured at universities, research institutes, and business R&D departments. In order to boost the economy's innovation capacity, startup strategies must focus on funding and incentives around current innovation hubs¹⁵.

One of the most recent works on the development of startup entrepreneurship in Greece has been done by a former student of the University of Macedonia, Zafeiris Sidiropoulos (2017). *Sidiropoulos*' purpose was to identify the appropriate financing options for Greek startups, by first analyzing the environment of startups in Greece, presenting the unique characteristics and qualities that it has. After providing some historical background on how Greek entrepreneurship has been developed in the last decade, the author continues with the financing dimension of startup businesses, describing all available sources of financing for Greek startups, and providing specific examples in the Greek market. In conclusion, *Sidiropoulos* comes up with some important findings regarding the development of the Greek startup ecosystem, saying that "the Greek market has some comparative advantages in human capital and in the development of innovative applications. However, Greece's performance in the fields of state support of

¹⁵ Angelis, Luca de. "When Too Much Is Too Little: Evaluating the Italian Startup Act." *The Journal of Private Equity* 21, no. 4 (2018): 38. <https://www.jstor.org/stable/26497441>.

entrepreneurship, ease of entry and exit to the market and bank financing is very low.”¹⁶ He also points out some additional drawbacks of the Greek ecosystem, such as the interconnection of universities with industrial research, the limited sources of financing available for startups (Bank loans, Crowdfunding) due to liquidity constraints or the strict legal framework and lastly, the mediocre performance of incubators and accelerators compared to clusters.

¹⁶ Sidiropoulos , Zafeiris. “The Development of Start-Up Entrepreneurship in Greece Supported by Modern Financing Methods.” University of Macedonia, 2017.
<http://www.asecu.gr/files/asecu-youth/7th-conf/379-sidiropoulos.pdf>.

Chapter 2: The Landscape of Startups in Greece

3.1 Entrepreneurship before and after the 2008 economic crisis

3.1.1 Before and During the 2008 Crisis

With their dominance over all known trade routes since Homer's time, Greeks have consistently been recognized for their ability to exercise entrepreneurship. This entrepreneurial spirit persisted into modern history, particularly in the twentieth century. The onset of the 2008 economic crisis is a significant event that might be seen as the inflection point for entrepreneurship in Greece. It is vital to analyze the situation before the crisis, as well as the post-crisis phase in the field of entrepreneurship so that we can reach the state of entrepreneurship nowadays.

Greek entrepreneurship before the 2008 crisis was established on a fast pace growing model, fueled primarily by public and private spending and "aided" by relatively accessible and low-cost foreign borrowing. Simultaneously, the Greek business environment was notably introverted; net investment and exports were much lower than the average European level, and the trade balance was always negative. However, rising private spending boosted demand and GDP growth, delaying the economic crisis to emerge. The growing demand caused an increase in real estate and commodity prices, while the increases in wage costs in public and private sectors negatively affected unit labor costs in the market. As a result, the competitiveness of Greek enterprises deteriorated by 30%, compared to the corresponding statistics from the Greek economy in the late 1990s.

Overall, the model provided low added value in the domestic economy. The country was enticed into a centralized, bureaucratic system that promised easy money and long-term employment. The Greek economy then entered a downward spiral because the weak growth model began to crumble as the public sector could not support the large domestic needs with the foreign debt that had already accumulated. The next step for the Greek economy was to enter the European Support Mechanism (2010)¹⁷. *Table 2* below shows the low value-added of the model that was used before the 2008 crisis:

Table 2: Low value-added model used before 2008				
Sector	Greece	Southern Europe	Northern Europe	Comments
Tradable Sector ¹⁸	35%	38%	39%	Significant imbalances in the Greek market, imbalances that were due to the "borrowed" money expenditures
Non-tradable Sector	65%	62%	61%	
Tourism	9%	15%	16%	The country's most exported product contributed less than its trade partners.
Source: Eurostat 2008				

Table 2: Low value-added model used before 2008¹⁹

The consequences of following a model like this and entering a recession caused the loss of 26% in gross domestic product from 2008 to 2013 (National Bank of Greece), the bankruptcy and

¹⁷ "The Second Economic Adjustment Programme for Greece First Review - December 2012." European Economy. European Commission, n.d. https://ec.europa.eu/economy_finance/publications/occasional_paper/2012/pdf/ocp123_en.pdf.

¹⁸ Tradables: industry sectors whose output of goods & services is traded internationally (manufacturing, tourism, business services, agriculture, shipping, energy, etc.)
Non-tradables: locally-rendered services (health, education, utilities, financial services, construction, etc.)

¹⁹ Sidiropoulos, "The Development of Start-Up Entrepreneurship in Greece Supported by Modern Financing Methods," 380.

closure of many businesses - mainly SMEs - causing the decline of the Greek market, followed by a loss of a significant number of job positions. The unemployment rate was 7.8% by 2008 but exploded to 23% by 2016 (Eurostat). This percentage was significantly higher for the youth, with more than 50% of young people unemployed.

3.1.2 The "genesis" of the Greek Startup Entrepreneurship Ecosystem

Following the downturn of the Greek economy, essential characteristics such as trust in the public sector and motivation and demand for doing business were lost. According to *Endeavor*²⁰ Greece's comparable data²¹, the situation appears to have worsened between 2012 and 2016, as the setting-up rate of new business is lower than in 2012 (by 33%). Specifically, the sectors with the most significant decline were retailing (49%) and restaurants (41%), but it was observed a high demand for export-oriented practices and tourism-related businesses (16% and 31% increase, respectively).

An economic crisis like the one that Greece experienced created many challenges that the country had to deal with, but it also created opportunities. The financial crisis of 2008 can be interpreted as a "wake-up call" for the Greek economy and act as a catalyst not just for the formation of new businesses, but also for their rapid expansion and multiplication of them. Furthermore, it was evident that the country's pre-crisis economic model, which was built on introversion and domestic consumption, could no longer be sustained, laying the foundation for new and innovative business ideas to emerge.

²⁰ Non-profit organization at the forefront of the high-impact entrepreneurial movement.

²¹ Endeavor Greece (2015). "Reports: Creating Jobs For Youth In Greece" Retrieved from: <https://endeavor.org.gr/wp-content/uploads/2019/11/INFOGRAPHIC-ENG.jpg>

During the year 2010, the startups based in Greece were approximately 16. At the end of 2013, they increased by 900%, making the total number of startups 144, and in 2019 the number of Greek startups was estimated to be around 2000 (Enterprise Greece). The investment and financing of startup entrepreneurship increased by 80 times for the same period (2010-2013), rising from €500,000 to €42,000,000 (Endeavor, Greece), recording a similar condition for the incubator and cluster firms (startup support organizations, 60 times increase), in addition to the attractiveness of foreign and domestic business angels. In 2016, the Greek government collaborated with the European Investment Fund to establish EquiFund, a **€300 million** fund for early-stage businesses that has enabled outstanding growth for the firms it has invested in. Through EquiFund, up to **€500 million** would be invested in the Greek economy (European Investment Fund)²². Due to the recession, this inflow of capital, combined with a tremendous surplus of labor capacity (NBG, estimated 20,000 new jobs only for the IT sector in 2020), has created the ideal environment for business in Greece.

There is not a single definition for startup entrepreneurship. *Oxford Dictionary* defines a startup as a "business or enterprise that is in the process of starting up, or that has just been established."²³ According to *Forbes Advisor*, "Startups are young companies founded to develop a unique product or service, bring it to market and make it irresistible and irreplaceable for customers. Startups are rooted in innovation, addressing the deficiencies of existing products or

²² "EIF and the Greek Government Launch New EUR 260 Million Equity Fund-of-Funds." https://www.eif.org/what_we_do/equity/news/2016/eif-and-the-greek-government-launch-new-eur-260-million-equity-fund-of-funds.htm.

²³ Home : *Oxford English dictionary*. (n.d.). Oed.Com. Retrieved from: <https://www.oed.com/view/Entry/189205?rskey=OltnBa&result=2&isAdvanced=false>

creating entirely new categories of goods and services, thereby disrupting entrenched ways of thinking and doing business for entire industries." (*Benjamin Curry*).²⁴ A self-taught investor, *Mitchell Grant*, provides another interesting definition on *Investopedia* and argues that the term 'startup' "refers to a company in the first stages of operations. Startups are founded by one or more entrepreneurs who want to develop a product or service for which they believe there is demand. These companies generally start with high costs and limited revenue, which is why they look for capital from a variety of sources".²⁵ Overall, we could attempt to create our definition of startup by summarizing the definitions above. Thus, a startup business is:

- An enterprise that is relatively new or has just been established in the market.
- It exists and survives because it brings unique and innovative products or services, finding the demand gaps in the marketplace; thus, it grows too fast.
- Due to the negative cost revenue ratio that startups experience initially, they usually look immediately for funding.
- It is typically in the form of a small enterprise with the ultimate goal to achieve the objectives of the business plan.

²⁴ Baldrige, Rebecca. "What Is A Startup?" *Forbes Advisor*, March 2, 2021. <https://www.forbes.com/advisor/investing/what-is-a-startup/>.

²⁵ Grant, Mitchell. "Startup." *Startup Definition*. *Investopedia*, September 15, 2021. <https://www.investopedia.com/terms/s/startup.asp>.

3.1.3 The business climate in Greece today

SMEs²⁶ Market

Greece has made significant improvements and fiscal adjustments progress since it joined the first support mechanism in 2010. Through the fiscal programs, the government has tried to develop entrepreneurship and innovation, addressing the major challenge of the proper allocation of resources for the benefit of enterprises. However, even if Greece depicts a very positive background for entrepreneurship, it also faces many obstacles that have significantly deteriorated the business environment.

The domestic market structure is mainly similar to that of the rest of the European Union. According to Eurostat data (2020), SMEs, where the category of startups mainly belong, account for 99.9% of the Greek market. 83% of the labor force is employed in these enterprises, and they consist of a value-added of 56.7%, compared to the EU-27 data, which account for 65.2% of people employed in SMEs with a value-added of 34.8%. Greece has an advantage on these figures, even though it shows a downward trend from 2019 to 2020, mainly due to the pandemic outbreak. Specifically, SMEs were increased by 0.6%, the number of persons employed reduced by 1.4%, and the value-added had a major decline of 19.7%. However, it is expected from the *European Commission Fact Sheet* that in 2021 "substantial growth in both SME value-added and SME employment is expected, -14.1% and 10.6% respectively - which will partly offset the downturn in 2020."²⁷

²⁶ Small and Medium enterprises: 0-249 persons employed

²⁷ *SME performance review*. (n.d.). Internal Market, Industry, Entrepreneurship and SMEs. Retrieved March 28, 2022, from https://ec.europa.eu/growth/smes/sme-strategy/sme-performance-review_en

It is mentioned that the Greek SMEs are bringing high levels of innovation, as 40% of them innovate in-house, whereas only 30% do so in the EU, on average. The country's primary objective is to build a vibrant startup culture; therefore, entrepreneurship activity is expanding quickly and is quite close to the EU average. According to the *Greece Investor Guide*²⁸, startups raised 147 million euros in 2019 while increasing the number of acquisitions by significant multinational firms. Lastly, another important aspect of Greek business is that Greece is becoming a desirable foreign investment target for tech-based sectors. These investments are fostering a high-value-added environment that attracts innovative startups.

