Measuring the importance of SMEs to the national economy: The case of Greece

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Abstract

Entrepreneurship has been widely acknowledged as a crucial factor for economic development. Small and Medium Enterprises (SMEs) play a key role in national economies as in most countries they represent the majority of the enterprises. Despite the fact that there is no common definition across the world about SMEs, it is widely recognized that they create jobs and significantly contribute to the creation of added value both in national economies and further in wider economies such as the European Union's internal market. Such recognition is a fundamental step to justify State's intervention through the appropriate public policies. In countries like Greece which is characterized by its limited national market and economy in terms of size compared to other developed European countries, SMEs are vast majority and play a substantial role to the creation of national income and employment and the accomplishment of social coherence. By analyzing data about SMEs in Greece both overall and by selected sectors, this article presents the evolution of SMEs by size and industry in the critical decade 2008-2017 in Greece. Moreover, it highlights their determinant role in the national economy, while pointing out the need for the design of targeted public policies to support entrepreneurship and SMEs by size and sector to overcome the barriers they have faced during the economic crisis of such period.

Key words: Entrepreneurship, Small and Medium-sized Enterprises (SMEs), Public Policy.

Introduction

The vital role of entrepreneurship to the economy highlighted in the literature of the 20th century under alternate perspectives. In his emblematic work, Schumpeter J. (1934) emphasized the significant role of entrepreneurs towards economic development, stressing out innovation and the introduction of new inventions to advance current technologies and products. This procedure known as "creative destruction" developed during the "first decades of the 20th century when small businesses were considered a vehicle for entrepreneurship and a source of employment and income" (Thurik R., 2009). After the 1930s, scientific research shifted its interest to large companies and how they contribute to the creation of added value to the economy. It is true that large companies offer the possibility of significant savings due to economies of scale, which lead to increased production capacity and distribution of products with more favorable terms. Moreover, economies of scale help the effective organization and management of resources and they provide the possibility to invest in research and development, leading in such way to new or improved products. The important role of large enterprises has been pointed out by several researchers (Schumpeter J., 1942; Galbraith J. K., 1956; Bell D. 1976; Chandler A., 1977, 1990), who estimated that in the future

the role of small enterprises would gradually weaken in contrast to large enterprises which would become the locomotive of economic growth. It is noteworthy that Schumpeter J. (1942) focused his attention on the creative accumulation which large enterprises have the opportunity to achieve through their innovative activities and their ability to invest in research and development as opposed to small enterprises which lag behind in this field showing significant inefficiencies and shortcomings.

From the end of the 20th century to present, rapid technological development in the fields of information and communications technologies and the globalization of capital markets and products, have changed the conditions of production internationally. A significant number of Small and Medium-sized Enterprises (SMEs) employ a workforce with a high level of knowhow in factors which decisively influence the production conditions of products and services. Knowledge has become one of production's factors complementing the traditional factors of capital, labor and land, the development of which was outbid by proponents of the important role of large companies. Solow R. (1956) for example defined capital and labor as the main sources of growth, as these two factors were the basis for industry's large-scale production, while years earlier Coase R. (1937) highlighted that increased transaction costs in such production scale impose increased firm size. At the same time, however, knowledge is characterized by high uncertainty and information asymmetries and its transfer creates high costs for companies. Given that SMEs have the potential to make a significant contribution to the creation of new high-quality and skilled jobs in new technologies according to modern requirements imposed by the age of globalization, public policies have turned their attention to SMEs, not just for social cohesion, but also because of their significant contribution to creating added value to the economy. The response of public policy to the developing demand which recognizes knowledge as the main source for the creation of comparative advantage, leads to the reappearance of what is called "The Entrepreneurial Economy" (Thurik R., 2009).

The importance of SMEs as an employment generator is also highlighted by OECD (2017¹), whereas Haltiwanger J., Jarmin R., Miranda J. (2012) and Lawless M. (2014) show that younger enterprises are significant creators of employment. As well, Lawless M. (2014) shows that smaller enterprises indeed provide the main source of employment.² In a sectoral basis, Rotar L.J., Pamic R.K. and Bojnec S. (2019) provide empirical evidence which confirm a positive association between the employment of SMEs in services sector and total employment. Furthermore, they find a positive relationship between GDP per capita and total employment whereas the effect of the employment of SMEs in industry sectors to total employment was found insignificant. In addition, the literature to date has highlighted the contribution of entrepreneurship to economic growth, further highlighting the positive contribution of start-ups to job creation, reducing unemployment rates (Hart P.E. and Oulton N., 2001; Thurik R., 2003; Ayyagari et al, 2011) and economic growth (Van Stel et al, 2005; Audretsch D.B. et al., 2006; Van Praag M.C., Versloot P. H., 2007; Koellinger P., Thurik A. R., 2012). This positive effect comes both from the innovative entrepreneurs at the heart of Schumpeter's analysis and from the entrepreneurs in necessity as well, who do not necessarily take on this role having discovered some market opportunities, but purely for survival reasons (Baumol W. J., 1990; Vivarelli M., 2013). The majority of entrepreneurs, both those who discover opportunities in markets or innovate and those

¹ OECD (2017a, 2017b).

² Similar conclusions can be found in a study of Anderson and Eshima (2013), Huber, Oberhofer, and Pfaffermayr (2017), Heyman, Norback, and Persson (2018), Love, Roper, and Zhou (2016), Ayyagari, Demirguc-Kunt, and Maksimovic (2014) in Rota L. J., Pamic R.K. and Bojnec S., (2019).

in necessity, belong to the multitudinous group of SMEs. In the OECD area, SMEs account for 99% of all firms creating about 70% of jobs on average, and contributing between 50% and 60% of value added on average (OECD, 2016³).

The recognition of the important role of SMEs in national economies and further in wider economies such as the European Union's internal market as already acknowledged in the European level⁴, is a fundamental step to justify State's intervention in this field of public policy. Such intervention should always aim at strengthening this category of companies, which in most economies constitutes the majority of the business community, offering a lot to both the development of entrepreneurship and job creation, while also contributing significantly in the creation of added value to the economy. A presentation of the different definitions given for SMEs in some of the most important economies of the world, as well as an analysis of SMEs in Greece, both overall and by sector, follows.

