

A STUDY ON FACTORS INFLUENCING SUSTAINABLE ENTREPRENEURSHIP IN EUROPEAN UNION COUNTRIES

**Teodora Elena Fogoros¹, Dorin Maier², Adrian Iordache³
and Gabriela Elena Bițan⁴**

^{1) 3) 4)} The Bucharest University of Economic Studies, Romania

²⁾ The Technical University of Cluj-Napoca, Romania

E-mail: teodora.elena@icloud.com; E-mail: dorin.maier@gmail.com

E-mail: adi.iordache@gmail.com; E-mail: gabriela_bitan@yahoo.com

Please cite this paper as:

Fogoros, T.E., Maier, D., Iordache, A. and Bitan, G.E., 2020. A Study on Factors Influencing Sustainable Entrepreneurship in European Union Countries. In: R. Pamfilie, V. Dinu, L. Tăchiciu, D. Pleșea, C. Vasiliu eds. *6th BASIQ International Conference on New Trends in Sustainable Business and Consumption*. Messina, Italy, 4-6 June 2020. Bucharest: ASE, pp. 950-957

Abstract

The main feature of this paper is analyzing the relationship between entrepreneurship and sustainability, in the context of innovative times where sustainability represents a challenge for entrepreneurs to keep up with the market changes. Based on the fact that the main factors of influence on a business are the social factors, the environment, the politics and the finances, one of the objectives of this paper is to observe their impact on business development and how could it be used as assets to sustainable development. The purpose of this study is to identify the most susceptible domain of business on developing its sustainable side, on a European level. By selecting the most profitable businesses in Europe based on statistics and identifying their influencing factors, this paper managed to compare and classify it in terms of possibility to adopt a sustainable development. A larger documentation on this subject would help entrepreneurs to embrace new strategies and cross the barriers to help their businesses grow in a sustainable manner.

Keywords

Sustainability, sustainable entrepreneurship, sustainable development, influencing factors, European businesses

JEL Classification

M10, O1, L26, Q56

Introduction

Globalization, digitization and sustainability are one of the main domains of interest of researches in the latest year. Focusing on the evolution of entrepreneurship, recent research (Cigdem and Sefer, 2019) showed that the entrepreneurial domain became the crucial factor

of influence for production and employment. Moreover, by mixing entrepreneurship with globalization, we can observe its impact on the economic growth and improvement. In their research, Levine and Rubinstein (2017) consider that entrepreneurship is a variable, which depends on a resource, such as the human being, the social environment and the financial capital. Hence, it was sustained by Marquardt et al. (2017) that the quality of services provided by entrepreneurs is linked to the customer satisfaction, crucial factor of influence in the business domain. Looking back to the history of entrepreneurship, the rate of unemployment was the key aspect taken into consideration by the educational support and by the government when decided to invest in the young graduates to encourage them owning a business (Akinbola et al., 2015). Introducing the aspect that innovative ideas, which can increase the profits, may be generated as a result of driving a business globalized the concept of entrepreneurship, by generating new positions of employment and increasing market competitiveness (Zahra, 1999). Further research (Marquardt et al., 2018) showed that the need of organizations to focus their attention on the economy, ecology and social goals – known as the sustainability triangle – is vital, with the aid of politics, by turning sustainable thinking into law. As in any domain of activity, there are several factors of influence on business: uncertainty of business profitability, no capital for start up, lack of entrepreneurship education and no vision on the environment possible damages, referring to sustainability. Moreover, as concluded by Mateescu et al. (2016) on their research, risk management might also be taken into consideration on business development, to ensure the protection and cohesion of a firm. As pointed by Gyaneshwar and Nagendra (2017) in their study, even though the terms sustainable entrepreneurship, green entrepreneurship or eco-entrepreneurship are considered synonyms, the first term manages to differentiate from the others by focusing more on the environment and society, than financial profit (Pacheco et al., 2010). By a sustainable business, there is a need from entrepreneurs to protect the environment and the natural resources, by assuring the maintenance of business in time.