On the other hand, the Greek business climate also deals with a significant number of challenges. First and foremost, access to funding for Greek SMEs is a considerable barrier. Despite the government's intense involvement in capital market growth through EquiFund and the creation of new mechanisms supplied by the Hellenic Development Bank, financing costs and collateral requirements continue to be higher than the EU average²⁹ (according to the *Small Enterprises Institute of the Hellenic Confederation of Professionals, Craftsmen, and Merchants*). Digitalization remains a major challenge for the Greek SMEs due to the pandemic outbreak, even if it has shown remarkable progress. However, Greece is still considerably behind the EU average, as evidenced by research from a mobile operator (*Cosmote*), which said that just 1 out of every 8 Greek SMEs could be deemed digitally advanced, while the other half is merely at the early level of digital maturity. Finally, the administrative burden remains a critical concern

²⁸ "SME Performance Review." Accessed May 2, 2022.
https://ec.europa.eu/growth/smes/sme-strategy/sme-performance-review_en

²⁹ According to the *Digital Economy and Society Index 2020*,
<https://ec.europa.eu/docsroom/documents/46077>

because 85% of Greek businesses find administrative procedures complicated. Similarly, for 87% of enterprises, the fast-changing regulatory framework prohibits them from developing at a faster pace and prevents entrepreneurship from taking place.

Startups Market

Moving from the SMEs industry and zooming more into the startup market, it can be said that Greek startups face long odds, but there is great space for improvement and development. According to the BCG³⁰ report in 2018, startups can undertake a pivotal role in recovering the Greek economy. It is suggested that through the attractiveness of foreign direct investment, luring highly skilled talent, increasing the global competitiveness of existing industries, and recasting struggling cities as epicenters of innovation, Greece could finally meet the standards of forming a startup nation. For this to happen, legislative actions, innovative initiatives, the alliance of government and officials, and large corporations and academic institutions must be present and intervene to ensure that Greece's startup ecosystem succeeds.

BCG reported that Greece represents a very favorable location for establishing startups and investments. Literally, the country's location is surrounded by major markets, located in the middle of Europe, but also the middle of the world, being a part of the European Union's €15 trillion worth of market. The living conditions are considered exceptional, having mild temperatures with a shallow crime rate and affordable housing prices.

There is a highly educated talent pool, where 25% of people have earned a science, engineering, or math degree. Also, 25% of people between 25 and 64 years old have a bachelor's

³⁰ Giakoumelos, Markos, Thanos Petkakis, and Zacharias Zacharia. "Greece's Startup Ecosystem: A Prime Opportunity for Economic Growth." Public Sector. Boston Consulting Group, April 23, 2018. https://web-assets.bcg.com/img-src/BCG-Greeces-Startup-Ecosystem_tcm9-190625.PDF.

degree, almost 10% higher than the OECD average (only 16%). In addition to some actions that have already been implemented, these factors have brought Greece into an excellent position for exercising entrepreneurship at a high level. Such actions are initiatives like the establishment of *EquiFund*, an investment platform created by the Ministry of Economy and Development of the European Investment Fund, which anticipates pouring up to 1 billion into Greek startups through venture capital and private funding. Also, the fact that more than 250 million has invested in Greek startups in the last decade has attracted foreign investors to acquire majority stakes in Greek startups.

Incubators and the provision of Co-working spaces have also impacted startups' rapid growth, as the former has supported the startups in finding seed funding, strategic partnerships, and innovation clusters. The latter has enabled entrepreneurs to grow their network and improve collaboration by providing affordable offices. Finally, the creation of venture capital groups has also played an important role in accelerating startup growth by financing the startups during their early stages.

However, the Greek startup market faces many challenges that delay the rapid growth of startups and do not allow them to develop and mature quickly. First of all, even if Greece has a relatively high percentage of the educated talent pool, there is limited access to the right talent at the right time. According to *BCG*, 59% of Greek employers cannot find suitable talent. This shortage of workers exists due to the fact that there is a lack of training in high-demand fields in addition to the limited education that is provided to students on entrepreneurship by the Greek public universities. Internships are hard to find and larger corporations only offer them to a limited number of people. Furthermore, institutional support and government incentives do not

help build a collaborative network, which entrepreneurs can rely on. The R&D investment is relatively low, with only 40% coming from corporations, which means that there are giant steps for improvement in this part, as it is still underdeveloped. The regulatory framework also adds uncertainty and creates an unfriendly environment for businesses to grow and develop domestically. In the *World Bank Ease of Doing Business Survey* for 2020³¹, Greece was ranked 79th out of 190 countries surveyed. Even if Greece did well on other aspects, and was ranked 11th in areas such as starting a business; the restricted product and service market regulations, as well as the difficulties that Greek businesses encounter (i.e., when they have to resolve a commercial dispute in court) bring the country's ranking to the point that it is right now. In addition, barriers to entry, pricing restrictions, and state monopolies create heavy competition in the domestic market. All this results in a small economic structure, which does not support the creation of large, globally competitive corporations with the incentive to innovate and export. During 2020, the Greek exports as a percent of GDP were only 31.89% compared to 40.38%, which was the world average in the same year³².

Last but not least, the societal stigma of failure is enormous in Greece. For this reason, people are less optimistic, and they rely on jobs that are less risky than starting a new business. This fear of failure exists because of cultural and educational reasons. As mentioned earlier, the education system offered by public universities does not focus on teaching entrepreneurship to young graduates. In addition, the legal framework for closing a business is anticipated with a

³¹ World Bank Group. "Doing Business 2020 ." World Bank, n.d. <https://documents1.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf>.

³² TheGlobalEconomy.com. "Greece Exports, Percent of GDP - Data, Chart." Accessed May 2, 2022. <https://www.theglobaleconomy.com/Greece/exports/>.

high-cost and time-consuming process, which also discourages entrepreneurs from launching a new startup. It is interesting to observe the diagram below, which shows the responses of survey participants in innovation-driven countries, including France, Germany, Israel, Portugal, and the US, in comparison to Greece. The green bar chart reflects the response of survey participants in Greece, whereas the red benchmark reflects the responses of the rest of the countries.

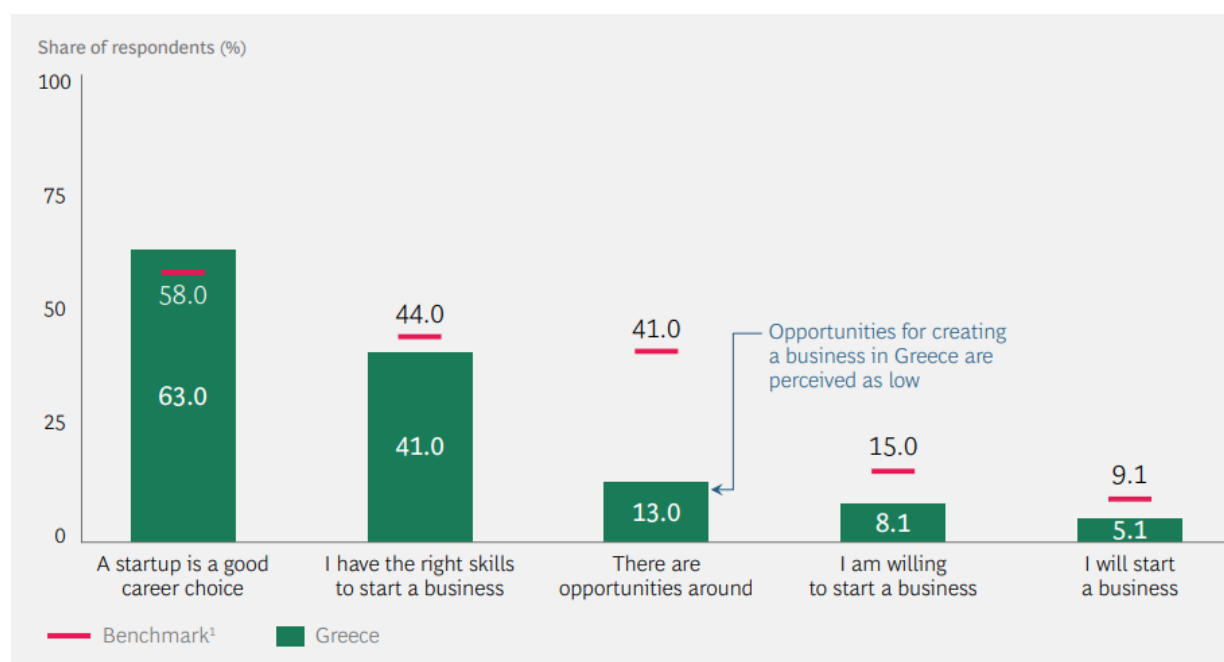


Figure 2: Fear of Failure Discourage Potential Founders from Creating Startups³³

Entrepreneurs appear to be lacking in possibilities to start a new business, and incentives/initiatives to establish a business are regarded as poor compared to the rest of the innovation-driven countries. The most significant difference is shown in the opportunities and incentives reported by entrepreneurs, where just 13% recognized opportunities to begin a startup in Greece, compared to 41% in the other economies.

³³ Giakoumelos, Petkakis, and Zacharia, "Greece's Startup Ecosystem: A Prime Opportunity for Economic Growth," 7.

3.1.4 The dimension of Greece evolving into a startup 'center' – 'Host-up' Greece

Greece depicts a country with outstanding characteristics and massive potential in the field of entrepreneurship and the attractiveness of new investment, even if it faces a significant number of challenges as a country. In addition to the long research that *BCG* provided in 2018, it also constructed a "bold vision," named 'Host-up Greece,' an ambitious project that aims toward the creation of a robust startup ecosystem in an effort to increase interaction among inventors, entrepreneurs, and organizations so that new ideas can emerge. This vision is based on four critical pillars that guarantee to establish a structural foundation for a startup ecosystem that can host and grow domestic and international startups in the short and long run.

First of all, establishing a collaborative innovation network is essential for startups to rely on and receive the appropriate support and incentives that are needed. This aspect represents the first pillar of the *Host-up Greece* project, and this network "consists of large enterprises, academic institutions, and startups working together to further innovation."³⁴ Launching a private, independent research fund, restructuring university entrepreneurship centers, establishing and growing local innovation districts, and building an international networking program to encourage mentoring, investment, and collaboration might contribute to the first pillar.

