

## GREEN ENTREPRENEURSHIP AMONG STUDENTS

Georgiana MOICEANU<sup>1</sup>, Mirona POPESCU<sup>1,2</sup>, Andreea BARBU<sup>1,2</sup>, Anca Daniela MOICEANU<sup>3</sup>

<sup>1</sup>National University of Science and Technology Politehnica Bucharest

<sup>1</sup>ORCID: <https://orcid.org/0000-0002-9483-0894>

Email: [georgiana.moiceanu@upb.ro](mailto:georgiana.moiceanu@upb.ro)

<sup>1</sup>National University of Science and Technology Politehnica Bucharest

<sup>2</sup>Academy of Romania Scientists

<sup>1,2</sup>ORCID: <https://orcid.org/0000-0002-4262-0270>

<sup>1,2</sup> Email: [mirona.popescu@upb.ro](mailto:mirona.popescu@upb.ro)

<sup>1,2</sup>ORCID: <https://orcid.org/0000-0003-3119-8753>

<sup>1,2</sup> Email: [andreea.barbu2901@upb.ro](mailto:andreea.barbu2901@upb.ro)

<sup>3</sup>AIDER Association

<sup>3</sup>ORCID: <https://orcid.org/0009-0005-6588-8164>

<sup>3</sup> Email: [anca.mcd@gmail.com](mailto:anca.mcd@gmail.com)

**Abstract:** *Students are increasingly launching firms that put sustainability and environmental responsibility first, a trend known as "green entrepreneurship." Students are proactively starting businesses that provide eco-friendly goods or services as they become more aware of the significance of addressing urgent environmental concerns. Students that engage in green entrepreneurship not only support sustainable practices but also develop their innovative, artistic, and leadership abilities. The finding revealed that they are willing to address more sustainable businesses to ensure future for others to come, but there are still data about green entrepreneurship that are unknown or difficult to address. In addition, the results revealed that green entrepreneurship could constitute a measure for helping the economy of a country. Students are bringing about change and defining a better future by fusing their entrepreneurial energy with their passion for environmental problems. In addition to improving their local communities, these young business owners are also encouraging others to adopt sustainable habits and advance a culture that values the environment.*

**Keywords:** *business, green entrepreneurship, green concept, students, sustainability*

### INTRODUCTION

The activity of starting and operating firms that prioritize social and environmental responsibility and financial security is referred to as green entrepreneurship, sometimes known as sustainable entrepreneurship or eco-entrepreneurship. Green business owners are driven by a goal to develop novel responses to environmental problems while making money and improving society [1]. The key tenets of green entrepreneurship are examined in this introduction, along with their significance, difficulties, and potential advantages.

As communities become more aware of the critical need to solve environmental concerns including climate change, pollution, and resource depletion, green entrepreneurship is gaining relevance on a worldwide scale. By incorporating environmentally friendly procedures into company models, goods, and service delivery, it takes a proactive approach to address these issues [2]. Green entrepreneurs employ ecologically friendly technologies, cut waste, conserve energy, and encourage responsible consumption.

The complexity and dynamic nature of sustainable business operations is one of the key obstacles confronting green businesses. Unique thinking, market knowledge, and comprehension of environmental legislation are necessary to strike a balance between profitability and societal needs, concerns about the environment, and market demands [3,4]. Green business owners must find chances where environmental responsibility and market needs are compatible, resulting in a win-win scenario. They must also overcome the misconception that eco-friendly options are more expensive in order to persuade customers to prefer sustainable goods and services to traditional choices [4].

Despite these difficulties, green entrepreneurship has several advantages. First, by encouraging research and the creation of environmentally friendly innovations, it helps to shift to an economic system that is more sustainable [5].

Green entrepreneurs drive others to embrace sustainable practices through their pioneering work, having a domino

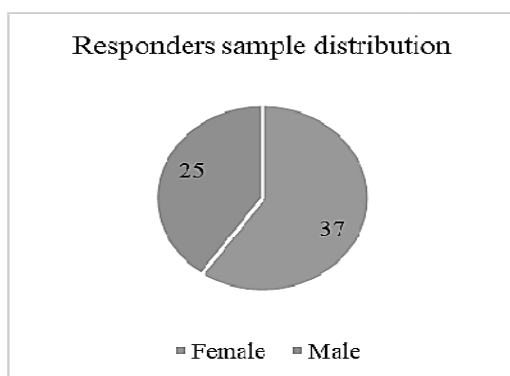
impact on the sector. Additionally, green enterprises can gain from market advantages like lower operational costs, easier access to green markets, and improved brand reputation, all of which can contribute to sustainable growth and profitability [6].