Research background

Entrepreneurship and sustainability

Understanding the link between entrepreneurship and sustainability means defining the terms. But there is no good definition for either of it: as entrepreneurship means developing its business by own capital, sustainability supposes the capacity of a business to last, by protecting the environment. Thus, sustainable entrepreneurship may be defined as the relationship of coexisting between the human and the biosphere or the relationship between sustainable development and business activities (Schaltegger and Wagner, 2008). On the other side, as stated by Iyigun (2015), there are three dimensions of sustainability (fig.no.1), related to each other: societal sustainability (the relationship between the company's value system and stakeholders' needs), economic sustainability (the company's capacity to handle its capital, the funds and the stock) and environmental sustainability (protecting the ecosystem in any possible way by the harming influences of the business sector). This is where the entrepreneur will get involved: his ability to adapt to the change (Iyigun, 2015) will motivate him to a successful way of transforming challenges into opportunities.

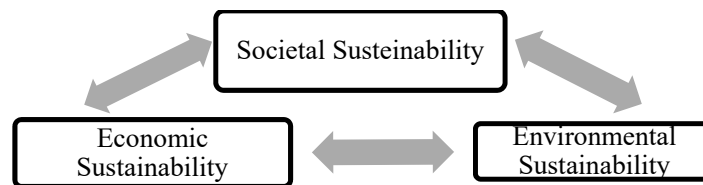


Fig. no. 1 The three dimensions of Sustainability

Source: elaborated by the author based on the research of Besler, 2009

Factors influencing sustainable entrepreneurship

In their research, Gholamhossein and Ali (2016) explained that the factors affecting the sustainable entrepreneurship in small and medium enterprises are the following: customer orientation, staff training, human resources and social supports. Also, it was confirmed that hiring people that supports the ethical behavior and the values of a company related to the environment is benefic (Hoffman, 2005). Taking into considerations the factors motivating the sustainable entrepreneurs, Gyaneshwar and Nagendra (2017) considered the following: their green perspectives, market gap, running their own business, earning a living and ultimately, passion. Though, this are considered factors of the internal environment. Apart from this, there are as well some influencing factors of the external environment, such as: green marketing, implication of the government, thinking eco-friendly (Gyaneshwar and Nagendra, 2017). The changes brought by the technology and the innovation in general, changed the way entrepreneurs leads their businesses. As observed by Pacheco et al. (2010), to develop an eco-friendly business, entrepreneurs should focus their attention first on influencing the customer’s green behavior towards ecological products so that he believes in the green culture of the business.

Methodology of Research

This research is an outcome of an early PhD research, based on statistics made before the possible future changes introduced by the COVID-19 context. An empirical research will be made based on the existing scientific literature, having as main goal to identify the most inclined business domain to adopt a sustainable development, based on the factors that are influencing it and their association with sustainability. The chosen method was searching on Eurostat the most profitable domains of business in the latest years, identifying their factors of influence and then comparing it. All things considered, this research aims to help aspirant entrepreneurs to easily pave their way for a sustainable business.

Research results and Discussions

So that the study can be conducted, the relevant economic sectors in terms of profitability were identified at a European level, based on statistics labeled on Eurostat (table no.1). Further on this paper we will focus our research on these top five domains of activity.

Table no. 1 European economic sectors by profit rate in 2016

Economic sector	Profit rate in 2016 (in %)		
	Micro SMEs	Small SMEs	Medium-sized SMEs
Mining and quarrying	22,9%	25,3%	14,1%
Manufacturing	14,9%	10,8%	9,5%
Electricity, gas, steam and air conditioning supply	25,1%	7,0%	5,4%
Water supply, sewerage, waste management and remediation	17,2%	16,9%	19,2%
Construction	16,3%	10,0%	9,1%

Source: European Commission, 2019. Annual report on European SMEs 2018/2019.