The second pillar of this vision is formulating a growth conducive business environment. The ultimate goal of this establishment is to assist entrepreneurs in swiftly and efficiently establishing, operating, and closing a firm and providing economic incentives to stimulate startup growth. Greece needs to pay attention to reforming existing tax policies to incentivize startup

³⁴ Giakoumelos, Petkakis, and Zacharia, "Greece's Startup Ecosystem: A Prime Opportunity for Economic Growth," 8.

development and ease regulations to promote growth in increasing potential segments. Developing incentive packages to retain and attract new talent as well as the urge for angel investors are essential strategies for boosting economic growth.

Furthermore, the third pillar that is argued is the accessibility to the right talent. This pillar consists of highly educated and specialized people with skills aligned with the market needs and prices. Of course, the education offered by the institutions is minimal concerning entrepreneurship and investing. However, improvement in fields like enhancing internships and fellowships opportunities as well as offering specialized training in specific topic areas are some aspects that can easily be implemented to enrich the startup workforce.

Finally and most importantly, sustainability in areas like funding and financing of startups should be established, where continuous access to capital is available for them to grow and mature over the long term. There is a great potential for establishing such a pillar, especially when *EquiFund* came up, which is expected to pour up to 1 billion into the Greek startup market, covering three key areas: research and innovation, early-stage and growth-stage funding.

3.2 The Financing Dimension of Startup Businesses in Greece

3.2.1 The business development of a startup

After perceiving an innovative idea that can be implemented in the real world and taking all the regulatory steps for legalizing a new business, entrepreneurs tend to attract funding in any way they can to benefit their business and go through the stages of business development. New businesses, especially startups, can be funded in many ways. These ways are separated into the traditional methods, such as personal investment, seeking support from friends and family or loans from banks, and the new ways of financing, for instance, venture capital, private/angel

investors, or crowdfunding. The government and universities can also provide seed capital through various resources and programs to support entrepreneurship, innovation, and new investment opportunities.

3.2.1.1 The financing life cycle of a startup

Usually, as a startup evolves and moves from one stage of its life cycle to another, different financing options appear, and its business model/plan is getting adjusted accordingly³⁵. As depicted in the figure above, the lifecycle of a startup can be separated into multiple stages, analyzed in a revenue: time ratio. At the beginning, where the idea is first established, it is observed that the startup is running a deficit in revenues, and this period is called the 'Valley of Death,' as most companies tend to fail and go bankrupt. The risk in the initial stages is high until

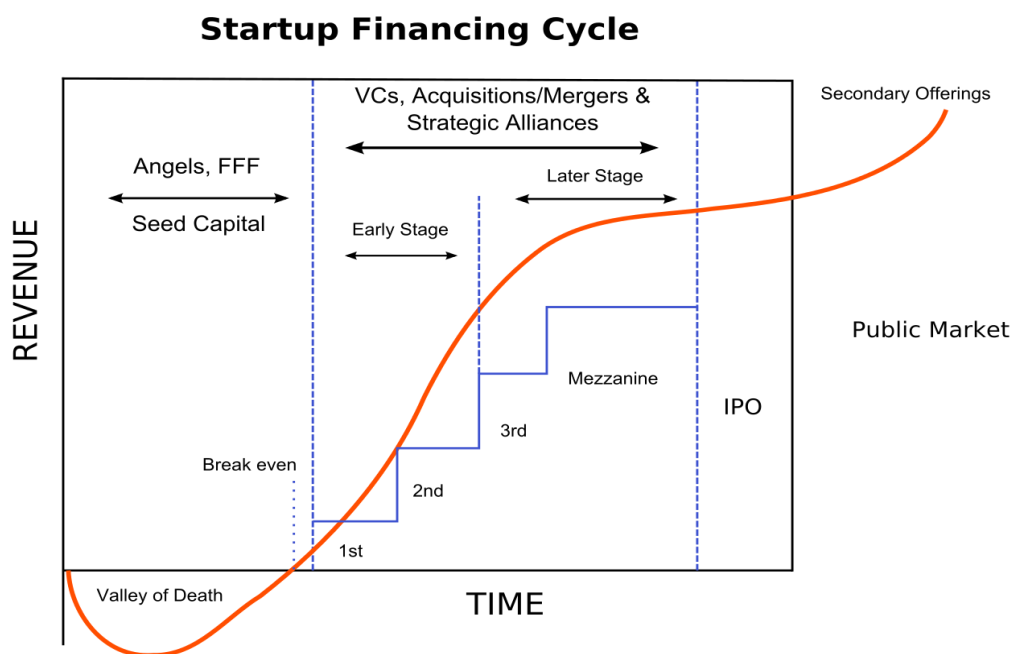


Figure 3: Life Cycle and Financing of a Startup³⁶

³⁵ Davila, Antonio, George Foster, and Mahendra Gupta. "Venture Capital Financing and the Growth of Startup Firms." *Journal of Business Venturing* 18, no. 6 (November 1, 2003): 689–708. [https://doi.org/10.1016/S0883-9026\(02\)00127-1](https://doi.org/10.1016/S0883-9026(02)00127-1).

³⁶ Startupxplore Blog. "Understanding Differences in Startup Financing Stages," October 9, 2014. <https://startupxplore.com/en/blog/types-startup-investing/>.

the business receives some support with seed capital from an angel or private investors. This can help the startup overcome the first risky section of its 'life' and slowly grow its revenues until it reaches the break-even point. As soon as there is a revenue surplus, then the second stage of the life cycle emerges, in which early-stage financing is needed from venture capitalists and strategic alliances. In the early-stage funding, financing is split up into two major rounds, and then later stage financing takes place, including two long-lasting rounds of funding.

After the later stage funding is completed, the startup is either acquired or moves on to the third stage of its life cycle. In the third stage, it takes its first steps toward accessing the public market, either by selling shares in an initial public offering (IPO) or a secondary market offering.

3.2.2 Traditional approaches to financing

The first challenge that a startup has to deal with is finding access to available financing. Securing money is one of the most challenging tasks that a new business encounters and at the same time, one of the most typical reasons that innovative and aspirational ideas fail. This chapter continues with the most well-known approaches to financing a startup, considering the existing situation of the market in Greece.

3.2.2.1 Personal Investment - Bootstrap

Bootstrap depicts a typical method of financing a startup's idea, and it is prevalent in the early stages of its life. The business sector regards this strategy as a tool for transforming human capital into financial capital³⁷. In other words, this approach can also mean that the entrepreneur is running the company by using only personal finances or operating revenue. This

³⁷ Lahm, Robert J., and Harold Little. "BOOTSTRAPPING BUSINESS START-UPS: A REVIEW OF CURRENT BUSINESS PRACTICES," 2005.
<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.453.1617&rep=rep1&type=pdf>

straightforward method of self-financing offers both benefits and drawbacks, like every other way does.

First and foremost, the entrepreneur does not waste valuable time waiting for the responses of potential investors and can start preparing and developing the business's concept. Simultaneously, the entrepreneur keeps complete control over the new venture and is flexible in establishing the right business development tools. However, this also represents a disadvantage since the entrepreneur is cut off from the exterior environment, fellow professionals, and contacts in the business world³⁸. Additionally, financing from personal investment is usually limited and effective when the startup does not require significant amounts of capital in the early stages of its life cycle. Consequently, using bootstrap financing may lead to the development of a secondary product that does not keep up with the alpha version of the product and may not be able to persuade potential investors to provide additional financing in the future.

In Greece, there is a scarcity of data on the financial instruments utilized by startups in the early phases. According to the General Secretariat of Industry³⁹ (GSI) research on the startup environment in Greece, 83.5 percent of entrepreneurs used personal capital as a source of finance for their business idea. *ANTCOR* is a prominent example of a startup that has flourished on the market, utilizing solely private equity as its original investment. The business was formed in Patra (2004) with the goal of developing microprocessors and the software that goes with them for wireless networking. *ANTCOR* used bootstrapping to get to the beta version of their product,

³⁸ Lopac, B. (2007). How to fund a Web startup. Retrieved from: <http://www.cromotion.net/76/kako-financirati-web-startup/>

³⁹ Sidiropoulos , "The Development of Start-Up Entrepreneurship in Greece Supported by Modern Financing Methods," 387.

then entered the market and sought additional capital. After three significant financing rounds from several investment firms, it was acquired in 2014 for 8.5 million euros by the Swiss enterprise *u-blox*.

3.2.2.2 Family & Friends & Fools (3F)

Searching for additional capital rather than the personal investment that the entrepreneur initially contributes to the startup, entrepreneurs tend to look in their inner circle, which is their family and friends. This category is also named the 3F (Family-Friends-Fools) and can significantly impact the development of the startup in the very beginning.

The positive of this method is that it does not require preparing a structured business plan (like investors do), as the environment is frequently convinced and offers financing support because relatives are willing to support and be involved in the process. However, mixing interpersonal relationships with business might lead to conflicts and risks if the startup's idea fails to develop. Due to the traditions and Greek culture, financial support from family and close friends is a must in Greece. This is also supported by the previously mentioned GSI study, which found that this approach is the most popular after personal financing among Greek startups.

3.2.2.3 Banks

Receiving financial support from banks, through a bank loan, is a conventional source of finance for existing enterprises. It represents a challenging technique for a new business since a serious and complete business plan must back it for the bank to accept and provide the loan. In this situation, funding is guaranteed if the bank approves the request. However, in exchange for his/her personal property, the entrepreneur is needed to submit multiple guarantees, also known as collateral. As a result, the repercussions of failure are quite unfavorable. However, because it

does not contribute stock to get finance, the entrepreneur retains the complete management of the startup.

This strategy was quite tricky in Greece and financing rates were extremely high during and after the financial crisis. Banks still have difficulty funding companies due to a liquidity shortage in the Greek financial sector⁴⁰. According to the GSI poll, just 4.7% of Greek startups have gotten a bank loan, particularly those in Athens. However, great potential for bank financing has come from the *Hellenic Development Bank*, which the Greek government founded in 2019. The mission of *HDB* is to “improve SMEs' access to finance, foster innovation, facilitate infrastructure investments, encourage equity investments and other alternative financing sources, and provide business support to SMEs, primarily through shared-risk loans and guarantee facilities, as well as financial expertise to the public sector.”⁴¹

3.2.3 New ways of financing

3.2.3.1 Angel Investors / Business Angels

Private investors interested in investing equity in a high-risk company concept in exchange for corporation shares or equity are known as business angels. Business Angels or Angel Investors form a common strategy for startups to receive extensive funding as it is frequently a startup's first “outside” source of finance. In comparison to traditional institutions', angel investors represent a much simpler way of financing as money is typically provided without personal guarantees or any type of collateral. Usually, business angels are individuals

⁴⁰ OECD. (2016a). *Entrepreneurship at a Glance 2016*. Paris: OECD Publishing. https://doi.org/10.1787/entrepreneur_aag-2016-en

⁴¹ OECD. *Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard*. Financing SMEs and Entrepreneurs. OECD, 2020. <https://doi.org/10.1787/061fe03d-en>.

who become interested in the team and the idea of a startup, giving them a vote of confidence by providing a significant amount of capital, hoping that the venture will perform well. The main advantage of this approach is the experience and the network that the angel investor has; however the investor is actively engaged in the venture's management to the point where the entrepreneur may lose control and privacy over the venture. It is worth noting that this investment is up to \$250,000. Endeavor estimated that this approach is rising in Greece, possibly by over 200% in the number and the sums that business angels invest, with approximately 150 active angels at least.