Individuals and organizations can profit from a variety of resources and support networks to be successful in green entrepreneurship. In order to help green start-ups, governments and non-governmental organizations (NGOs) frequently offer money, grants, and incubation programs. Numerous academic institutions and research centers also provide courses and workshops on sustainable business practices and entrepreneurship [7].

A few noteworthy works have aided the understanding of green entrepreneurship and its ramifications. In paper [8] A framework to position sustainable entrepreneurship in relation to sustainability innovation is proposed, with the purpose to convince managers of the importance of sustainability in entrepreneurship and innovation. Also, in paper [9], Eric Koester's book offers helpful guidance, case studies, and tools for green entrepreneurs. In paper [10], Daniel C. Esty and Andrew S. Winston's book provides advice on how companies can use environmental sustainability to their competitive advantage. Considering all this the aim of this research is to conduct an exploratory study to present the tendency of future entrepreneurs towards green entrepreneurship and its understanding among them.

## EXPERIMENTAL

**Research context:** Considering the increasing interest of students in entrepreneurship and their desire to attain success as entrepreneurs, the objective of the article is to present the student's perception and knowledge regarding green entrepreneurship. In order to do so, a questionnaire was designed to assess the current state among them. Although the questionnaire aimed to address a minimum number of 110 students, just 62 chose to answer (a rate of 56%) (Figure 1). With the help of other colleagues, (professors) the questionnaire was received by students and they answered under anonymity. Also,, it was applied during April and May 2023 to students from the Faculty of Biotechnical Engineering and Faculty of Entrepreneurship, Engineering and Business Management, University POLITEHNICA from Bucharest. They are currently studying for their bachelor degree. The author's decision to choose these two faculties resides in the fact that they are specialized in environmental respectively entrepreneurship/business studies. The data analysis was done using EXCEL MSOffice.



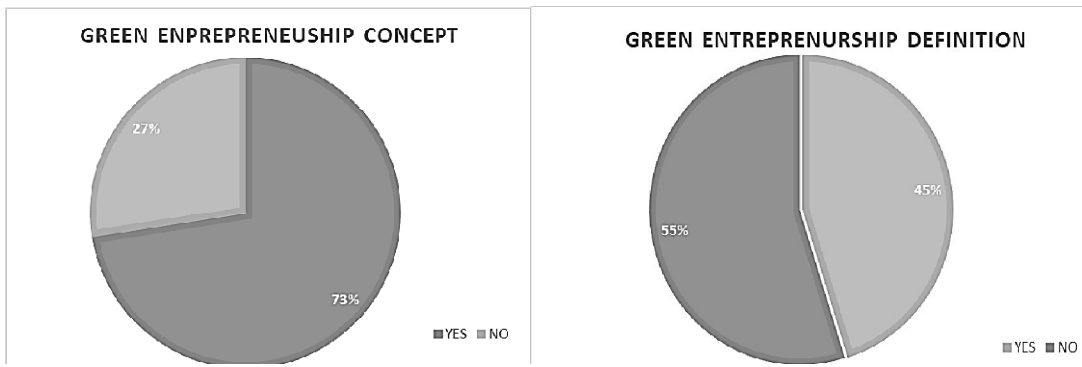
**Figure 1.** Sample distribution

### Limitations of the Study

The study was limited to students between the ages of 19 to 24 from the University POLITEHNICA of Bucharest, respectively the two faculties were targeted. Also, the expansion of this analysis to other faculties may be considered a plus brought to study domains for future knowledge regarding, sustainability, green concept, green revolution, and last but not least green entrepreneurship.

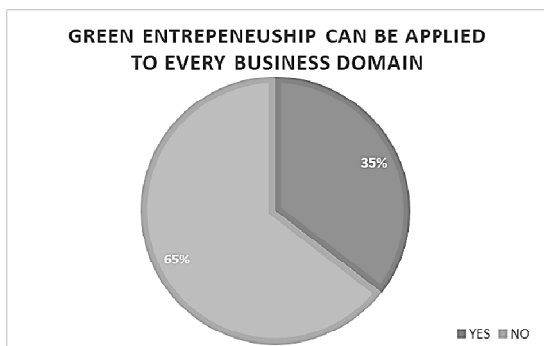
## RESULTS

The data obtained from the questionnaire was analyzed using Excel MS Office and the authors identified correlations in the answers given by the responders. According to the data the distribution between males and females revealed that 59% out of the responders were women and 41% were men. Out of the total number of responders 69% plan on opening up a business in the future and becoming an entrepreneur. The focus on green entrepreneurship started with the knowledge among the responders regarding the knowledge of the term and its definition. As it can be seen in Figure 2 even if 73% of the respondents heard about the term then just 45% actually know the definition of the concept.



