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**ABSTRACT.** The performed empirical study identified some factors that lead to the encouragement and stimulation of sustainable entrepreneurial intentions, by integrating the variables from the theory of planned behavior in the model of the entrepreneurial event, adapted to the context of sustainable entrepreneurship.

For a sample of 170 students of the Faculty of Economics and Business Administration within the West University of Timisoara, the empirical results showed that: perceived desire and feasibility for sustainable entrepreneurship are direct antecedents of sustainable entrepreneurial intentions; the individual attitude regarding entrepreneurship, subjective norms and behavioral control determine the perceived desire and feasibility regarding sustainable entrepreneurship, under the conditions of environmental values influence. The increase of respondents' number and the inclusion of additional variables in the research model, with moderating or mediating role, would allow the obtained results to be generalized for young people with university studies who have taken

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entrepreneurship courses through their academic curriculum and would guide to an expansion of research on stimulating factors of sustainable entrepreneurial intention.

**Keywords**: sustainable entrepreneurial intention, sustainable entrepreneurship, environmental values, theory of planned behavior, entrepreneurial event theory.

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### Introduction

Sustainable entrepreneurship postulates entrepreneurial activity as a potential solution to environmental degradation and social inequality (Muñoz and Cohen, 2018; Shepherd and Patzelt, 2011). Entrepreneurs can pursue their motivation to obtain financial benefits by creating new businesses or new activities within existing firms, and contributing in the same time to the reduction of social, environmental and environmental degradation related problems (Belz and Binder, 2017; Muñoz and Cohen, 2018; Schaltegger and Wagner, 2011). Upstream of any sustainable entrepreneurial creation specific process lavs the intention of a potential entrepreneur, meaning the probability that he/she will practice a sustainable entrepreneurship (Sendawula, 2018). In order to identify the determinants of sustainable entrepreneurial intention, there are recent studies that have considered and extended the specific models of entrepreneurial event theory (Shapero and Sokol, 1985) or theory of planned behavior (Ajzen, 1990, 2002), adapting them to the context of sustainable entrepreneurship (Agu et al., 2021; Peng et al., 2021; Yasir et al., 2021). Establishing the factors that would lead to encourage sustainable entrepreneurial intention creates the possibility for universities to understand the measures to be taken to promote environmental values and sustainability in the entrepreneurship education programs for vouth, and government decision makers to ensure a stimulating business

environment for entrepreneurial business creation in order to generate at the same time profit, conserve the natural and social environment, improve the well-being of the society.

In Romania, there is a sustained academic research on the antecedents of entrepreneurial intention of youth with university degrees (Feder and Nitu-Antonie, 2017; Georgescu and Herman, 2020; Herman and Stefănescu, 2017; Nitu-Antonie and Feder, 2013; Nitu-Antonie and Feder, 2017a; Nitu-Antonie and Feder, 2017b; Nitu-Antonie et al., 2014; Nitu-Antonie and Feder, 2015; Păunescu et al., 2018; Popescu et al., 2016; Vodă and Florea, 2019). However, academic research is very limited when considering the determinants of entrepreneurial intentions that may influence students in their decisions to adopt and implement sustainable practices in their future business endeavors. Consequently, the present paper aims to establish the direct and indirect antecedents of sustainable entrepreneurial intentions for Romanian students who benefited from entrepreneurship university courses, in the context of integrating variables from the theory of planned behavior (Ajzen 1991, 2002) in the entrepreneurial event model (Shapero and Sokol, 1982) and their adaptation to the sustainable entrepreneurship framework. The main objective of the research was to study the indirect linkages of individual attitude towards entrepreneurship, subjective norms and perceived behavioral control regarding sustainable entrepreneurial intention, through perceived desire and feasibility on sustainable entrepreneurship, given that environmental values are precedent for individual attitude, subjective norms and perceived behavioral control.

The research was structured in four main parts: the theoretical and empirical framework regarding the antecedents of sustainable entrepreneurial intentions, respectively the conceptual research model; the presentation of the research methodology; the results obtained from the statistical analysis of the primary data, the findings and the implications regarding the research; the establishment of conclusions drawn from the conducted research, the limitations and future directions of research.

### Literature, Hypotheses and Conceptual Research Model

Studies regarding the determinants of entrepreneurial intentions have been largely founded on the entrepreneurial event theory (Shapero and Sokol, 1982) and on the planned behavior theory (Ajzen, 1991, 2002)

(Ali *et al.*, 2012; Carr and Sequeira, 2007; Griffiths *et al.*, 2009; Krueger, 1993; Moriano *et al.*, 2012 in Sharahiley, 2020).

The entrepreneurial event theory (Shapero and Sokol, 1982) starts from the premise that the existence of an entrepreneurial event transforms a person's behavioral inertia into the act of creating a business. This theory considers the creation of a firm as the result of the interaction between contextual factors and a person's perceptions, highlighting the importance of these individual perceptions in the anticipation of intentions to act in a certain way (Nguyen, 2021). According to this theory, there are three factors that determine entrepreneurial intention: perceived desire, perceived feasibility and inclination to act. Perceived desire refers to the extent to which a person feels attracted to become an entrepreneur, perceived feasibility shows the extent to which they consider themselves capable of becoming an entrepreneur, and the propensity to act indicates their willingness to start a business according to their decision to become an entrepreneur.