Definition of Small and Medium-sized Enterprises (SMEs)

Internationally there is no common definition about SMEs. In most cases a general rule like the number of employees helps to identify which enterprises belong to the category of SMEs. For instance, in the Unites States of America (USA) an SME is a firm with less than 500 employees⁵ while in the European Union as it is shown later the corresponding threshold is 250 employees. Furthermore, other criteria are commonly used to define an enterprise as SME like turnover, revenues, capital and sector/industry. Indeed, in USA SMEs are categorized based on industry - a criterion which is affected by the characteristics of each productive sector -, revenues and the number of employees⁶ while in the European Union a more general – horizontal approach has been adopted based on criteria like the number of employees, turnover and capital. Moreover, in the USA an enterprise in the manufacturing sector is defined as an SME if it employs 500 to 1250 employees, whereas in the sector of wholesale trades the corresponding threshold in terms of employment ranges between 100 to 200 employees⁷. But differences could be also presented within the same sector in the USA as could be shown with a simple glance in SBA's statistics: for example according to NAICS in sector 22 "Utilities" as regards code 22.11.11 "Hydroelectric power generation" the threshold to define an enterprise as an SME is 500 employees, whereas the corresponding threshold for code 22.11.12 "Fossil fuel electric power generation" is 750 employees and the relative one for code 22.11.14 "Solar electric power generation"

³ See OECD (2016).

⁴ See European Commission (2008) *Small Business Act (SBA) for Europe*, European Commission (2020), *An SME Strategy for a sustainable and digital Europe*.

⁵ See OECD Stats: <u>https://stats.oecd.org/glossary/detail.asp?ID=3123</u> and <u>https://sbecouncil.org/about-us/facts-and-data/</u>, Ward S. (2020) in website: <u>https://www.thebalancesmb.com/sme-small-to-medium-enterprise-definition-2947962</u>

⁶ In the USA the classification of an industry is based on NAICS (North American Industry Classification System), a system developed by the United States, Canada, and Mexico to standardize and facilitate the collection and analysis of <u>business statistics</u> (see Ward S., 2020 as mentioned above).

⁷ See US Small Business Administration (2019a), *SBA's Size Standards Methodology*, pp.36-37, https://www.sba.gov/sites/default/files/2019-04/SBA%20Size%20Standards%20Methodology%20April%2011 %2C%202019.pdf.

is 250 employees⁸. Furthermore, in Canada any business establishment with 0 to 499 employees and less than \$ 50 million in gross revenues is defined as an SME.⁹

According to the European Union's definition (2003/361/European Commission's Recommendation), SMEs are firms with less than 250 employees and annual turnover below EUR 50 million and/or balance sheet below EUR 43 million. A small enterprise is defined as one which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million. The category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million. Within the SME category, a small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million. Within the SME category, a microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million. Within the SME category, a microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million.

In accordance to Recommendation 361/2003 of the European Commission (article 3), firms are categorized in the following three categories: (i) "autonomous enterprises" which are those not classified as "partner enterprise" or "linked enterprise", (ii) "partner enterprises" which are all enterprises which are not classified as linked enterprises and between which there is the following relationship: an enterprise (upstream enterprise) holds, either solely or jointly with one or more linked enterprises 25 % or more of the capital or voting rights of another enterprise (downstream enterprise) and (iii) "linked enterprises" are enterprises which present any of the following relationships with each other: (a) an enterprise has a majority of the shareholders' or members' voting rights in another enterprise; (b) an enterprise has the right to appoint or remove a majority of the members of the administrative, management or supervisory body of another enterprise; (c) an enterprise has the right to exercise a dominant influence over another enterprise pursuant to a contract entered into with that enterprise or to a provision in its memorandum or articles of association; (d) an enterprise, which is a shareholder in or member of another enterprise, controls alone, pursuant to an agreement with other shareholders in or members of that enterprise, a majority of shareholders' or members' voting rights in that enterprise¹⁰.

The above EU's definition of SMEs is crucial because it shapes the maximum percentage of state-aid among European Union's regions which differ economically as they contribute unequally to national GDPs. The determination of maximum amounts and percentages of state-aid either in non-repayable forms like grants and tax exemptions or debt and equity financial instruments, follows the Regional Aid Map which takes into consideration the GDP of each geographic region in the European

⁸ See US Small Business Administration (2019b), *Table of Small Business Size Standards Matched to North American Industry Classification System Code*, p.5, <u>https://www.sba.gov/sites/default/files/2019-08/SBA%20Table%20of%20Size%20Standards Effective%20Aug%2019%2C%202019 Rev.pdf</u>.
⁹ See Kekez A., Howlett M., Ramesh M (2019).

¹⁰ For exemptions see article 3 of European Commission's Recommendation 361/2003.

Union and is defined according the objectives of social and regional cohesion. Actually, the Regional Aid Map provides aid rates inversely proportional to the size of the potential beneficiaries (e.g., enterprises). Such rates are defined in terms of the eligible budget of the beneficiaries and determine the proportion of the state-aid in each business plan. In particular, the Regional Aid Map provides higher aid rates for micro and small enterprises, even lower rates for medium-sized enterprises and, finally, lower rates for large enterprises.

The lower proportion rate in each region corresponds to large companies and it rises by 10% for medium companies and by 20%B for small and micro enterprises. This distinction mainly takes into account the fact that SME support leads to less distortions of competition than state aid to large companies in order to meet the conditions of Articles 107-109 of the Treaty on the Functioning of the European Union. State-aid rates defined by the Regional Aid Map concern autonomous enterprises. In contrast, when an enterprise is defined as partner or linked, then state-aid rates become lower because such link decreases the potential state-aid as the firm grows in terms of turnover, annual balance sheet and employment. The reason is that all individual financial data between firms which are connected between each other in a way that they make them "partner enterprises' or "linked enterprises", are aggregated. The final result is transformed to potential beneficiaries i.e., firms which seek to receive state-aid, which in such case will remove to a higher category in terms of size and eventually will receive a lower rate of state-aid.

The determination of state-aid rates solely on the basis of the GDP generated by each European region finds many stakeholders negative, as it does not take into account other important factors, either general, such as the unemployment rate in a geographical area, or tailored to business specificities, such as percentage of retention of jobs or the contribution of each company and sector to the generated GDP per region. Both the above general and specific factors could lead to higher rates of state aid to medium and even large enterprises, so that following state-aid they will be able to increase their contribution to the generated GDP of their region. In this perspective, the less developed regions of the European Union will be able to increase their GDP and help European Union to achieve its social and regional cohesion.

Despite the various definitions used across the world to define SMEs, they play a key role in national economies as in most cases they represent the majority of the enterprises. According to the Office of the United States Trade Representative SMEs¹¹ are the backbone of the American and European economies. Actually, 30 million SMEs in the USA account for nearly two-thirds of net new private sector jobs in recent decades across the country. Moreover, SMEs accounted for 99.9 percent of the 27 million private businesses in the United States in 2006 while the vast majority of SMEs were firms with fewer than 20 employees. On the other side of the Atlantic, SMEs in the European Union account for 99.8% of the 25.1 million enterprises in 2018 (EU's SBA Factsheet 2019)¹², while the vast majority (93%) of the European SMEs are micro (e.g., having less than 9 employees and a turnover less than \notin 2 million). Furthermore, 66.7% of the European workforce is being employed in the European SMEs which

¹¹ See Office of the United States Trade Representative (2010), *Small and Medium-Sized Enterprises: Overview of Participation in U.S. Exports*, <u>https://www.usitc.gov/publications/332/pub4125.pdf</u>.