To observe the actions that may be taken into consideration by the entrepreneurs in these economic sectors, in order to develop its business to a sustainable culture, we identified in table no.2 the critical factors of influence in terms of sustainability.

Table no. 2 Factors of influence in business services

Economic sector	Critical factors of influence in terms of sustainability
Mining and quarrying	<ul style="list-style-type: none"> • Traffic, noise and pollution increased due to lorries taking the limestone away • Destroying natural habitats by digging a pit • Dust and noise produced by quarries and landscape spoiling due to quarries
Manufacturing	<ul style="list-style-type: none"> • Minimization of creativity due to automation • Encouragement of global warming, due to chemicals and gasses used • Lack of human recruitment due to innovation and automation (robots are used instead of human being) and costs involved in machinery purchase
Electricity, gas, steam and air conditioning supply	<ul style="list-style-type: none"> • More pollution • Bigger prices • Natural habitats destroyed for the needed space of producing electricity • Risk of chaos if the electricity will be cut
Water supply, sewerage, waste management and remediation	<ul style="list-style-type: none"> • Large river catch and lot of rainfall needed • Possible silt up of reservoirs • Risk of earthquake • Possible waste of water in case of leakages in the system
Construction	<ul style="list-style-type: none"> • The ventilation and the air quality inside the construction may be affected due to poor design • Risk of damaging the structure of the roof by the plants, if the protection anti-corrosion isn't good

Source: Authors own research

By identifying the critical factors of influence in terms of sustainability, we observe that despite the factors related to natural habitats, pollution and waste of water, businesses are facing as well challenges due to technology advancement, automation and digitalization, often called the 4th Industrial revolution in the scientific literature (de Man and Strandhagen, 2017). In table no.2, the most influenced economic sector by the innovation is the manufacturing sector, which introduces robots instead of human beings. In their paper, Mocan et al. (2016) concluded that adopting a sophisticated robotic system on the manufacturing domain has a positive impact in terms of sustainability. Hence, to identify the most predisposed domain of business to improve its sustainable part, in table no.3 we chose to examine similar research papers in the scientific literature of sustainable entrepreneurship. To have an overall view on this subject, we examined the opinions of approximately 100 authors, between we chose 15 opinions most frequently encountered and then determined based on their theories the matching economic sector between the ones specified earlier on this paper. We numbered the economic sectors as it follows: Mining and quarrying – 1, Manufacturing – 2, Electricity, gas, steam and air conditioning supply – 3, Water supply, sewerage, waste management and remediation – 4, Construction – 5.

Table no. 3 Bases of sustainable entrepreneurship

Source of research	Authors' statement regarding sustainable entrepreneurship	Matching economic sectors
Shepherd and Patzelt, 2011	• By sustainable entrepreneurship, despite the nature, the ecosystems and the communities, the economy must be as well supported	1,3,4
Kuckertz and Wagner, 2010	• Sustainable development and its objectives must receive a positive influence from the entrepreneurial activities which has a sustainable base	1,2,3,4,5
Bocken, N.M.P, 2015	• Some of the causes of failure of sustainable businesses are the lack of knowledge	2,5
Bocken, N.M.P, 2015	• Innovation in the business models is opening the door to success	2,3,5
Bocken, N.M.P, 2015	• Entrepreneurs can strengthen the development of sustainable businesses by calling for current businesses and business models	2,3,4
Bocken, N.M.P, 2015	• New forms of financing such as crowd funding and peer-to-peer lending can facilitate the development of sustainable businesses.	4,5
İyigün, N., 2015	• Sustainability is a business with a cause – a world cause	3,4
Gholamhosseina and Ali, 2016	• The renewable energy sources must be used properly	3,4
Gholamhosseina and Ali, 2016	• While producing, there should be no environmental pollution and a use of resources in such manner to avoid a potential loss	1,2,5
Klein Woolthuis, R., 2010	• Creation of environment friendly products or services	1,3,5
Abiola, A.H. and Udo, M.A., 2017	• Sustainable entrepreneurship supposes to deal with the most claimed world problems, like climate change, finance crisis, political uncertainty, by managing to obtain the success of the business as well	3,4
Tur-Porcar et al., 2018	• The factors affecting entrepreneurial sustainability are: environment (social awareness, policies), business factors (profit, job satisfaction, business management), behavior (motivation, lifestyle, metacognition) and human relations	1,2,3,4,5
Vinokurova, N., 2015; Aparicio et al., 2019	• The gender represents one of the main points of interest regarding sustainable entrepreneurship	2,5
Butkouskaya, et al, 2020	• Youth entrepreneurship may be benefic for sustainability, due to prior knowledge of ecological assets, innovation and social value creation	3,4
Durst and Zieba, 2019	• Risks regarding lack of competencies in terms of sustainability among the employees	1,3,4