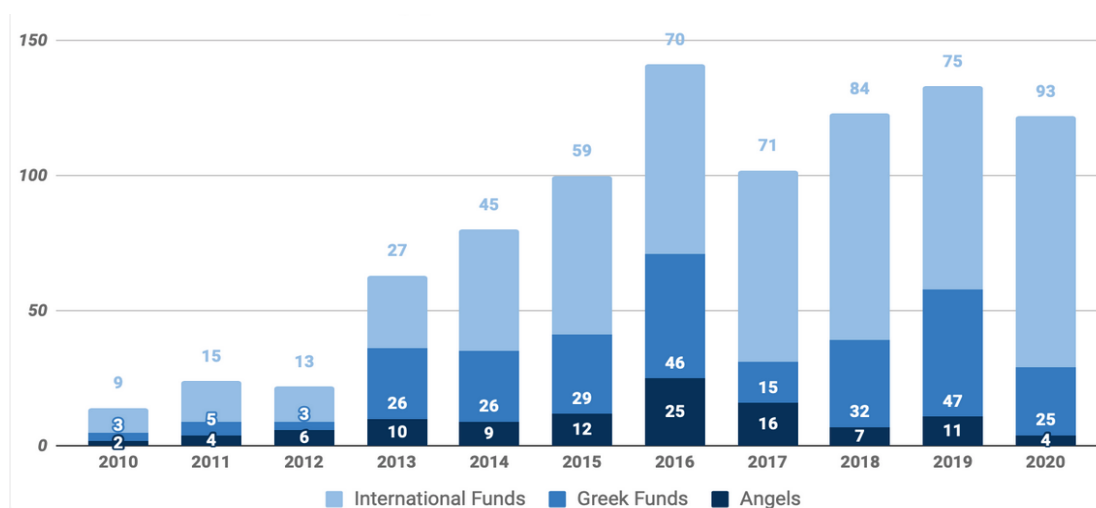


Figure 4: Business Angels Impact on Investment Rounds⁴²

⁴² Papadopoulos, Panos. "The Greek Startup Industry: Investments and Exits, 2010-2020." Accessed May 4, 2022. <https://marathon.vc/blog/the-greek-startup-industry-investments-and-exits-2010-2020>.

3.2.3.2 Venture Capital

Compared to Angel Investors, Venture capital represents a more holistic approach that can provide a significantly higher amount of funding for startups. VC investors are interested in business ideas with high growth potential and a capable team that is ambitious to turn their business concept into a viable company. VC is a medium to long-term investment mechanism in which the VC firm acquires an interest in the startup's capital, and if the company needs further funding to grow, it is common for many investment rounds to follow.

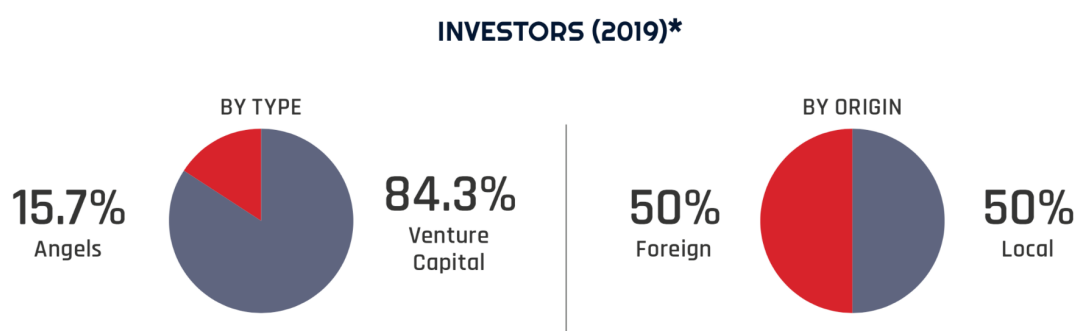


Figure 5: Venture Capital Vs. Business Angels in 2019⁴³

Venture Capital is not limited to providing capital but can also offer assistance with management, marketing, human resources, and strategic planning. Relationships with other market firms and a network that can be leveraged to build corporate alliances are vital for the organization, assisting startups to become more competitive. Again, entrepreneurs' possibility of

⁴³ "Startups in Greece 2019 ." Annual Report. Re-Mapping the Investments Landscape. Foundation, n.d. <https://thefoundation.gr/wp-content/uploads/2020/05/Startups-in-Greece-2019-by-EIT-Digital-and-Foundation.pdf>.

losing control over their business is a major drawback of this approach, as venture capitalists may intervene and get actively involved with business decisions because their main goal is to maximize profit. The business development process is particularly demanding, and there is an existing view which argues that VC investments are often used with the ultimate goal for the startup to enter the stock market and resell its shares as quickly as possible. However, this does not appear to be validated in the Greek ecosystem, as the startup market is not comparable to nations such as the United States or Germany.

In recent years, large sums of money have been invested in the Greek market through "JEREMIE"⁴⁴ funds. Looking more into depth in the distribution of these high-risk funds, around 80% were awarded to startups located in Athens or Attica, in general. Specifically, more than 39 million dollars (51 million in total) were directed to the Greek market and benefited startups in Attica. However, the Greek market has begun to pique the curiosity of investors. Venture capital seems to be more available and efficient than angel investments, accounting for 84.3% in 2019, coming from local and foreign VC investors.

Looking at all-time data regarding investors, the number, and the value of deals, VC represents the dominant approach compared to business angels and accelerators. (Foundation) Most of the investors are originally foreigners, bringing foreign direct investment into the country, adding value to the promising Greek startup ecosystem that is created. Among the most successful startups that have been funded by foreign capital (VC and angel investors) have been *Persado* (2013: \$15 million from VC), launched in 2012 with a focus on mobile marketing, *inaccess* (2013: \$6.5m from VC and investors), a startup for monitoring energy and communications, and

⁴⁴ European funds that are distributed either from investment companies or banks, boosting entrepreneurial activity in the field of technological innovation, providing funds for co-financing loans

Transifex (2014: \$2.5 million from foreign VCs and business angels), a technology company that started in Patras (2009), moved to Athens (2014) and now is active in the U.S. (Sidiropoulos, 2017)

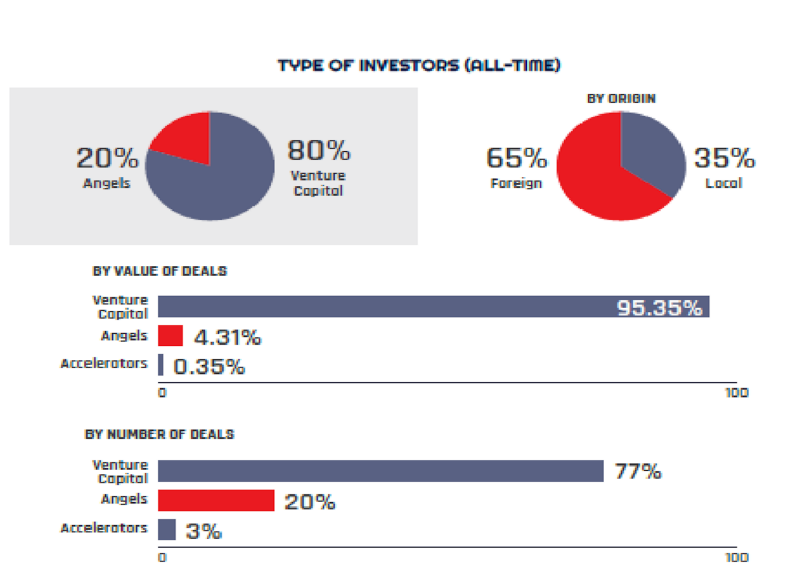


Figure 6: Venture Capital Vs. Business Angels (All-time Data)⁴⁵

3.2.3.4 Crowdfunding

Crowdfunding represents a relatively modern approach to securing funding compared with VC and Business angels methods. This technique is based on internet platforms where the entrepreneur proposes a crowdfunding plan and raises financing⁴⁶. Through internet platforms,

⁴⁵ "Startups in Greece 2018." A Maturing Ecosystem Points to a Brighter Future . Foundation, n.d. <http://thefoundation.gr/wp-content/uploads/2018/12/Startups-in-Greece-2018-by-EIT-Digital-and-Foundation.pdf>.

⁴⁶ Pierrakis, Yannis, and Liam Collins. "Crowdfunding: A New Innovative Model of Providing Funding to Projects and Businesses." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, May 5, 2013. <https://papers.ssrn.com/abstract=2395226>.

the campaign developer can communicate directly with the public by defining the financing packages ranging from a few hundred to thousands of dollars and providing incentives⁴⁷ to the general public. The way that this works is that each proposal presentation campaign lasts for a significant period of time, and the platform that promotes it receives a percentage of the collected funds as a commission for their work⁴⁸. The critical advantage of crowdfunding is that individuals who invest do not receive a stake or shares in the firm; instead, the entrepreneur keeps complete control, which is ideal for the early stages of a startup. Furthermore, a successful crowdfunding campaign helps the entrepreneur to make valuable conclusions regarding the product's future demand.⁴⁹

Starting in 2012, Greece has shown substantial interest in developing crowdfunding platforms. There are a variety of platforms, such as Groopio, OpenCircle, GIVE & FUND, etc., offering hybrid types for supporters of crowdfunding campaigns. Since this approach is still developing in Greece, most crowdfunding platforms were initially created on the basis of international practice or operated entirely in English to attract more investors. The main feature of this method in the Greek startup market is to secure some kind of seed capital for the early stages of the startup; however, there are cases where larger capital has been collected from the

⁴⁷ "In terms of motivation, Bradford (2012) classifies crowdfunding in five different forms (a) the donation model where the supporter does not receive any reward for his contribution (b) the reward model, where the creator determines different rewards (e.g. the product or the service) depending on the value of the contribution. The same is with the (c) pre-purchase model. There is also the (d) lending model, where supporters are expected to be repaid the funds they contributed and the (e) equity model where the supporter expects a share of the company's profits or percentage of the equity capital. Generally, some platforms combine more than one crowdfunding model, while other platforms operate in a single form."

⁴⁸ Andersen, L. M. K., & Mauritzen, L. J. (2016, March 30). *Crowdfunding as a tool for startups to raise capital why and how to use it*.