¹² See <u>https://ec.europa.eu/growth/smes/business-friendly-environment/performance-review_en#annual-report</u>.

contribute to 56.4% of added value in the European Union's economy (EU-28 including Great Britain). The above data justify the great importance of SMEs in both sides of the Atlantic as it has been recognized by the Transatlantic Trade and Investment Partnership (TTIP) between the USA and the EU.¹³

The importance of SMEs to the economy: The case of Greece

In countries like Greece which constitutes a small national market compared to other large national economies in Europe (such as Germany, France, Italy, UK, Spain), SMEs play a substantial role to the national economy and the society's cohesion. According to the SBA Factsheet 2019¹⁴ for Greece, 821 209 enterprises, almost 100% of all Greek enterprises, are defined as SMEs, according to data from the European Commission. 97,4% of Greek businesses (800 075) are micro-enterprises employing less than 10 employees, 2,3% (18 958) are small enterprises, 0,3% (2 176) are medium-sized enterprises, and almost 0,0% (331) are large enterprises. Much more than half of the Greek workforce, or 62%, is employed by microenterprises and 87,9% of the workforce is employed by SMEs. Micro enterprises and SMEs account for 17,6% and 63,5% of the value added in the economy, respectively. Compared to the EU-28 average, SMEs and especially micro-enterprises are more numerous and more important to the Greek economy.

Source: Eu	ropean Co	ommission's	2019 SBA	Factsheet –	- Greece.				
Class size	1	Number of e	enterprises	a				Value adde d	
		Greece	EU-28		Greece	EU-28	(Greece	EU-2
	Number	Share	Share	Number	Share	Share	Billion €	Share	Share
Micro	800.075	97,4%	93,0%	1.527.075	62,0%	29,7%	9.0	17,6%	20,8%
Small	18.958	2,3%	5,9%	398.514	16,2%	20,1%	11.8	23,1%	17,6%
Medium	2.176	0,3%	0,9%	239.627	9,7%	16,8%	11.7	22,9%	18,0%

2.165.216

297.411

2.462.627

Table 1: SMEs in Greece compared to the EU-28

These are estimates for 2018 produced by DIW Econ, based on 2008-2016 figures from the Structural Business Statistics Database (Eurostat). The data cover the 'non-financial business economy', which includes industry, construction, trade, and services (NACE Rev. 2 sections B to J, L, M and N), but not enterprises in agriculture, forestry and fisheries and the largely non-market service sectors such as education and health. The following size-class definitions are applied: micro firms (0-9 persons employed), small firms (10-49 persons employed), medium-sized firms (50-249 persons employed), and large firms (250+ persons employed). The advantage of using Eurostat data is that the statistics are harmonised and comparable across countries. The disadvantage is that for some countries the data may be different from those published by national authorities.

87.9%

12,1%

100,0%

32.6

18.7

51.2

3.5%

36,5%

100,0%

56 4%

43,6%

100.0%

66,6%

33,4%

100,0%

99.8%

0,2%

100,0%

100,0%

100,0%

0.0%

SMEs

Large

Total

821.209

821.540

331

At a sectoral glance (see Table 2 below) the majority of Greek SMEs activate in services sector (49.3%) which actually includes economic activities such as professional, scientific and technical activities (19.5%), accommodation and food services (15.6%), transportation and storage (7.9%), administrative and support services (2.8%), information and communication (2.5%) and real estate (1.1%). Moreover, 32.8% of Greek SMEs activate in trade sector, while 9.1% activate in constructions and 7.6% in manufacturing. In comparison with the EU28 the above-mentioned percentages as regards the number of SMEs in services in Greece are close

¹³ See Joint Statement from the 10th U.S.-EU SME Workshop in the framework of the Transatlantic Economic Council, Kansas, September 2019, https://ustr.gov/issue-areas/small-business.

¹⁴ See European Commission (2019), SBA Factsheet – Greece 2019.

to those of the EU28 in services (EU28: 50.2%), have a slight difference as regards manufacturing (EU28: 8.5%), while remarkable differences are occurred in trade sector (EU28: 25.8%) and constructions (EU28: 14.6%).

	Gree	ce	EU28	8
	No	%	No	%
Non-financial business economy	821 209	100,0	25 032 008	100,0
Mining & quarrying	709	0,1	18 938	0,1
Manufacturing	62 450	7,6	2 132 687	8,5
Electricity, gas	7 075	0,9	106 479	0,4
Water supply, sewerage, waste management	2 162	0,3	80 017	0,3
Construction	74 736	9,1	3 664 383	14,6
Distributive trades	269 158	32,8	6 467 652	25,8
Transportation & storage	64 845	7,9	1 276 442	5,1
Accommodation & food services	127 962	15,6	2 073 133	8,3
Information & communication	20 404	2,5	1 285 352	5,1
Real estate	9 306	1,1	1 487 525	5,9
Professional, scientific & technical activities	159 730	19,5	4 742 678	18,9
Administrative & support services	22 672	2,8	1 696 722	6,8
Manufacturing	62 450	7,6	2 132 687	8,5
Construction	74 736	9,1	3 664 383	14,6
Trade	269 158	32,8	6 467 652	25,8
Services	404 919	49,3	12561852	50,2

Table 2: Number of SMEs by sectors in Greece and the EU28

Source: European Commission's 2019 SBA Factsheet – Greece.

As regards the contribution of SMEs in terms of employment we can see that the number of persons employed in SMEs which belong to the manufacturing sector in Greece is 12.2% while in EU28 18.3%, while the corresponding percentages in constructions, trade and services in Greece are 6.0% (EU28: 12.2%), 30.3% (EU28: 24.5%) and 49.6% (EU28: 43.7%), respectively. According to these data (see Table 3 below) remarkable differences are occurred in all sectors regarding employment.

	Gree	ce	EU28		
	No	%	No	%	
Non-financial business economy	2 165 216	100,0	97 738 950	100,0	

Table 3: Number of persons employed in SMEs by sectors in Greece and the EU28

Mining & quarrying	3 440	0,2	179 109	0,2
Manufacturing	264 655	12,2	17 888 818	18,3
Electricity, gas	22 073	1,0	338 028	0,3
Water supply, sewerage, waste management	14 771	0,7	850 832	0,9
Construction	130 567	6,0	11 890 423	12,2
Distributive trades	656 560	30,3	23 904 302	24,5
Transportation & storage	146 817	6,8	6 198 049	6,3
Accommodation & food services	511 948	23,6	10 361 891	10,6
Information & communication	58 701	2,7	4 387 088	4,5
Real estate	16 555	0,8	2 637 367	2,7
Professional, scientific & technical activities	253 532	11,7	11 104 458	11,4
Administrative & support services	85 597	4,0	7 998 585	8,2
Manufacturing	264 655	12,2	17 888 818	18,3
Construction	130 567	6,0	11 890 423	12,2
Trade	656 560	30,3	23 904 302	24,5
Services	1 073 150	49,6	42 687 438	43,7

Source: European Commission's 2019 SBA Factsheet – Greece.