Source: Authors own research

In Figure no. 2 we counted how many times each economic sector appeared on the table, meaning that the theories of the authors matched their domain of activity. The most impacted economic sector with eleven matching statements, which may have the possibility to improve its sustainable department, is electricity, gas, steam and air conditioning supply.

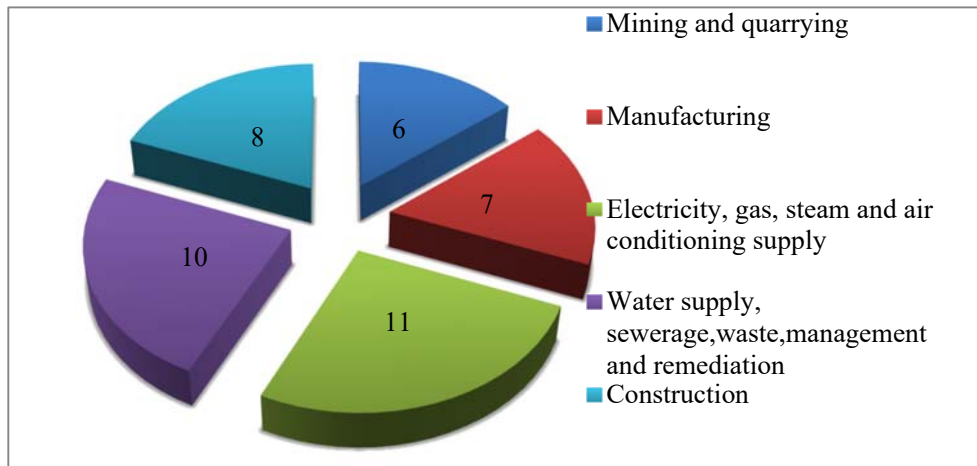


Fig. no. 2 Economic sectors identified to improve sustainability

Source: elaborated by the authors based on their research

Recent research concludes that the energy approaches in the E.U. should encourage the implementation of hydropower, wind and solar, and expel the non-renewable sources and bioenergy (Zurano-Cervello et al., 2019). Due to innovation and globalization, many industries utilize at the moment large amounts of electricity to get all the technologies for production to work (Ateba et al., 2019). This is the reason why the energy is the main interest for the United Nations (UN) Sustainable Development Goals (Mzini and Muhiya, 2014), organization which focuses on the environment of humans and which encourages the economic industry to efficiently use the energy to protect the social and economic growth. Also, it is considered that wind and solar PV are the most sustainable resources, comparing with coal (Cooper et al., 2018) and that equalizing the environmental, social and economic factors on the industries would increase the level of sustainability.