⁴⁹ Agrawal, Ajay, Christian Catalini, and Avi Goldfarb. "Crowdfunding: Geography, Social Networks, and the Timing of Investment Decisions." *Journal of Economics & Management Strategy* 24, no. 2 (June 2015): 253–74. <https://doi.org/10.1111/jems.12093>.

“crowd.” One of the first Greek startups that used crowdfunding was *Doxato Farm*, a company in the agri-food sector. In addition, the Greek fintech startup *Plum* announced the launch of a crowdfunding campaign that started last October⁵⁰, aiming to triple the company's valuation, offering investors a stake in the company as a reward. However, the relevant statistics for the Greek market indicate that investors prefer to sponsor social acts, such as the Chios Refugee Act, which raised 25,622 euros in 2016. Finally, the Greek legal environment poses significant challenges to the proper functioning of crowdfunding. Because crowdfunding is governed primarily by existing regulations rather than by a separate legal structure, there are impediments to the loan and equity models of crowd fundraising, making this approach more difficult to get established.⁵¹

3.2.3.5 Government & Universities

Governments and Universities usually have an indirect role; however, a very crucial one regarding the financing of startups. Starting with the former one, governments in startup economies have gradually played a crucial part in building a startup culture by enacting better legislation, lowering tax burdens, facilitating talent mobility, expanding infrastructure, etc. By setting up a friendly environment for startups, the government provides the appropriate incentives to foreign and domestic investors to be a part of the startup ecosystem, thus supporting the

⁵⁰ Stojkovski, Bojan. “Greek Fintech Startup Plum Secures €12M, Launches Crowdfunding Campaign next Week.” *TheRecursive.Com* (blog), October 15, 2021. <https://therecursive.com/greek-fintech-startup-plum-secures-e12m-launches-crowdfunding-campaign-next-week/>.

⁵¹ European Crowdfunding Network. (2013). *Review of Crowdfunding Regulation, Interpretations of existing regulation concerning crowdfunding in Europe, North America and Israel*. Belgium: European Crowdfunding Network. Retrieved from <http://eurocrowd.org/wp-content/blogs.dir/sites/85/2016/12/ECN-Review-of-Crowdfunding-Regulation-2013.pdf>

funding of these new ventures. In addition, European governments can also introduce significant financial packages/acts for startups when partnering with the European Union, such as the creation of *Equifund*, an initiative created by the Hellenic Republic in cooperation with the European Investment Fund (EIF). This initiative has boosted investments in startups in Greece, and it will provide more than 300 million euros to early-stage startups, but also support those that are in the growth stage and need to expand even more.

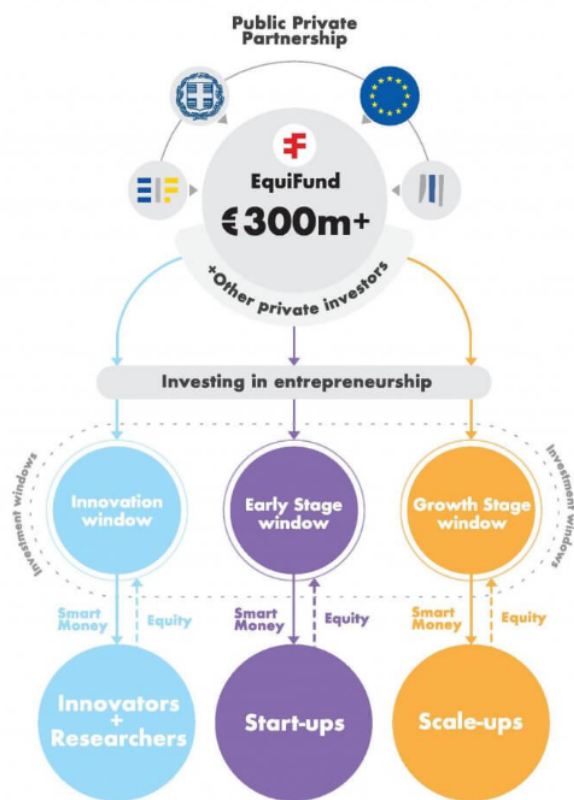


Figure 7: EquiFund Model⁵²

While the Greek government supports equity financing through minority participation in venture capital funds, it also operates several loan guarantee programs. In 2017, the Greek government announced various actions, like the establishment of the Intermediate

⁵² EquiFund. "EquiFund: Finance Your Idea." Accessed May 2, 2022. <https://equifund.gr/>.

Entrepreneurship Fund and the Western Macedonia's Regional Development Fund. These funds complement The Entrepreneurship Fund II and The Energy Saving Fund II, established in 2016, and started to provide loans in 2018. Due to the support of the national financial sources and the European Structural Investment funds, additional funding for short-term and long-term export credit insurance is available for Greek startups.⁵³

Universities can also have a significant role in the development of new startups by providing the appropriate education on entrepreneurship to students, inspiring them to cultivate their own ideas, by using the equipment and the facilities that they provide. Through education, private or public schools have the chance to get involved in the process, generating talented individuals that have promising ideas and can significantly contribute to the ecosystem. Examples of successful enterprises that began as academic research spin-offs demonstrate that entrepreneurship and university life go hand in hand and that integrating the two generates tremendous innovative value.

However, as mentioned earlier, one of Greece's major ecosystem challenges is the role of public universities and the preparation of youth towards an entrepreneurship mindset. Lately, actions have started taking place, such as the establishment of Athens Center for Entrepreneurship and Innovation (ACEin), run by Athens University of Economics and Business, which supports young local entrepreneurs and researchers in transforming their creative ideas into enterprises with long-term business models. ACEin's mission is to bridge the current gap

⁵³ OECD. *Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard*. Financing SMEs and Entrepreneurs. OECD, 2020. <https://doi.org/10.1787/061fe03d-en>.

between valuable insights and achievements derived from scientific and academic research, on the one hand, and their commercialization, on the other⁵⁴.

3.2.4 Business development through incubators

3.2.4.1 Incubators

Incubators are private organizations that support the creation and development of new ideas and startups, by providing the appropriate equipment, spaces, knowledge, and network, enabling them to grow and develop their products or services in the market. Small sums of funding are sometimes used to provide assistance (much less than VC), but the primary goal of an incubator is to provide young entrepreneurs with the opportunity to work in a setting similar to co-working spaces while also providing counseling and mentoring services.⁵⁵ Generally, the incubator's role is purely supportive, allowing the firm to proceed to a sustainable business development after some time⁵⁶, with adequate infrastructure and planning, seeking funding from banks or investors. In exchange, incubators obtain shares or a profit percentage from future sales.

⁵⁷

More than 20 incubators (or pre-incubators) operate in Greece, with most of them located in Attica (only 3 in Thessaloniki). The majority of these were established after 2008 and offer

⁵⁴ Ilvanova, Elena. "Lessons from Greece: University Incubators Bridge the Gap between Research and Business." *TheRecursive.Com* (blog), April 1, 2021.

⁵⁵ Bergek, Anna, and Charlotte Norrman. "Incubator Best Practice: A Framework." *Technovation* 28, no. 1–2 (January 2008): 20–28. <https://doi.org/10.1016/j.technovation.2007.07.008>.

⁵⁶ usually 6 to 18 months and not more than 5 or 7 years.

⁵⁷ Sofouli, Evangelia, and Nicholas S. Vonortas. "S&T Parks and Business Incubators in Middle-Sized Countries: The Case of Greece." *The Journal of Technology Transfer* 32, no. 5 (October 1, 2007): 525–44. <https://doi.org/10.1007/s10961-005-6031-1>.

additional accelerating mentoring. *Exothermia* is a spin-off startup from The Aristotle University of Thessaloniki that has successfully established itself in the Greek market environment, while also developing a considerable export activity following a "successful" incubation period. Its business operations are focused on creating automotive software applications for the automobile sector, helping large enterprises in the industry with their products, like *Toyota*.

3.2.5 Greek Startups during the pandemic

COVID-19's impact on Greek startups was uneven and varied by sector. The social distancing and lockdown measures implemented to prevent the spread of the virus, as well as people's increased concerns, had a significant impact on sectors such as tourism, with inbound tourists dropping by 76.5 percent in 2020⁵⁸, and real estate, particularly short-term leasing. In contrast to the layoffs and lack of activity in these industries, the pandemic produced significantly better conditions for the rise of e-commerce and delivery startups. Regardless of the challenges posed by the virus, it is critical for startups to adapt to present conditions as well as foresee future trends⁵⁹. *EnzyQuest* and *BIOPIX-T*, for example, received funds from venture capital companies and the EU to develop in the multi-billion-euro diagnostics business, which is likely to grow even more owing to increased worldwide demand.

Furthermore, exogenous shocks such as COVID-19 show the flaws in existing supply chain models. Through robotic process automation, data management, and artificial intelligence, startups can significantly aid in the digitization of supply chains and the development of future

⁵⁸ INSETE. (2021). Statistical Bulletin February 2020. INSETE. https://insete.gr/wp-content/uploads/2021/02/Bulletin_2102.pdf

⁵⁹ Vakoulis , Christos. "STARTUPS IN GREECE: THE INFLUENCING FACTORS OF A GROWING ECOSYSTEM." Student Competition, University of Macedonia, Department of Economics, 2021. <https://www.economia.gr/startups-in-greece-the-influencing-factors-of-a-growing-ecosystem/>.

resilience. Finally, touching upon tourism as it is one of Greece's most significant industries, companies have moved towards alternative solutions, using virtual and augmented reality technology to engage foreign travelers, proving that adjustments can be made.⁶⁰

⁶⁰ Vakoulis, op.cit.

Chapter 3: Analysis of the Exploratory Study

In order to explore the potential of startups in Greece and the most significant challenges and opportunities that these new ventures have to deal with, a qualitative survey was conducted in the Fall of 2022 with 13 startup companies that were owned by Greek entrepreneurs. The initial goal of the study was to reach out to as many Greek startups as possible aiming at the creation of an econometric model that would identify the most sensitive factors that impact the development and success of a new startup. Due to the fact that the availability of data was limited and even though incubators, such as Orange Grove and E.G.G were willing to support the exploratory study, I did not receive the appropriate amount of responses in order to satisfy the requirements of creating an econometric model that would lead to general and solid conclusions about the potential of the Greek startup ecosystem. Given the small sample size, I conducted structured, non-standardized interviews with two of the original founders of the startups who participated in the questionnaire, as well as a venture capitalist who provided her responses written via email. The use of interviews has a significant advantage that we were able to probe the major challenges and issues that Greek startups face, as well as extract some additional information from primary sources that were not available online. Also, the interview's role was complementary to the limited sample size that we had provided some validity to the results and conclusions.