Finally, as regards the contribution of SMEs in terms of added value in the economy we can see that the SMEs in manufacturing sector in Greece contributes 20.8% in value added while in EU28 the respective percentage is 18.9%, while the corresponding percentages in constructions, trade and services in Greece are 6.4% (EU28: 11.4%), 26.6% (EU28: 22.1%) and 40.9% (EU28: 44.6%), respectively. According to these data (see Table 4 below) remarkable differences are occurred in terms of added value to the economy, except manufacturing which is characterized by a slight difference.

Greece		EU28	
Mil. Euros	%	Mil. Euros	⁰ ⁄0

Table 4: Value added (in million €) of SMEs by sectors in Greece and the EU28

Non-financial business economy	32 555	100,0%	4 357 046	100,0 %
Mining & quarrying	285	0,9%	17 731	0,4%
Manufacturing	6 776	20,8%	821 902	18,9%
Electricity, gas	910	2,8%	60 060	1,4%
Water supply, sewerage, waste management	515	1,6%	51 130	1,2%
Construction	2 085	6,4%	498 514	11,4%
Distributive trades	8 672	26,6%	962 711	22,1%
Transportation & storage	4 217	13,0%	274 327	6,3%
Accommodation & food services	3 138	9,6%	213 580	4,9%
Information & communication	1 233	3,8%	281 264	6,5%
Real estate	453	1,4%	252 094	5,8%
Professional, scientific & technical activities	2 918	9,0%	599 192	13,8%
Administrative & support services	1 354	4,2%	324 541	7,4%
Manufacturing	6 776	20,8%	821 902	18,9%
Construction	2 085	6,4%	498 514	11,4%
Trade	8 672	26,6%	962 711	22,1%
Services	13 312	40,9%	1 944 997	44,6%

Source: European Commission's 2019 SBA Factsheet – Greece.

Analysis of manufacturing companies

According to the data of the SME Performance Review database of the European Commission which is based on the official data of Eurostat, in 2017 a total of 57,373 manufacturing companies were active in Greece, of which 91.8% (52,710 companies) belong to the category of micro enterprises, 6.7% of manufacturing companies (3,835 companies) belong to the category of small enterprises, of which 4.3% employ from 10 to 19 employees and a percentage of 2.4% employ from 10 to 49 employees according to EC's 361/2003 Communication. The total percentage of micro and small enterprises of the manufacturing sector (56,545 out of a total of 57,373) constitutes 98.6% of the enterprises in the manufacturing.

Overall, manufacturing companies decreased by 32.5% in 2017 compared to 2008. The decrease was significant in the category of micro manufacturing companies (-35.1%), smaller in the large ones (-7.8%) and almost imperceptible in the category of medium-sized enterprises in the sector (-0.6%). It is noteworthy, however, that in 2017 medium-sized manufacturing companies employing 10-19 employees increased significantly compared to 2008 (specifically, by 66.7%), while medium-sized enterprises with 20-49 employees decreased by 2.8%.



Figure 1: Evolution of number of manufacturing companies during 2008-2017 in total and by size

Number of manufacruring companies											
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Percentage change (2017/2008)
Sum	85.004	83.565	79.338	74.066	64.582	57.736	66.088	61.840	61.862	57.373	-32,51%
0 - 9	81.270	79.467	75.447	70.438	61.022	54.891	61.370	57.660	57.578	52.710	-35,14%
10 - 19	1.475	1.781	1.751	1.692	1.677	1.182	2.600	2.213	2.293	2.459	66,71%
20 - 49	1.416	1.424	1.348	1.245	1.184	947	1.341	1.237	1.218	1.376	-2,82%
10 - 49	2.891	3.205	3.099	2.937	2.861	2.129	3.941	3.450	3.511	3.835	32,65%
50 - 249	702	761	658	571	587	602	658	617	660	698	-0,57%
> 250	141	132	134	120	112	114	119	113	113	130	-7,80%
Source: Eurostat, SMEs - Annual enterprise Statistics by size class - industry, https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme.											

At the same time, the total number of employees in the manufacturing sector decreased by 25.7% in 2017 compared to 2008 which means that 1 out of 4 employees of the sector lost their job during that certain period. It is noteworthy that a large decrease of staff (-50.1%) occurred in micro manufacturing companies meaning that half of this category's personnel became unemployed. Furthermore, a significant decline of employment showed in the case of large companies of the sector (-18.7%). On the contrary, it is noteworthy to mention that small manufacturing companies with a workforce of 10-19 employees increased the number of their personnel by 58% in 2017 compared to 2008. It should be further noted that small manufacturing enterprises (with 10-49 employees according to the EC's 3618/2003 Communication) presented an increase of the number of their employees by 12.7%, while the respective percentage of medium enterprises was 2.4%. As regards large enterprises eth employment reduced by 18,69% in 2017 compared to 2009.

The total turnover of the manufacturing sector showed a significant decrease of 19.3% compared to 2008 when the global financial crisis showed up, particularly amounted to 54.2 billion euro in 2017 from 67 billion euro in 2008. The share of micro manufacturing companies in 2017 amounted to 10.6% (5.75 billion euro) of the total turnover (54.2 billion euros) of the sector and decreased significantly by 54.6% compared to 2008. At the same time, the share of small enterprises of the sector amounts to 14.7% (7.9 billion euro) of the total turnover of manufacturing, of which 5.6% corresponds to 3,043 enterprises employing from 10 to 19 people and a percentage of 7.9% in 4,893 companies presented in 2017 a turnover corresponding to 25.3% of the

total turnover of the sector, showing a significant decrease of 32.9% compared to 2008. Medium-sized enterprises, in the same year presented a turnover of 11.8 billion euro, holding a share of 21.9% of the total turnover of the sector, while the corresponding percentage for large manufacturing companies amounts to 52.8% (28,6 billion euro).

Figure 2: Evolution of the number of employees in the manufacturing sector during 2008-2017 in total and by size



https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme.