Conclusions

This paper concludes that sustainability represents a matter of interest nowadays and by considering several factors of influence, it can easily penetrate all the business economic sectors. Though, we concluded that the domain of electricity, gas, steam and air conditioning supply is the the main susceptible sector in adopting a sustainable culture, close to it is as well the water supply, sewerage, waste, management an remediation. Even though entrepreneurship represents an individual process, sustainability manages to create equilibrium between the economic sectors based on the factors of influence. As we observed in our research, the environmental factors may rely to the energy, but to the mining and quarrying domain as well; the technology advancement may affect the manufacturing domain, as well as constructions. Considering that sustainability increased its importance only in the latest years, it is clear that this subject will still be a challenge for entrepreneurship on the years to come. Though, we should take into consideration that in the context of COVID-19, the economic sector might dramatically change its order in terms of profit and the factors of influence can differ. We aim that this study will help aspirant entrepreneurs to better organize

their sustainable culture and to adapt to the challenges brought by digitalized and innovative times we are facing.

Acknowledgement

This work was co-financed from the European Social Fund through Operational Program Human Capital 2014-2020, project number POCU/380/6/13/125015 "Development of entrepreneurial skills for doctoral students and postdoctoral researchers in the field of economic sciences".

References/Bibliography

- Abiola, A.H., 2017. Environmental Factors Challenging Sustainable Entrepreneurial Development: A Regional Perspective of IDAH, Nigeria. *International Journal for Research in Applied Science and Engineering Technology*, V(IX), pp.1116–1124.
- Department of Business Management, College of Development Studies, Covenant University, Ota, Ogun State, Nigeria, Amos, A., Oluseye, O., Department of Business Management, College of Development Studies, Covenant University, Ota, Ogun State, Nigeria, Bosedé, A. and Department of Business Management, College of Development Studies, Covenant University, Ota, Ogun State, Nigeria, 2015. Influence of Contextual Factors on Entrepreneurial Intention of University Students: The Nigerian Experience. *Journal of South African Business Research*, pp.1–13.
- Aparicio, S., Urbano, D., Audretsch, D. and Noguera, M., 2019. Female and male entrepreneurship during the economic crisis: An institutional tale of European countries. *Rev. Econ. Mund.*, 51, pp.163–184.
- Ateba, B.B., Prinsloo, J.J. and Gawlik, R., 2019. The significance of electricity supply sustainability to industrial growth in South Africa. *Energy Reports*, 5, pp.1324-1338.
- Besler, S., 2009. Kurumsal Sürdürülebilirlik. In S. Besler ed. *Yönetim Yaklaşımlarıyla Kurumsal Sürdürülebilirlik*. Istanbul: Beta, pp.1-18.
- Bocken, N.M.P., 2015. Sustainable venture capital - catalyst for sustainable start-up success? *Journal of Cleaner Production*, 108, pp.647-658.
- Butkouskaya, V., Romagosa, F. and Noguera, M., 2020. Obstacles to Sustainable Entrepreneurship amongst Tourism Students: A Gender Comparison. *Sustainability*, 12, Article Number: 1812.
- Cigdem, B.T., and Sefer, S., 2019. The Determinants of Entrepreneurship in Turkey. *Procedia Computer Science*, 158, pp.648-652.
- Cooper, J., Stamford, L. and Azapagic, A., 2018. Sustainability of UK shale gas in comparison with other electricity options: Current situation and future scenarios. *Science of The Total Environment*, 619–620, pp.804–814.
- De Man, J.C. and Strandhagen, J.O., 2017. An Industry 4.0 research agenda for sustainable business models. *Procedia CIRP*, 63, pp.721-726.
- Durst, S. and Zieba, M., 2019. Knowledge risks inherent in business sustainability. *Journal of Cleaner Production*, 251, Article Number: 119670.
- European Commission, 2019. *Annual report on European SMEs 2018/2019*. Luxembourg: Publications Office of the European Union.
- Gholamhossein, H. and Ali, R. 2016. Factors Influencing Sustainable Entrepreneurship in Small and Medium-Sized Enterprises in Iran: A Case Study of Food Industry. *Sustainability*, 8, Article Number: 1010.
- Gyaneshwar, S.K., and Nagendra, K.S., 2017. Factors Influencing Young Entrepreneurial Aspirant's Insight Towards Sustainable Entrepreneurship. *Iranian Journal of Management Studies (IJMS)*, 10(2), pp.435-466.