The questionnaire was organized into five different sections addressing some of the most important characteristics of a startup. The first section, named 'Company Characteristics', asked for some general information regarding the location of the startup, the number of entrepreneurs, and some information about them (for example, age, occupation, degree level, past experience

with startups), the year that the venture started and the sector that is based in. The second and third sections aimed to gather some quantitative information in order to observe the financial background of the companies that were taking part in the survey and maybe used it in the case we wanted to make a comparison between the companies in the research. Most of the startups, however, were reluctant to submit these sections of the questionnaire either because of confidential purposes that they did not want to disclose or because they did not have the data. In these sections, the startups were asked to disclose their initial capital, first and last year sales/earnings, the size of their team, the size of their offices, and some financial information, such as their current ratio, the gross revenue, and the EBITDA. Overall, these two sections had a secondary role in the research and they were included in the survey mostly for procedural reasons.

Moving forward to the fifth section, the sources of financing for startups are mentioned there, specifically all potential sources of funding in Greece, such as personal investment, family & friends, bank, venture capital, private investors, government, universities, and crowdfunding. In addition to that startups had to mention the duration that took them to receive funding, as well as the amount of funding that they received. Finally, in order to determine the importance of each source of financing, startups had to rank each source from one to five, namely from the least important to the most important source of funding. The sixth and last section included some short questions with the goal of gathering some qualitative information from the startups. In this section, the major challenges of the Greek startup ecosystem are mentioned and the primary goal is to identify the most common ones mentioned by the startups so that we can provide appropriate recommendations. Questions such as the major challenges that startups face, if the

regulatory framework supports the creation of startups, if there are enough incentives provided by the government, and if taxation is fair, or if startups should be taxed differently are just some of those.

In the table below (*Table I*) the major characteristics of the sample are presented, summarizing the 13 companies that participated in the survey. There is a variety in the sectors that each startup comes from with most of the companies coming from the energy, technology, and business services sectors. The startups in the sample have not been in business for a lot of years and they are considered relatively new with just only two companies starting before 2018. The number of entrepreneurs is varying from 1 to 7 people, with only one outlier company that had 30 entrepreneurs and it is the oldest company in the sample. The minimum level of education degree that entrepreneurs in the sample have received is a bachelor's degree from universities in Greece, but also in other countries like the U.K, mainly. The age group of the entrepreneurs ranges from 25 to 70 years old, with the majority of them being under 40 years old. It can be said that entrepreneurs' occupation and their field of study is strongly correlated with the startup sector; however, there are cases where entrepreneurs entirely changed path and created a company that they were just interested in the subject or they had a different type of connection with it. *Table I* also includes some quantitative data that are worth to be mentioned and these are the initial capital used by the startup, the first-year sales and earnings. In order to organize these data better, we took the median out of every category so that we can have a better understanding of the sample rather than a bunch of different numbers. The sample shows that startups' median starting capital accounted for \$17,371; similarly to sales, which was \$16,819 for the first year. First-year earnings were usually equal to zero, with just only three startups having positive

earnings during their first year and one startup running a deficit the first year, which is something very common for new ventures.

Table I : Characteristics of the sample⁶¹				
Sector	Startup Year	# Entrepreneurs	Startup Capital	Sales 1st Year
Energy	2020	3	1,085	148,241
Retail/ eCommerce	2010	30	13,020	86,806
Energy	2016	2	> 1,085	16,276
Analytics	2021	3	54,254	0
Business Services	2022	1	0	N/a
Infrastructure	2020	2	5,425	7,595
Business Services	2020	5	2,170	N/a
Energy	2021	1	379,778	54,254
Technology	2012	3	135,635	10,850
Technology	2020	7	21,701	N/a
Retail/ eCommerce	2019	3	217,016	217,016
Technology/ Business Services	2018	2	1,085	17,361
Agro/Food	2022	1	2,170,160	0
Median	2020	3	\$17,361	\$16,819

**Table I: Visual Representation Of The Characteristics Of The Startup Sample
That Participated In The Questionnaire**

⁶¹ Sales, earnings and capital are converted from EUR to USD (a conversion rate of 1.09 USD per EUR is used throughout the whole period of the study)

While *Table I* represents an overview of the sample's main characteristics, it also indirectly shows the major issue that startups have to face in their early life, and this is their need for funding. Most entrepreneurs usually begin with some personal investment, which gives them the opportunity to maintain full control of their business and deal with some of the initial expenses that will come up. Although the personal investment might work for a short amount of time, entrepreneurs may need additional financing to grow their startup and develop it throughout the process and stages. *Table II* gives an overview of the financing sources that were used by the startups in the sample; as well the median and average amounts accounted from each source. It is obvious that “entrepreneurs are the most important providers of financial resources at the startup; this is comparable to the Anglo-Saxon studies”⁶² Just only three startups from the sample did not use any kind of personal financing and they received support primarily from friends and family as well as from venture capitalists, private investors, and crowdfunding.

There is a tie in the second spot of source of financing used at startups in the sample. Family & Friends, Venture Capital and Private Investors were used by two startups in the sample, validating the results of a study (GSI) mentioned earlier in the project, which found that family and friends represents the most popular approach after personal financing among Greek startups. The availability of VC is much better than the previous years something that is not depicted in the responses of the questionnaire, as the sample is too small, so the probability for errors is big. Universities and Crowdfunding were sources of funding used by the same startup that was created in the U.K from two young entrepreneurs that graduated from one of the universities there. The startup is a social enterprise that received funding in the form of grants from the

⁶² Manigart and Struyf, “Financing High Technology Startups in Belgium,” 128.

university that the students were attending, in addition to the crowdfunding that was ‘absorbed’ by impact investors interested and sensitized in the project and the vision of the enterprise.

Last but not least, it is important to point out that none of the startups in the sample received any kind of funding from Banks or the Government. It is very surprising that no one out of the thirteen startups did get a loan to fund their early phase, as it is considered a very usual source of financing for the early-stage financing of the startup. Of course, there could be an error due to the small sample, but it can also be said that: 1) most of the startups that completed the questionnaire were really young and they were not able to receive a loan due to low credit score or not a well-formed business plan, or 2) due to the bad economic conditions and especially the pandemic outbreak the interest rates for corporate loans were not at a level that attracted new ventures to apply for them, as they might be better options in the market and most of these loans included some kind of collateral. Likewise to banks, government was also not used from startups in the sample as a source of funding, showing that additional government interference is needed as well as provisioning of grants in order to incentivize startups to grow and develop quicker. Even though government do not have a primary role as depicted by the answers in the survey, it plays an indirect role by attracting venture capitalists and providing incentives and funds through the European Union. It is interesting to notice that a startup coming from the agricultural sector (Agro/Food) that was recently established (2022) received a subsidy from the European Union, adding 500K in their funding, meaning that there is rigorous support for business ideas in Europe.

Table II: Sources of Financing used at startup⁶³		
Source of Financing	# Startups	Comments
Personal Investment	<u>10</u>	2 reinvesting profits
Family & Friends	2	
Bank	0	
Venture Capital	2	
Private Investors	2	
Government	0	
Universities	1	Grants
Crowdfunding	1	Impact Investors
Other	1	1 EU Subsidy

**Table II: Visual Representation Of The Sources of Financing
Used By The Startups In The Sample**

Table III breaks down the 13 entities (column 1) by the number of sources of finance utilized by each (column 2), and the particular combinations indicated (column 5). Thus, two startups, for example, employed just three sources of funding during their life period. One of them combined the entrepreneurs' own funds with venture capital and private investor backing. The other venture, on the other hand, did not employ any personal funds from the entrepreneurs and was instead mostly backed by family, private investors, and venture capitalists. When only

⁶³ The total number of startups is larger than 13, as companies can use several sources of financing simultaneously (see *Table III*).

one source of financing was used at the startup (*Table III*), it was always the entrepreneurs' own capital (8 startups used entirely personal investment from entrepreneurs). *Table III* shows clearly that there is not a pattern of incremental growth between the number of financial sources used and the initial capital of the startup (column 3-4), in comparison with the study that was conducted in Belgium and mentioned earlier in *Chapter 1*. Again, there is a simplicity in how startups are financed: if the requisite amount of funding can be obtained from a limited number of sources, no further sources will be brought in. This would merely add layers of complexity to the process.

Table III : Number of Financing Sources at startup				
# Startups	# Sources	Median Amount	Average Amount	Comments
8	1	59,679	384,118	8x entrepreneur
2	2	1,361,775	1,361,775	1x entrepreneur + EU subsidy 1x entrepreneur + reinvest profits
2	3	542,540	542,540	1x entrepreneur + VC + private investor 1x family + VC + private investor
1	4	54,254	54,254	1x family + university + crowdfunding + impact investors & grants

**Table III: Visual Representaiton Of The Different Number of Financing Sources
Used By the Startups In The Sample**

Table IV summarizes the results regarding the importance of each source of financing. The startups in the sample ranked each source of financing, either if they used it or not, from one to five, namely from least important to most important. It is obvious that personal investment,

one of the sources of financing, which was mostly used in the sample, was ranked as the most valuable source of financing as almost 77% of the sample population ranked it as a very important source of financing (see Graph below). Personal financing is not always required, but it is considered essential for an idea to transform more quickly into a startup, giving the opportunity to the owner to retain full control over the entity.

Table IV: Importance of Financing Sources at startup						
Ranking	1	2	3	4	5	Responses
	Not important<		Important	>Very important		
Sources						
Personal Investment	-	2	1	2	8	13
Family & Friends	4	1	2	4	2	13
Bank	7	3	2	-	1	13
VC	4	2	1	5	1	13
Private Investors	2	2	1	4	4	13
Government	5	-	2	2	4	13
Universities	6	1	2	2	2	13
Crowdfunding	7	1	-	3	2	13
Other	5	3	-	-	-	8

Table IV: Visual Representation Of The Results Regarding The Importance of Each Source of Financing

Furthermore, private investors support is the second most important source of financing (62% ranked it as very important) showing the demand and the interest that startups have to additional capital from exterior sources.

Family & Friends, Venture Capital and Government are coming up next in the third spot getting almost even answers, as 46% of the sample ranked them as very important and another 38% as not that important. Finally, crowdfunding (38%), universities (31%) and banks (8%) were ranked as the least important sources of financing showing that crowdfunding has not yet established itself in the market as a source of funding, and universities and banks do not provide the appropriate criteria and incentives to startups. They are still being very underdeveloped to support rising startup companies. On the graph below we can see a visual representation of the results from *Table IV*, clearly showing the importance of each source of financing, with the most important part being depicted from the blue bar, the not important sources with the red and the neutral answers (important) with the orange bar.