Chart 3: Evolution of manufacturing companies' turnover during 2008-2017 in total and by size

	70.0 60.0 50.0 40.0 30.0 20.0		> > \$ ⁸ 20 ⁸ 1	010 2011	2012 201	²³ 20 ¹⁴ 1) 0 ¹⁵ 20 ¹⁶	2011		Sum 0 - 9 10 - 49 50 -249 > 250	
Turnover											
€ million											
Year	2008	3 2009	2010	2011	2012	2013	2014	2015	2016	2017	Percentage change (2017/2008)
Sum	67.035,3	54.883,8	56.842,7	57.736,0	58.313,9	56.478,3	58.109,6	53.531,6	46.793,0	54.119,8	-19,27%
0 - 9	12.674,6	5 10.852,3	10.386,2	9.588,8	8.684,9	8.278,8	6.159,7	6.236,7	5.801,4	5.749,1	-54,64%
10 - 49	7.733,8	3 7.214,1	6.761,9	6.611,1	6.178,5	5.149,1	7.932,2	7.665,0	7.188,5	7.936,4	2,62%
50 - 249	10.502,5	5 10.074,1	9.585,8	9.053,4	9.496,5	10.703,4	11.532,9	10.846,8	11.198,6	11.828,2	12,62%
> 250	36.124,2	2 26.743,3	30.108,7	32.482,8	33.954,0	32.346,9	32.484,7	28.783,2	22.604,4	28.606,1	-20,81%
Source:	Eurostat,	SME	s -	Annual	ente	rprise	Statisti	ics by	size	clas	s - industry

Source: Eurostat, SMEs - Annual enterprise Statistics by size class - industry, https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme. In addition, the value of the production of manufacturing companies followed in 2017 the course of the turnover. Indeed, it amounted to a total of 48.3 billion euro, to which the micro and small companies contributed a total of 23.1%, the medium 21, 5% and large ones 55.4%. Micro manufacturing companies created 8.9% of the production value (4.3 billion euro). In the small business category, 5.3% (production value of 2.6 billion euro) contributed by manufacturing companies with 10 to 19 employees, while 8.9% (production value of 4.3 billion euro) offered by companies employing 20 to 49 employees. All size categories presented declined value of their production from 2008 to 2017 but micro manufacturing companies showed their production value to sharply fell by almost 179%.



Figure 4: Evolution of production value of manufacturing companies during 2008-2017 in total and by size

Source: Eurostat, SMEs - Annual enterprise Statistics by size class - industry, https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme.

Furthermore, in 2017 manufacturing companies contributed to the Greek economy the total amount of 11.5 billion euro in terms of added value. The share of micro and small companies of the sector amounted to 25.6% of the total added value of manufacturing sector in the Greek economy, while the percentages for medium and large processing units were 24.9% and 49.5%, respectively. Micro enterprises created 8.4% of the added value of the sector, while the small ones accounted for 17.2%, of which 6.4% came from the small companies that employ from 10 to 19 employees and a percentage of 10.8% from the enterprises that employ from 20 to 49 employees.

Figure 5: Evolution of the added value of manufacturing companies during 2008-2017 in total and by size



Source: Eurostat, SMEs - Annual enterprise Statistics by size class https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme.

Figure 6: Evolution of the number of construction companies during 2009-2017 in total and by size



Number of construction companies

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	Percentage change (2017/2008)
Sum	112.952	105.298	92.699	86.873	84.622	86.992	74.337	77.229	61.833	-45,26%
0-9	109.693	102.617	90.313	84.552	82.841	85.470	72.797	75.770	60.402	-44,94%
10 - 49	2.785	2.338	2.102	2.134	1.612	1.364	1.396	1.312	1.282	-53,97%
50 - 249	462	331	269	175	157	140	133	135	136	-70,56%
> 250	12	12	15	13	12	18	11	12	13	8,33%

Source: Eurostat, SMEs - Annual enterprise Statistics by size class - construction,

https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme.

Analysis of the construction sector's enterprises

According to the data of the SME Performance Review database of the European Commission which is based on the official Eurostat data for Greece in 2017, the construction sector which includes all technical construction companies and technical offices in Greece, accounted 61,833 companies, showing a decrease of 16.4% compared

to 2016 and 44.9% compared to 2009 when the effects of 2008 global financial crisis appeared. It is noteworthy that 97.7% of companies in this sector micro, with less than 9 employees and a turnover of less than 2 million euros. Only 1.42% of the companies in the sector employ from 10 to 19 employees, an even smaller percentage of 0.65% corresponds to companies with 20 to 49 employees, and just 2.1% of the companies in the sector are small. Overall, 99.8%, which corresponds to the vast majority of companies in the construction sector, are micro and small enterprises.

The turnover of the construction sector amounted to 9.9 billion euros in 2017, reduced by 6.9% compared to 2016 and significantly reduced by 37.6% compared to 2009. It is worth noting that micro enterprises in the construction sector hold 39.4% of the total turnover of the sector, while small enterprises represent 23.9% of the turnover of the whole sector. In total, micro and small enterprises created in 2017 63.3% of the total turnover of the sector, while medium enterprises share was 14% and large companies share was 22.7%. It is noteworthy that, in relation to 2009, micro enterprises presented a significant decrease of their turnover by 45.9% (from 7.2 billion euros in 2009 to 3.9 billion euros in 2017), while at the same time sector's small enterprises employing 10-19 employees also showed a significant decrease by 57% of their turnover, actually from around 2 billion euros in 2009 (28.4% of the total turnover of the sector) to 0.9 billion euros in 2017 (just 8.9% of the total turnover of the sector).

On the other hand, large enterprise of the construction's sector more than doubled by 117,8% their turnover in 2017 compared to 2008 possessing a share of 22.7% of the reduced total sector's turnover in 2017 while their share in 2008 was 6,5%, almost four (4) times lower. Such development reflects the harsh reality experienced by SMEs of the constructions sector since 2009 onwards, which, due to the high financial needs required by the technical projects for their implementation, showed serious weaknesses as regards financing in the general negative climate of the Greek economy. A crucial negative factor was Greek banks' lending policy, which negatively affected financing of SMES, including those in the construction sector which by default have significant high financing needs.



Figure 7: Evolution of construction companies' turnover during 2009-2017 in total and by size

Turnover												
million €												
										Percentage change		
Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	(2017/2008)		
Sum	15.852,2	14.287,3	11.709,6	11.254,2	10.840,9	9.932,9	10.368,0	9.249,3	9.886,6	-37,63%		
0 - 9	7.205,0	6.931,5	5.413,6	5.648,2	5.984,9	4.217,8	4.144,3	3.920,5	3.894,7	-45,94%		
10 - 19	2.047,5	1.583,6	1.389,3	1.547,6	1.199,6	950,1	1.218,5	950,9	880,5	-57,00%		
20 - 49	1.855,3	2.189,3	1.453,5	1.282,5	1.067,6	1.197,6	1.728,8	1.135,1	1.482,8	-20,08%		
10 - 49	3.903	3.773	2.843	2.830	2.267	2.148	2.947	2.086	2.363	-39,45%		
50 - 249	3.715,3	2.437,5	2.080,3	1.514,7	1.316,4	1.601,8	1.615,3	1.640,3	1.387,6	-62,65%		
> 250	1.029,1	1.145,4	1.372,9	1.261,2	1.272,5	1.965,6	1.661,1	1.602,5	2.240,9	117,75%		
Source: E	irostat,	SMEs	- An	nual e	nterprise	Statist	ics by	size	class	- construction,		
https://ec.eur	nttps://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme.											