- Hoffman, A., 2005. *Denmark's Innovation Capacity—From Benchmarking to Policy Priorities*. Copenhagen, Denmark: FORA, Division for Research and Analysis, Ministry of Business and Economic Affairs.
- İyigün, N., 2015. What could Entrepreneurship do for Sustainable Development? A Corporate Social Responsibility-Based Approach. *Procedia- Social and Behavioral Sciences*, 195, pp.1226-1231.
- Klein Woolthuis, R., 2010. Sustainable Entrepreneurship in the Dutch Construction Industry. *Sustainability*, 2(2), pp.505-523.
- Kuckertz, A. and Wagner, B., 2010. The influence of sustainability orientation on entrepreneurial intentions - investigating the role of business experience. *Sustainable development and entrepreneurship. J. Bus. Ventur.*, 25(5), pp.524-539.
- Levine, R. and Rubinstein, Y., 2017. Smart and illicit: who becomes an entrepreneur and do they earn more? *Q. J. Econ.*, 132(2), pp.963-1018.
- Marquardt, K., Olaru, M. and Ceaușu, I., 2017. Study on the development of quality measurements models for steering business services in relation to customer satisfaction. *Amfiteatru Economic*, 19(44), pp.95-109.
- Marquardt, K., Olaru, M., Golowko, N. and Kiehne, J., 2018. Study on economic trends, drivers and developments of the 21st century. Book Series: *Proceedings of BASIQ International Conference: new trends in sustainable business and consumption*, pp.65-73.
- Mateescu, R.M., Olaru, M., Sarbu, A. and Surugiu, I., 2016. Research on Increasing Risk Management Efficiency as Support for Corporate Sustainable Development. In: Acad Conf LTD, Book Series. *Proceedings of the International Conference on Management Leadership and Governance*, pp.450-459.
- Mocan, B., Fulea, M., Olaru, M. and Buchmüller, M., 2016. From Intuitive Programming of Robotic Systems to Business Sustainability of Manufacturing SMEs. *Amfiteatru Economic*, 18(41), pp.215-231.
- Mzini, L. and Muhiya, L., 2014. An assessment of electricity supply and demand at emfuleni local municipality. *J. Energy South. Afr.*, 25(3), pp.20-26.
- Pacheco, D.F., Dean, T.J., and Payne, D.S., 2010. Escaping the green prison: Entrepreneurship and the creation of opportunities for sustainable development. *Journal of Business Venturing*, 25(5), pp.464-480.
- Schaltegger, S., and Wagner, T., 2008. Types of Sustainable Entrepreneurship and Conditions for Sustainability Innovation: From the Administration of a Technical Challenge to the Management of an Entrepreneurial Opportunity. In R. Wüstenhagen, J. Hamschmidt, S. Sharma and M. Starik eds. *Sustainable Innovation and Entrepreneurship*, pp.27-48.
- Tur-Porcar, A., Roig-Tiemo, N. and Llorca Mestre, A., 2018. Factors Affecting Entrepreneurship and Business Sustainability. *Sustainability*, 10, Article Number: 452.
- Vinokurova, N., 2015. Sustainable entrepreneurship and women in science and education: Gender equality, gender inequality. *Entrepr. Sustain.*, 2, pp.220-232.
- Zahra, S.A., 1999. The changing rules of global competitiveness in the 21st century. *Academy of Management Perspectives*, 13(1), pp.36-42.
- Zurano-Cervello, P., Pozo, C., Mateo-Sanz, J.M., Jimenez, L. and Guillen-Gosalbez, G., 2019. Sustainability efficiency assessment of the electricity mix of the 28 EU member countries combining data envelopment analysis and optimized projections. *Energy Policy*, 134, Article Number: 110921.