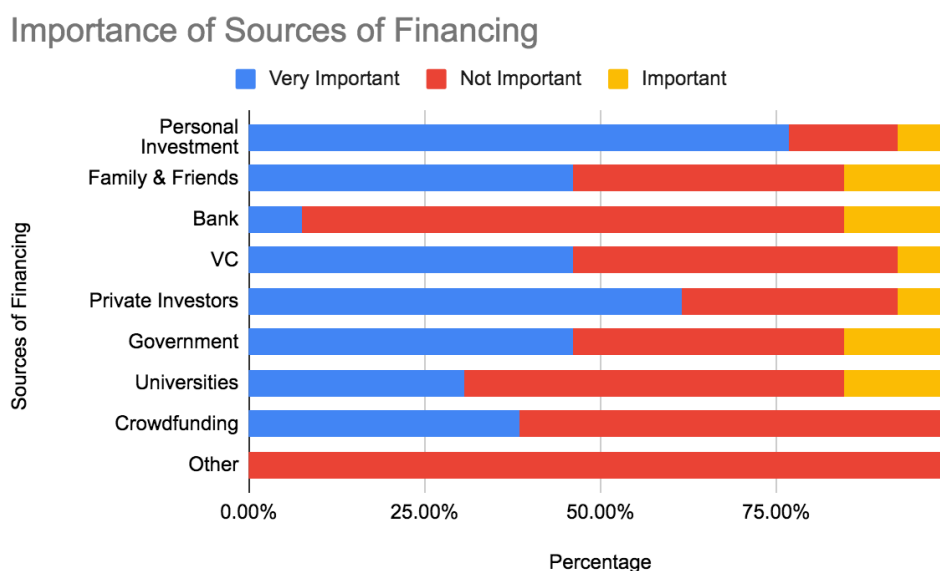


Figure 8: Bar Chart Showing The Importance of Each Source Of Financing

After looking at the sources of financing and the importance of each source given the answers of the entrepreneurs in the sample, it is very crucial to observe the most significant challenges and odds that Greek startups have to deal with, taking into account the last section of the questionnaire (section 6: qualitative data) and the recorded interviews.

To begin with, the startups in the sample had to provide their input regarding how challenging the development of a startup is in Greece. This represents an overview of how entrepreneurs view the opportunities available in the country and interpret the potential of the market. It was reported that almost 70% of the respondents in the sample believe that the conditions are extremely challenging for a startup to grow in Greece, and 30% of them took a neutral position (Maybe), without any of the thirteen companies saying that it is not extremely

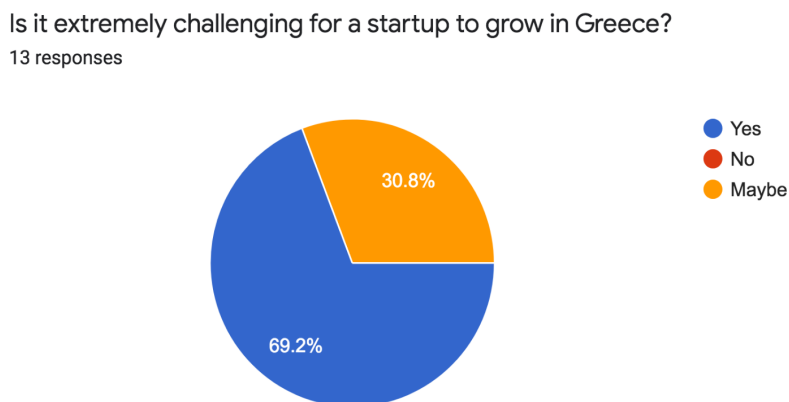


Figure 9: Results On How Challenging It Is For a Startup To Grow In Greece

hard to develop a new venture. The most common challenges pointed out in the questionnaire had to do with access to financing, lack of youth talented individuals (mostly tech professionals), the heavy and ‘unfair’ taxation system, the unfriendly legislation and bureaucratic environment, as

well as the underdeveloped business culture. In order to explain the challenges mentioned above more in depth and understand the mentality of the startups towards them, I summarized them into four different categories: 1) Regulatory framework/Bureaucracy, 2) Government Involvement and Provision of Incentives, 3) Taxation, 4) Team Development and Performance.

1st Challenge: Regulatory Framework / Bureaucracy

The legislative environment for startups does not appear to be at a level that can truly promote the development of new ventures since there is no clear distinction between startups and SMEs, thus they are all treated the same. Unfortunately, this does not take into consideration the fact that SMEs and startups are two distinct entities, therefore lumping them together results in the loss of some key characteristics, which has a significant influence on the entrepreneurial culture that we want to foster as a country. This unfavorable regulatory environment is confirmed from the answers of the questionnaire, where almost 54% of startups claimed that the legislative framework does not support the startups in Greece, with an additional 30% being inconclusive and provide a neutral response. Just only two startups provided a positive answer, supporting that

Do you think that the regulatory framework supports the startups in Greece?
13 responses

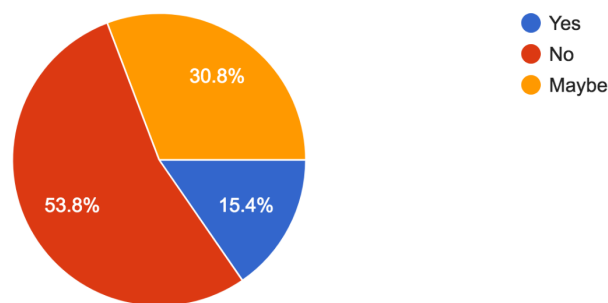


Figure 10: Results On If The Regulatory Framework Supports The Startups In Greece

the legal framework is encouraging startups to further develop. These answers, however, came from two startups that are considered spin-offs, namely “capital companies established by academic or research staff of Research Centres and Higher Education Institutions for the purpose of commercial exploitation of the research results and knowledge produced in the context of their activities.”⁶⁴ Recently, the Greek Government introduced a new law (Law 4864/2021), which aimed “to unify and improve the fragmented institutional framework that has been regulating companies with related activities until now.”⁶⁵ This new law might justify the 15.4% of positive answers received, as actions have been already taken from the government towards this sub-category of startups, discriminating them from the vague category of SMEs, with the primary goal of simplifying procedures, removing ambiguities identified in the existing legislative framework, and modernizing strategic investments.

2nd Challenge: Government Involvement and Provision of Appropriate Incentives

Government support and involvement is very vital for startups not only for access to available financing, but also for the establishment of a startup ecosystem, which is the ultimate goal of this study. Government interference represents one of the core values of creating a strong startup environment as also mentioned in the startup model of Silicon Valley, being located in the *meso* level of the equation. The graph below demonstrates the issue that arises with the government's engagement in startup development, namely the element of providing sufficient incentives to maintain these new enterprises domestically. The majority of the startups, almost 50% in the sample offered a negative response claiming that government still do not provide the

⁶⁴ Andersen in Cyprus. “Law 4864/2021 on the Establishment and Operation of ‘Spin-Off,’” February 24, 2022. <https://cy.andersen.com/news/law-4864-2021-on-the-establishment-and-operation-of-spin-off/>.

⁶⁵ “Law 4864/2021 on the Establishment and Operation of ‘Spin-Off.’”

appropriate incentives to keep startups in Greece. The reason was the heavy taxation and the business environment that a startup company has to deal with, in addition to the bureaucratic processes that are in place. Just one entity in the sample submitted a positive response to the question, saying that the government offers available funding/subsidies packages collaborating with the European Union, which helped the startup to develop through its early stages.

Do you think that the government provides the appropriate incentives to keep startups in Greece
13 responses

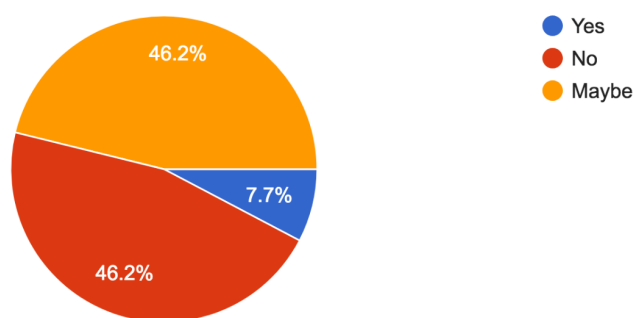


Figure 11: Results On If Entrepreneurs Think That The Government Provide The Appropriate Incentives For Their Startups

3rd Challenge: Taxation

Taxation is considered the most significant issue that Greek startups currently face and the exploratory study confirms that the taxation system does not support the startup ecosystem, as 92.3% of the sample argued that startups should be taxed differently and just only one company responded that the system is relatively fair. As it was mentioned in the first challenge, startups are treated very similar with SMEs and this also applies to the taxes that they have to pay back to the government.

Do you think that startups should be taxed differently?

13 responses

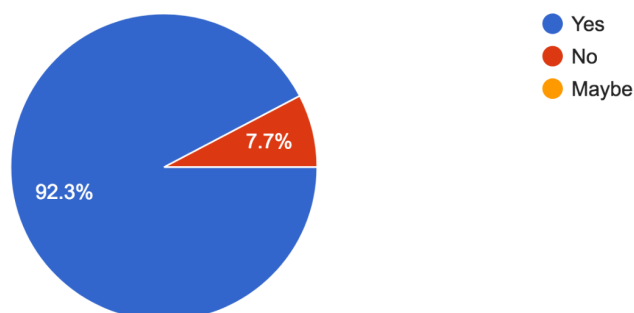


Figure 12: Results On If Startups Should Be Taxed Differently

After the interview that I conducted with one of the startups of the sample (INEM Technology), it was clear that the entrepreneurs were very discouraged with the existing system, claiming that they had a really hard time paying out taxes in the first years. Specifically, the total amount of taxes that a startup has to pay in Greece is the following: a) 24% income tax, b) advance tax payment for the next year equal to 100% of the previous year⁶⁶, c) a flat amount of 800 euros per year for having an operational entity, d) VAT in every purchase (24%), e) tax on dividends to shareholders (5%). As a result, Greek startups have to be prepared to pay out almost a minimum of 50% of their income revenue back to the government making it very hard for them to develop and grow fast. Working in conjunction with the discouragement the taxation system breeds, it also impairs their ability to navigate the market and mobilize their capital.

⁶⁶ This percentage was reduced to 50% during 2020, due to the pandemic crisis.

It is worth noting that one of the startups in the sample has already found a way to evade the stringent Greek taxation legislation by incorporating their company in St. Lucia (Caribbean), where corporations do not have to pay taxes on internationally sourced income. Of course, this benefits the individual entity by making it more affordable for entrepreneurs to operate; however, this is a burden of the Greek government, which is currently pushing startups to base their businesses in a different country that offers better taxation conditions, thereby harming the overall ecosystem.

4th Challenge: Team Development and Performance

As opposed to higher performing economies, the emphasis on comradery is lackadaisical in Greece. This arises from the fact that universities do not cultivate a team environment, especially for the younger generation, causing them to be unprepared when it comes to working in a group setting that sets targets and long-term goals.