The total value of production in the construction sector (production value) decreased significantly by 40% in 2017 compared to 2009 (from 15.6 billion euros in 2009 to 9.4 in 2017). The largest decrease was presented by micro-enterprises and small enterprises in the sector, whose share in the total value of production decreased by 48.2% and 39%, respectively. The total value of small businesses that employed from 10 to 19 employees decreased by 59.1% in 2017 compared to 2009, while those with 20-49 employees by 24.6% over the same period. It is worth noting that the share of medium-sized enterprises increased during the same period by 68.4%, while that of large enterprises in the conditions of the economic crisis - perhaps through the verticalization of the production process and the reduction of subcontracting - in relation to micro and small enterprises of the sector, which lost a significant share in the total value of the production of the sector.

Figure 8: Evolution of construction companies production value during 2009-2017 in total and by size



Finally, in terms of value added, the construction sector showed a significant decrease of 40% in 2017 (euro 2.4 billion) compared to 2009 (euro 4.1 billion). The largest decrease was presented by micro (69.2%) and small (40%) enterprises of the sector, while the share of small enterprises that employed in 2017 from 10 to 19 employees

decreased dramatically by 77%. The share of micro-enterprises in the total value added of the construction sector in 2017 amounts to 25.2%, while the respective percentage of small enterprises amount to 8.6%, medium enterprises to 29.6% and large to 15.8%.

Figure 9: Evolution of construction companies added value during 2009-2017 in total and by size



https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statisti

Analysis of companies activated in the services sector

According to the data of the SME Performance Review (SPR) database of the European Commission, which is pointed out that they are not presented uniformly for the services sector, interesting conclusions emerge for individual sectors that fall under the services. Particularly:

• Information and Communications Technologies: In 2017, a total of 16,725 companies were active in these activities, of which 95% belong to the category of micro-enterprises. Businesses operating in these sectors account for 15.6% of all SMEs in Greece, employ 23.6% of the SMEs workforce and contribute 9.6% in terms of value added to the economy. In addition, ICT companies increased by 21% in 2017 compared to 2008, recording a particularly upward trend until 2014, which was followed by a downward trend in years 2015-2017. Most of them are micro- enterprises, as according to 2017 data, 95% belong to this category, of which 69.4% are self-employed or with one employee (subcategory 0-1) and 25.6% are companies employing from 2 to 9 employees. The turnover of ICT companies decreased by 37.6% compared to 2008, while small businesses faced the largest decrease as they presented loses by 64.5% during the same period. Moreover, the added value of the above business activities decreased by 54% in 2017 compared to 2008, while in the same period the number of employees decreased significantly (22.5%). The biggest loss (73.9%) was also presented by the small enterprises of the specific sectors, while on the contrary, the

number of enterprises with no (self-employed) to one employee (0-1) increased in 2017 by 16.9% compared to the year 2008.





Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Percentage change (2017/2008)
Total number of ICT companies	13.816	13.733	12.765	12.586	12.512	12.670	20.416	19.603	19.069	16.725	21,79%
Turnover (€ million)	15.636,4	15.125,9	12.385,5	10.075,0	9.596,4	9.085,9	9.725,7	9.485,1	9.399,7	9.763,0	-35,46%
Value added (€ million)	6.810,8	6.538,4	5.140,5	4.174,9	3.650,6	3.351,4	3.181,6	3.546,4	3.367,1	3.134,5	-52,06%
Number of employees	104.320	96.414	88.668	77.161	74.722	70.080	80.498	77.790	79.568	80.825	-16,17%
Turnover per employee (€ million)	149,9	156,9	139,7	130,6	128,4	129,6	120,8	121,9	118,1	120,8	-23,01%

Source: Eurostat, SMEs - Annual enterprise Statistics by size class - services, <u>https://ec.europa.eu/eurostat/web/structural-business-statistics/structura</u>

• **Professional - Scientific - Technical Activities:** In 2017, a total of 137,267 enterprises were active in these activities, of which 99.9% belong to the category of micro-enterprises. This group includes all scientific entrepreneurial activities (lawyers, economists, architects, business consultants, etc.). These companies showed an overall increase of 13% in 2017 compared to 2008, of which companies with 0-9 employees showed an overall increase of 33.5% (16.9% companies with 0-1 employees and 21.4% companies with 2-9 employees). The other categories of the above companies showed a significant decrease during the same period. The turnover of these businesses decreased significantly by 49.1% in 2017 compared to 2008, while the same happened with their added value to the economy, which decreased by 52.1%. In terms of added value, micro-enterprises in 2017 hold 54.4% of which those with 0-1 employees have 28.9% and those with 2-9 employees 25.5%. In addition, small businesses hold 17.4% of the added value of these businesses, of which 8.5% are those with 10-19 employees and 8.9% those with 20-49 employees.



Figure 11: Evolution of total number, turnover and added value of professional, scientific and technical activities in the period 2009-2017

Total number of professional - scientific - technical enterprises											
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Oercentage change (2017/2008
Tatal number of enterprises	121.502	121.824	119.154	114.716	111.256	105.002	161.780	152.731	152.320	137.267	12,68%
Turnover (€ million)	16.509,8	14.817,8	12.497,7	9.992,8	9.282,9	8.400,8	8.194,2	8.054,6	7.559,0	8.402,3	-43,30%
Value added (€ million)	7.223,7	6.803,8	5.248,9	5.023,4	5.032,7	4.259,1	3.726,6	3.613,5	2.805,0	3.461,1	-49,13%

Source: Eurostat, SMEs - Annual enterprise Statistics by size class - services, https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme.

Conclusions

SMEs play a substantial role as they contribute to the creation of jobs and added value to the economy and they help the achievement of social cohesion. This is widely recognized in the literature and in statistical databases as presented in this article. The realization of such role justifies State's intervention through public policies which should aim at supporting entrepreneurship and strengthening SMEs' potential to develop their activities. Planning and implementing public policies for the support of SMEs could create extremely positive results to economies where SMEs are the vast majority of the entrepreneurship ecosystem such as Greece. As showed above in the case of Greece the vast majority of companies in 2018 were SMEs (821,209 from 821,540), a percentage almost reaching 100%. Moreover, 97.4% of the total number of enterprises, belong to the subcategory of micro-enterprises, which contribute 62% to employment (almost 2 in 3 employees are employed in micro-enterprises) and by 17.6% in terms of value added in economy. The corresponding percentages for small enterprises are 2.3% of Greek enterprises, which contribute 16.2% to employment and 23.1% in value added terms to the economy. Overall, micro and small enterprises represent 99.7% of all enterprises operating in Greece and contribute 78.2% to employment and 40.7% to value added to the economy.