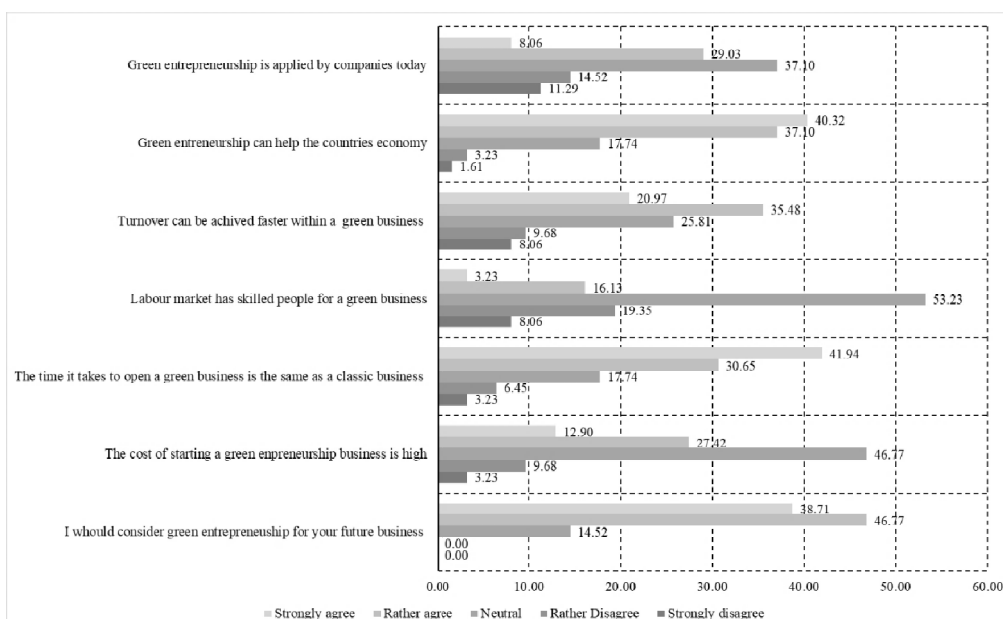
**Figure 2:** Green entrepreneurship concept and definition

Although embracing green entrepreneurship allows companies to connect their operations with environmentally friendly ideas and contribute to a more sustainable future across a variety of industries, the responders do not consider that the concept can be applied to any type of business. As can be seen in Figure 3 the responders in a percentage of 35% responded that they do not consider green entrepreneurship fit for every business.



**Figure 3:** Green entrepreneurship business domains

Regarding the further questions that expressed the responders' knowledge regarding other elements that are a part of the green entrepreneurship concept, it must be said that they do not know if the labor market has the necessary people, the skilled employees to build a green business (53%). Also, the turnover for this kind of business, in their opinion, can be achieved quite fast compared to other businesses, they rather agree in a percentage of 35%. Also, even if they don't agree with many green entrepreneurship elements, of they don't quite know the term, 46% of the responders mentioned that they would consider a business that applies the concept. Figure 4 expresses the percentage for the statements mentioned and other.



**Figure 4:** Green entrepreneurship future

To better see the correlation between the statements a correlation analysis was conducted as it can be seen in table 1.

**Table 1:** Correlation analysis for the statements using MSOffice Excel

Pearson Correlation	I would consider green entrepreneurship for your future business	The cost of starting a green entrepreneurship business is high	The time it takes to open a green business is the same as a classic business	Labour market has skilled people for a green business	Turnover can be achieved faster within a green business	Green entrepreneurship can help the country's economy	Green entrepreneurship is applied by companies today
I would consider green entrepreneurship for your future business	1						
The cost of starting a green entrepreneurship business is high	0.304	1					
The time it takes to open a green business is the same as a classic business	0.924	0.250	1				
Labour market has skilled people for a green business	-0.203	0.868	-0.214	1			
Turnover can be achieved faster within a green business	0.849	0.716	0.687	0.295	1		
Green entrepreneurship can help the country's economy	0.978	0.318	0.982	-0.175	0.795	1	
Green entrepreneurship is applied by companies today	0.192	0.935	0.0198	0.858	0.680	0.1378	1

## DISCUSSION

Regarding the data provided by the results it must be said that there are multiple elements that are still unknown by the responders or are still in the process of learning them.

As it can be seen, the highest correlations between the data collected from the questioners were between the statements "green entrepreneurship can help the country's economy" and "I would consider green entrepreneurship for your future business" which shows that the responders prioritize sustainability and environmental responsibility, helpful for the country and people.