Are you satisfied with the performance of your team in your business?
13 responses

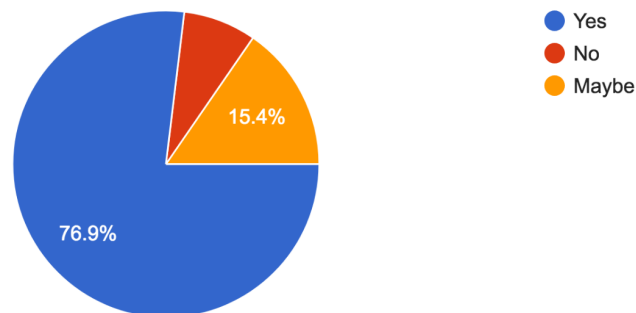


Figure 13: Results On The Satisfaction Of Entrepreneurs With Their Team Performance

The survey below represents almost 77% of the entrepreneurs in this sample were satisfied with the performance of their team, showing that startups in the sample have created a healthy team environment in order to be efficient in the market.

However, the remaining companies (23%) reported either equivocal or unfavorable answers to their team performance, raising some crucial implications about the importance of the challenge. During the interview, Mrs *Moutsiou* claimed that the concept of the team should be formed at a very young age, when individuals, particularly students, begin working in groups, fostering healthy teamwork that maximizes efficiency. She did, however, say that Greek universities are now training 'passive' students who don't know and haven't experienced teamwork, which translates to new ventures launched by young entrepreneurs.⁶⁷

Recommendations and Improvements

While the Greek startup ecosystem still rises and develops, it is natural that it faces a number of challenges that prevent it from growing fast. The goal, however, is not only to recognize these challenges, but also be willing to make certain modifications in order to improve the ecosystem overall, and fill the gaps that exist in the startup market. After identifying the four main issues impeding the startup ecosystem's rapid growth, it is critical to mention some potential changes that can be implemented in Greece to address these concerns.

First and foremost, the primary change that should be made in Greece is the clear distinction between SMEs and startups. The last few years the government has shown some improvements in defining what startup is, by creating an online platform called Elevate Greece, which addresses every greek startup. Existing and rising greek entities have to register in this

⁶⁷ Moutsiou , Maria . Interview With The Managing Partner of INEM Technologies PC, April 12, 2022.

platform in order to be considered as startups and they have to undergo a process which includes the submission of important documents, such as business plans. This platform has helped to organize the startup market and has defined the notion of what startup is in Greece, to a certain extent. However, there is not clear distinction between startups and SMEs in a legislative context, yet. This implies that both entities are considered the same, as they are taxed and treated similar. The government could solve this problem, by introducing a new law (likewise they did with the spin-offs, Law 4864/2021), where the definition of startup is presented and clearly differentiated from the large category of SMEs. This implementation would help to distinct the two entities from each other and set the foundation of the importance of greek entrepreneurship. Furthermore, as indicated by Mrs. *Marina Hatsopoulos*, minimizing bureaucratic processes as well as reforming the judicial branch so that lawsuits can be prosecuted more efficiently, would be beneficial for the startup ecosystem.⁶⁸ As a result, government intervention is required for these measures to occur, and the use of electronic platforms and technology should be enhanced even more.

As soon as there is a clear distinction between startups and SMEs, additional government intervention is needed so that startups receive the appropriate incentives and motives in order to develop and grow as fast as possible. Mrs. *Hatsopoulos*, a significant venture capitalist in Greek startups, argues that “the Greek government is doing a great work in all of its many policies in order to attract more capital and investments in Greece.”⁶⁹ The establishment of Equifund, the development of VC and the attraction of financial packages and subsidies from the European Union have definitely assisted startups to receive financing and develop. Even if government

⁶⁸ Hatsopoulos , Marina. Interview about the Major Challenges of Startups In Greece, April 5, 2022.

⁶⁹ Hatsopoulos, *ibid*

indirectly supports greek startups with the provision of capital and financial incentives, there is a lack of offering tax incentives. Both from the interviews and the questionnaire conducted, entrepreneurs have expressed their complaints concerning the current complex tax code. However, *Hatsopoulos* specifies that “taxes are too high for mid-level managers” and mentions that taxation for startups represent “one of the biggest issues that the government can easily fix.”

⁷⁰ Mrs. *Moutsiou* made a reasonable remark, stating that startups should be tax-free for the first three years of business and taxed progressively beyond that time period. This change would provide the startup some crucial time to develop and monitor the market without having to pay out obligations. Nonetheless, a key counterargument to the tax exemption is that burdensome tax systems drive out the weaker businesses, leaving only the most robust and resilient startups in the market.⁷¹

Finally, the teamwork environment and networking should be developed and improved in Greece. This should start from schools and universities where individuals first learn how to collaborate in teams and acquire a sense of collectivism. The startup ecosystem, unfortunately, lacks of a unified atmosphere where “entrepreneurs can rely on each other and have peers to go to for support and assistance.”⁷² The absence of collaboration skills causes the young individuals to be unprepared when they enter the professional world, therefore it takes longer to acclimatize to the environment, which slows the entity’s as well as the ecosystem’s overall growth. Of course, the emergence of incubators such as Orange Grove and E.G.G has helped startups to receive additional education and mentoring in specialized areas, but more extensive assistance is

⁷⁰ *Hatsopoulos*, op.cit.

⁷¹ *Moutsiou*, op.cit.

⁷² *Hatsopoulos*, *ibid*

needed. As a result, educational institutions should place a greater emphasis on team-based activities, such as team assignments and competitions, in order to foster a collaborative and inclusive culture. As far as the unpreparedness of the human capital when it comes to jobs could be solved with the establishment of an internship portal where companies can publish their availability and employ young individuals to train them and provide them with the appropriate experience and knowledge needed.

Conclusion

To recapitulate, the Greek startup ecosystem has evolved dramatically over the last decade, and the number of Greek startups founded is increasing year by year. At the same time, there is a shift in young people's perceptions about entrepreneurship and its role in the modern Greek economy.

Even if the Greek market offers some comparative advantages in terms of human capital and the development of innovative applications, it performs poorly in terms of state support for entrepreneurship, ease of entry and exit the market and bank financing. Furthermore, there are considerable issues with the relationship between universities and corporate research, as well as the right preparation of the youth towards entrepreneurship. The complexity of the taxation system discourages the development of new ventures and harms the growth of the ecosystem as it does not provide enough incentives for the rising entrepreneurs.

While the aforementioned challenges stymie the evolution of the startup market, there are possible ways to deal with them and try to solve them. This, of course, requires a significant effort on the part of the Greek government, which needs to pay greater attention on these new ventures and provide the appropriate conditions needed for them to grow and thrive. Further research can be done on ways to create a startup model for the Greek market, similar to the one used in Silicon Valley, which will summarize the interconnected areas pertinent to the Greek startup ecosystem and organize the resources of the market. Identifying a bigger startup sample that can give reliable and valid data for analysis is one of the enhancements that might be done in this study. Thus, the development of an econometric model would be achievable with a bigger number of firms participating in the research, allowing us to examine the most sensitive aspects

impacting the growth of a startup in Greece. Additionally, the bias incorporated in the study represents a limiting element, as only surviving companies are included in the sample. Companies that did not survive their first years of operation are omitted; it is plausible, however, that these companies experienced different challenges that caused them to fail or go bankrupt that we are unable to determine with the small sample used in this research.

Appendix

Appendix I: Questionnaire

Page 1

Questionnaire for Startups

Senior Project: "The Ecosystem of Startups in Greece", by Stamatios Koulouris

* Required

1. Email *

Section I: Company Characteristics

2. Startup Location *

3. Number of Entrepreneurs *

4. Information about the Entrepreneurs

Age(s), Occupation(s), Degree Level(s), Previous Experience with Startups (years).

5. Year Started *

Page 2-3

6. Sector *

Check all that apply.

- Agro/Food
- Analytics
- Business Services
- Energy
- Entertainment/Social
- Infrastructure
- Life Sciences
- Retail/eCommerce
- Technology
- Transportation
- Tourism/Hospitality
- Other: _____

7. How long have you been in business? *

Section II: Quantitative Data

8. Initial Startup Capital

9. 1st Year Sales

10. Last Year Sales

11. 1st Year Earnings

12. Last Year Earnings

Section III: Financial Ratios

13. How big is your team? *

14. How big is your office?

in square meters

15. Current Assets / Current Liabilities

Current Ratio

16. Gross Revenue/Top line

17. EBITDA

Section IV: Sources of Financing

Where is your financing coming from?

Page 4-5

18. Source of Finance *

Check all that apply.

- Personal Investment
 Family & Friends
 Bank
 Venture Capital
 Private Investors
 Government
 Universities
 Crowdfunding
 Other: _____

19. Please indicate approximately the amounts that you received from the different sources of finance. *

Determine the currency (U.S. dollars preferred)

Mark only one oval.

- > \$10,000
 > \$50,000
 > \$100,000
 > \$500,000
 Other: _____

20. How long did it take you to receive finance from each source? *

Mark only one oval.

- >3 months
 > 6 months
 > 1 year
 > 2 years
 Other: _____

Importance of Financing

Rate the sources of finance below from less important to more important.

21. Personal Investment *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

22. Family & Friends *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

23. Bank *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

24. Venture Capital *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

Page 6-7

25. Private Investors *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

26. Government *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

27. Universities *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

28. Crowdfunding *

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

29. Other

Mark only one oval.

	1	2	3	4	5	
Not that important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely important

Section V: Qualitative
Data

Please respond to the short questions with as much detail as possible.

30. Is it extremely challenging for a startup to grow in Greece? *

Mark only one oval.

- Yes
- No
- Maybe

31. List 3 challenges that you deal with?

32. Do you think that the regulatory framework supports the startups in Greece? *

Mark only one oval.

- Yes
- No
- Maybe

Page 8-9

33. What is the regulatory framework of startups in Greece?

34. Do you think that the government provides the appropriate incentives to keep * startups in Greece?

Mark only one oval.

- Yes
 No
 Maybe

35. What are your incentives for staying in Greece and having a startup here?

If you have left Greece and relocated into a different country, please list the reasons why.

36. What are the 3 most important factors for a successful startup?

Please list them by name and elaborate if you want.

37. What are the 3 main causes for a startup to fail in Greece?

38. Do you think that startups should be taxed differently? *

Mark only one oval.

- Yes
 No
 Maybe

39. How much tax are you paying back to the government?

Please explain how the taxation system impacts your business.

Page 10-11

40. Are you satisfied with the performance of your team in your business? *

Mark only one oval.

- Yes
- No
- Maybe

41. What is the average academic level/experience of your team?

42. Are you satisfied with the support from the incubator? *

Mark only one oval.

1 2 3 4 5

Not satisfied Extremely satisfied

43. What is the best part that you receive from the incubator?

44. How do the incubators/ accelerators support you and help you to become successful?

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