Sectoral analysis showed quite interesting results highlighting the heterogeneity of SMEs characteristics among both at different sectors and different size of enterprises

belonging to the same sector. As regards the manufacturing sector, in 2017 a total number of 57,373 companies were active in Greece accounting 7.6% of the total number of enterprises operating in Greece. The manufacturing sector as a whole contributed 12.2% to employment and 20.8% to the creation of added value in the economy. Furthermore, 91.8% of manufacturing companies (52,710 out of 57,373) were micro and 6.7% were small (3,835 out of 57,373). Summing micro and small manufacturing enterprises (56,545 out of 57,373) constitutes 98.6% of the sum of the sector's enterprises. The number of medium-sized manufacturing companies increased by 32.6% in 2017 compared to 2008, while manufacturing units with 10 to 19 employees increased significantly by 66.7%.

In contrary, the number of employees in the manufacturing sector decreased totally by 25.7%, but such a decrease does not appear in all sizes of the sector's companies. As regards micro-enterprises, personnel decreased by 50.1%, while it increased by 58% to those micro firms with a workforce 10 to 19 employees and furthermore, by 12.7% to medium-sized category as a whole and by 2.4% to the medium-sized enterprises of the sector. In addition, the turnover of the manufacturing sector in 2017 showed a significant decrease of 32.5% compared to the year 2008. Actually, in 2017 and in terms of turnover, the share of micro-enterprises of the sector reached 10.6%, significantly reduced by 54.6% compared to 2008. Totally, micro-enterprises of the sector presented a turnover that corresponded to 25.3% of the total turnover of the manufacturing companies, presenting a significant decrease of 32.9% compared to 2008. In terms of value added to the economy, micro-enterprises created 8.4% while small ones 17.2%. In addition, the constructions sector in 2017, amounted 61,833 active companies in Greece of which 97% (60,402 companies) belonged to the category of micro companies. 99.8% of the sector's companies was micro and small enterprises of which 97.7% were micro. Compared to 2009, micro-enterprises showed a significant decrease in their turnover by 37.6%. In contrast, medium and large companies of the sector have shown remarkable resilience, increasing their share in terms of turnover, production value and added value to the economy. In terms of value added, the construction sector showed a significant decrease of 40% in 2017 (euro 2.4 billion) compared to 2009 (euro 4.1 billion). The largest decrease in terms of value added was presented by micro (69.2%) and small (40%) enterprises of the sector.

Regarding the ICT sector, in 2017 a total number of 16,725 companies were activated in such activities, when 95% of which were micro-enterprises. 99.8% of the sector's enterprises were micro and small enterprises as well. It is noted that the majority of ICT companies were micro enterprises (95%), of which 69.4% were self-employed enterprises or employing at maximum one employee (sub-category 0-1) and 25.6% are employed enterprises from 2 to 9 employees. The total turnover of the sector's companies decreased by 37.6% in 2017 compared to 2008, while the largest decrease was presented by small businesses (64.5%). Finally, the sector's added value to the economy decreased by 54% in 2017 compared to 2008, while the number of employees decreased significantly by 22.5%. Furthermore, a total of 137,267 companies were active in the fields of professional, scientific and technical activities in 2017, of which 99.9% micro-enterprises. Vast majority of the enterprises are micro (99.6%), of which 82.9% are self-employed enterprises or with a maximum of one employee (subcategory 0-1) and 16% are enterprises employing from 2 to 9 employees. Business activities included to the such category of the services sector increased by 13% in 2017 compared to 2008 while their turnover decreased by 49.1% in 2017 compared to 2008 and their added value to the economy as well, which decreased by 52.1% during the same period. The above analysis demonstrates in the most unequivocal way the substantial role of SMEs in the Greek economy even during the financial crisis of the last decade and despite their heterogeneity.

This fact becomes even more important if we consider the extremely high share of SMEs in the sub-sectors of manufacturing, construction and selected service sectors, such as information and communication technologies and various scientific professional activities, both in terms of employment and added value. Therefore, public entrepreneurship support policies should take into account SMEs' needs focused mainly on the sector they are activated in and their size in order to become multipliers and accelerators of positive financial results at micro and macro-economic level. Although it is never too late to take effective action in the context of public policy, the circumstances are ideal. Future programs to be funded by sources of the European Structural and Investments Funds or other European Union's Funds such as InvestEU¹⁵ for the period 2021-2027 and the Recovery and Resilience Facility (RFF)¹⁶ as well for the period 2021-2025 in the European Union, can be widely used to support entrepreneurship and the special needs of SMEs according to their size, age, region and sector without being horizontally scheduled. Such an approach while being in line with the European Union's SME Strategy (European Commission, 2020), should further take into consideration the characteristics of the national economies and the comparative advantages of each member-state, in order to help the creation of the right conditions to achieve sustainable economic growth in terms of social and regional cohesion across the European Union.

¹⁶ See European Commission (2020), *Proposal for a Regulation of the European Parliament and of the Council establishing a Recovery and Resilience Facility*, COM(2020) 408 final/28.5.2020, <u>https://eur-lex.europa.eu/resource.html?uri=cellar:1813ea3d-a0be-11ea-9d2d-01aa75ed71a1.0001.02/DOC_1&format=PDF</u>, annexes: <u>https://eur-lex.europa.eu/resource.html?uri=cellar:1813ea3d-a0be-11ea-9d2d-01aa75ed71a1.0001.02/DOC_2&format=PDF</u>.

¹⁵ See European Commission (2018), *Proposal for a Regulation of the European Parliament and of the Council establishing the InvestEU Programme*, COM(2018) 439 final, Brussels, 6.6.2018, <u>https://eur-lex.europa.eu/resource.html?uri=cellar:319a131d-6af6-11e8-9483-01aa75ed71a1.0002.03/DOC_1&forma=PDF</u>.