Also, with a correlation of 0.982 the respondents consider that they can get faster to their goals thus, help the country's economy. The negative correlation -0.203 and -0.214 are related mainly to "The labor market has skilled people for a green business" statement which means that they are willing to open a green business or take the time necessary to open it, but they would still require a skilled labor market. Therefore, the negative correlation arises from the idea that if there are a significant number of skilled individuals with knowledge and expertise in green business practices, it becomes easier and faster to find qualified employees, consultants, and partners.

This availability of skilled professionals can streamline the process of establishing and running a green business, leading to a shorter setup time. On the other hand, if there is a limited pool of skilled individuals for green businesses, it can be more challenging to find the right talent, which may result in a lengthier and more time-consuming process of opening a green business compared to a classic business.

The next negative correlation of -0.175 between "Green entrepreneurship can help the country's economy" and "Labour market has skilled people for a green business" implies that when there is a higher number of skilled people available for green businesses (statement 2), the perceived impact of green entrepreneurship on the country's economy is lower (statement 1), or vice versa. Thus, the respondents could consider that the country may face challenges in finding qualified workers for green businesses, leading to skill shortages and potential constraints on the growth of the sector which means that the limited availability of skilled labor can hinder the scalability and productivity of green businesses, impacting their ability to contribute significantly to the country's economy.

## CONCLUSIONS

The research has investigated the student's perception regarding green entrepreneurship and their willingness to consider

it for a future business. It was found that if the concept is known the actual definition is not but regardless, they are still willing to prioritize sustainability and environmental responsibility. As the survey showed, they want to contribute to the country's economy despite the fact that skilled people are hard to find. Future research should focus on a larger sample scale that can provide more insights. Also, a study done among existing entrepreneurs and the concept of green sustainability should be applied to see if they are working towards sustainability and how they are doing it. Thus, these can bring a better perspective on the subject.

## References

- [1] Guo J, The significance of green entrepreneurial self-efficacy: Mediating and moderating role of green innovation and green knowledge sharing culture. *Front. Psychol.* Vol 13 (2022), doi: 10.3389/fpsyg.2022.1001867, ISSN 0959-6526;
- [2] Yang, Z., Sun, J., Zhang, Y., and Wang, Y. Green, green, it's green: A triad model of technology, culture, and innovation for corporate sustainability. *Sustainability* Vol 9, (2017), pp 1369, doi: 10.3390/su9081369, ISSN: 2071-1050;
- [3] Zhang, Q., & Ma, Y. The impact of environmental management on firm economic performance: The mediating effect of green innovation and the moderating effect of environmental leadership. *J. Clean. Prod.* Vol 292 (2021), pp. 126057, , <https://doi.org/10.1016/j.jclepro.2021.126057>, ISSN 0959-6526;
- [4] Takalo, S. K., & Tooranloo, H. S. Green innovation: A systematic literature review. *J. Cleaner Prod.* Vol. 279 (2021), pp. 122474, <https://doi.org/10.1016/j.jclepro.2020.122474>, ISSN 0959-6526;
- [5] Gürlek, M., & Tuna, M. Reinforcing competitive advantage through green organizational culture and green innovation. *Service Ind. J.* Vol 38 (2018) , pp. 467–491. doi: 10.1080/02642069.2017.1402889, Online ISSN: 1743-9507;
- [6] Jayasinghe, S., Johnson, L., Hewege, C., and Perera, C. Defining Firm-Level Resource Integration Effectiveness from the Perspective of Service-Dominant Logic: A Critical Factor Contributing to the Sustainability of a Firm's Competitive Advantage and the Ecosystem It Operates. *Sustainability*, Vol. 14 (2022), pp 2717, doi: 10.3390/su14052717, ISSN: 2071-1050;
- [7] Li Y., Nordin N.R.M., Akhter S, Kumar T., Shaheen M. Does green entrepreneurial behavior enhance through entrepreneurship education, perceived-ability to use technology, and commitment to environment? Understanding the contribution of entrepreneurial motivation and university support, *Economic Research-Ekonomska Istraživanja*, Vol 36, Issue 3 (2023), doi: 10.1080/1331677X.2022.2153375, Online ISSN: 1848-9664;
- [8] Schaltegger S & Wagner M, Sustainable entrepreneurship and sustainability innovation: categories and interactions, *Business Strategy and the Environment*, Vol 20, Issues 4 (2011), pp. 222-237, <https://doi.org/10.1002/bse.682>, Online ISSN:1099-0836;
- [9] Koser E., *Green Entrepreneur Handbook: The Guide to Building and Growing a Green and Clean Business (What Every Engineer Should Know)*, CRC PRESS, ISBN-10 1439817294, (2010).
- [10] Daniel C. Esty & Winston A., *Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage*, Wiley Publisher, ISBN-10 0470393742, (2009).