References

- 1. Anderson, B. S., Eshima, Y. (2013), "The influence of firm age and intangible resources on the relationship between entrepreneurial orientation and firm growth among Japanese SMEs", *Journal of Business Venturing*, 28(3), 413–429.
- 2. Audretsch D. B., Keilbach M. C., Lehmann E. E. (2006), *Entrepreneurship and Economic Growth*, Oxford University Press: Oxford.
- 3. Ayyagari M., Demirguc-Kunt A., Maksimovic V. (2014), "Who creates jobs in developing countries?", *Small Business Economics*, 43(1), pp. 75–99.
- 4. Ayyagari M., A. Demirguc-Kunt A., Maksimovic V. (2011), "Small vs. young firms across the world: contribution to employment, job creation, and growth", *World Bank Policy Research*, Working Paper 5631, World Bank: Washington DC.
- 5. Baumol, W. J. (1990), "Entrepreneurship: productive, unproductive and destructive", *Journal of Political Economy*, vol. 98, pp. 893-921.
- 6. Bell D. (1976), *The Cultural Contradictions of Capitalism*, Basic Books, Inc., Publishers, New York.
- 7. Chandler, A. (1977), The Visible Hand, Harvard University Press: Cambridge, M A.
- 8. Chandler, A. (1990), *Scale and Scope: The Dynamics of Industrial Capitalism,* Belknap Press: Cambridge, MA.
- 9. Coase R (1937), "The Nature of the Firm", *Economica*, 4(16), pp. 386–405.
- European Commission (2020), Proposal for a Regulation of the European Parliament and of the Council establishing a Recovery and Resilience Facility, COM(2020) 408 final/28.5.2020, <u>https://eur-lex.europa.eu/resource.html?uri=cellar:1813ea3d-a0be-11ea-9d2d-01aa75ed71a1.0001.02/DOC 1&format=PDF</u>, annexes: <u>https://eurlex.europa.eu/resource.html?uri=cellar:1813ea3d-a0be-11ea-9d2d-01aa75ed71a1.0001.02/DOC 2&format=PDF</u>.
- European Commission (2020), An SME Strategy for a sustainable and digital Europe, COM(2020) 103 final/10.03.2020, <u>https://ec.europa.eu/info/sites/info/files/communication-sme-strategy-march-</u> <u>2020_en.pdf</u>.
- 12. European Commission (2019), 2019 SBA Fact Sheet Greece, <u>https://ec.europa.eu/growth/smes/business-friendly-environment/performance-review_en</u>.
- 13. European Commission (2018), Proposal for a Regulation of the European Parliament and of the Council establishing the InvestEU Programme, COM(2018) 439 final/6.6.2018, <u>https://eur-lex.europa.eu/resource.html?uri=cellar:319a131d-6af6-11e8-9483-01aa75ed71a1.0002.03/DOC_1&format=PDF</u>.
- 14. European Commission (2008), Small Business Act (SBA) for Europe, COM (2008) 394 final.
- 15. European Commission (2003), *Recommendation 361/2003 concerning the definition of micro, small and medium-sized enterprises*, <u>https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:124:0036:0041:en:PDF</u>.
- 16. Galbraith J. K. (1956), *American Capitalism: The Concept of Countervailing Power,* Boston: Houghton Mifflin.

- 17. Haltiwanger J., Jarmin R., Miranda J. (2012), "Who creates jobs? Small vs Large vs Young", National Burau of Economic Research Working Paper n.16300, <u>https://www.nber.org/papers/w16300</u>.
- 18. Hart P. E., Oulton N. (1996), "Growth and size of firms", *Economic Journal*, vol. 106, pp. 1242-1252.
- Heyman, F., Norblack, P. H., Persson, L. (2018), "Who creates jobs and who creates productivity? Small versus large versus young versus old", *Economics Letters*, 164, 50 – 57.
- Huber, P., Oberhofer, H., Pfaffermayr, M. (2017), "Who creates jobs? Econometric modeling and evidence for Austrian firm level data", *European Economic Review*, 91, 57 –71.
- 21. Kekez A., Howlett M., Ramesh M (2019), "Collaboration in public service delivery: what, when and how", in *Collaboration in public service delivery: Promise and pitfalls*, Edward Elgar publications.
- 22. Koellinger P., Thurik A. R. (2012), "Entrepreneurship and the business cycle", *Review of Economics and Statistics*, vol. 94, pp. 1143-1156.
- 23. Lawless M., (2013), "Age or Size? Determinants of Job Creation," *Research Technical Papers 02/RT/13,* Central Bank of Ireland.
- 24. Love, L. H., Roper, S., Zhou, Y. (2016), *Experience, age and exporting performance in UK SMEs,* International Business Review, 25(4), 806–81.
- 25. Office of the United States Trade Representative (2010), Small and Medium-Sized Enterprises: Overview of Participation in U.S. Exports, <u>https://www.usitc.gov/publications/332/pub4125.pdf</u>.
- 26. OECD Stats: <u>https://stats.oecd.org/glossary/detail.asp?ID=3123.</u>
- 27. OECD (2016), Entrepreneurship at a Glance 2016.
- 28. OECD (2017a), Enhancing the Contributions of SMEs in a Global and Digitalised Economy.
- 29. OECD (2017b), Entrepreneurship at a Glance 2017.
- Rotar L. J., Pamic R.K., Bojnec S., (2019), "Contributions of small and medium enterprises to employment in the European Union countries", *Economic Research*, vol. 32, no.1, pp. 3302-3314, <u>https://doi.org/10.1080/1331677X.2019.1658532</u>.
- 31. Schumpeter J. (1934), *The Theory of Economic Development*, Cambridge, Mass.: Harvard University Press.
- 32. Schumpeter J. (1942), *Capitalism, Socialism and Democracy*, New York: Harper and Row, (1944), London, Allen and Unwin.
- 33. Solow R. (1956), "A Contribution to the Theory of Economic Growth", *Quarterly Journal of Economics*, 70, pp. 65–94.
- 34. Thurik A. R. (2003), "Entrepreneurship and unemployment in the UK", *Scottish Journal* of *Political Economy*, vol. 50, pp. 264-290.
- 35. Thurik A. R. (2009), "Entreprenomics: Entrepreneurship, Economic Growth, and Policy", in *Entrepreneurship, Growth and Public Policy* (ed. Acs Z., Audretsch D., Strom R.), Cambridge University Press, ISBN-13 978-0-521-89492-0.

- 36. US Small Business Administration (2019a), SBA's Size Standards Methodology, pp. 3637, https://www.sba.gov/sites/default/files/2019-04/SBA%20Size%20Standards%20
 Methodology%20April%2011%2C%202019.pdf.
- US Small Business Administration (2019b), Table of Small Business Size Standards Matched to North American Industry Classification System Code, p.5, https://www.sba.gov/sites/default/files/2019-08/SBA%20Table%20of%20Size%20Standards_Effective%20Aug%2019%2C%202019_ Rev.pdf.
- 38. Van Praag M. C., Versloot P. H. (2007), "What is the value of entrepreneurship? A review of recent research", *Small Business Economics*, vol. 29, pp. 351-382.
- 39. Van Stel A. J., Carree M., Thurik A. R. (2005), "The effect of entrepreneurial activity on national economic growth", *Small Business Economics*, vol. 24, pp. 311-321.
- 40. Vivarelli M. (2013), "Is entrepreneurship necessarily good? Microeconomic evidence from developed and developing countries", *Industrial and Corporate Change*, vol. 22, number 6, pp. 1453–1495.
- **41.** Ward S., (2020), "What are SMEs? Definitions and examples of SMEs", <u>https://www.thebalancesmb.com/sme-small-to-medium-enterprise-definition-</u> <u>2947962</u>.