According to the theory of planned behavior, the basis of any behavior is an intention, and the influencing factors of intentions are conceptually independent and refer to the individual attitude towards a behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). According to Ajzen (1991), in general, the attitude toward the achievement of a behavior shows the perception of a person regarding the desire to achieve that behavior, based on the evaluation of that behavior and the result it would generate. Adapted to the entrepreneurship field, the favorable attitude towards entrepreneurial behavior refers to a person's desire to become an entrepreneur and is reflected by the beliefs, respectively by the individual expectations regarding the development of an independent activity (Nguyen, 2021). Subjective norms reflect a person's perception of performing a certain behavior under social pressure (Ajzen, 1991). For entrepreneurship, these are the result of individual beliefs that he/she should become an entrepreneur because the personal entrepreneurial behavior was validated as a result of the felt social pressure. In the case of entrepreneurship, perceived behavioral control reflects the capacity that a person acknowledges about the execution of a target behavior (Ajzen, 1991). This factor is favorably influenced by individual perceptions regarding the possibilities to have the necessary skills, competencies, resources and the opportunities to engage in entrepreneurial behavior.

The two theories were mainly used separately or in some cases integrated in order to establish conceptual research models for determining the background of entrepreneurial intent, being subjected to empirical testing. Krueger (1994) confirmed that perceived desire, perceived feasibility, and propensity to act, are determinants of entrepreneurial intentions, and perceived feasibility is delimited as the best predictor. Recent empirical studies confirm that individual attitudes toward entrepreneurship, subjective norms, and perceived behavioral control. are all directly and positively related to entrepreneurial intentions (Pejic Bach et al., 2018; Nguyen, 2018), nevertheless there are studies that show that some of these variables do not influence entrepreneurial intentions (Phong et al., 2020; Nguyen, 2017; Zang et al., 2015). Consideration and inclusion of exogenous variables in the theory of planned behavior can increase its predictability in establishing the determinants of sustainable entrepreneurial intention and behavior. Peng et al. (2021) along with Yasir et al. (2021) show that variables in the theory of planned behavior are antecedents of sustainable entrepreneurial intention, and the significance attributed to environmental issues by a person (Corraliza and Berenguer, 2000) directly influences the attitude towards sustainable entrepreneurship (Yasir et al., 2021), respectively the subjective norms (Pang et al., 2021). Consequently, the following research hypothesis was formulated:

Hypothesis 1 (H1): Environmental values positively influence (a) personal attitude, (b) perceived behavioral control, and (c) social norms.

Some researchers believe that the variables that constitute the antecedents of entrepreneurial intentions have not been sufficiently tested and can be further integrated (Krueger *et al.*, 2000; Solesvik *et al.*, 2012). Iakovleva and Kolvereid, (2009) emphasize that the perceived desire and feasibility specific to entrepreneurship are determined by attitude, subjective norms and perceived behavioral control, respectively determine the entrepreneurial intention, without empirically testing their conceptual model. Schlaegel and Koenig (2014) integrate the variables that constitute the antecedents of entrepreneurial intention within the two theories, highlighting that the individual attitude towards entrepreneurship directly and significantly influences the perceived desire for entrepreneurship, while perceived behavioral control is a

direct and significant predictor of the perceived feasibility regarding entrepreneurship, given that entrepreneurial intention is directly and significantly influenced by the perceived desire, respectively the perceived feasibility. Alferaih (2017) indicates that the analysis of findings, based on her proposed integrative model, leads to the conclusion that the antecedents of the two theories are individual constructs that determine entrepreneurial intention, given that perceived desire for entrepreneurship does not significantly influence entrepreneurial intention. Therefore, the integrated models have not been validated or were just partially validated, requiring further identification of improved integrated models (Sharahiley, 2020). Agu et al. (2021) propose a research model that integrates and adapts the two theories to the context of sustainable entrepreneurship. The results of their empirical research emphasize that personal attitude towards entrepreneurship and subjective norms have a direct and significant influence on sustainable entrepreneurial intentions, while desire and feasibility do not influence directly sustainable entrepreneurial intentions. Therefore, the following research hypotheses can be stated:

Hypothesis 2a (H2a): Personal attitude positively influences perceived sustainable entrepreneurial desire in the case of youth with higher education.

Hypothesis 3a (H3a): Perceived behavioral control positively influences perceived sustainable entrepreneurial desire in the case of youth with higher education.

Hypothesis 4a (H4a): Social norms positively influence perceived sustainable entrepreneurial desire in the case of youth with higher education.

Hypothesis 2b (H2b): Personal attitude positively influences perceived sustainable entrepreneurial feasibility in the case of youth with higher education.

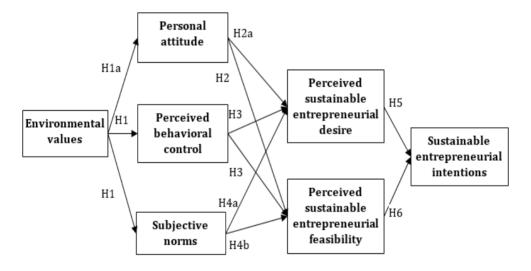
Hypothesis 3b (H3b): Perceived behavioral control positively influences perceived sustainable entrepreneurial feasibility in the case of youth with higher education.

Hypothesis 4b (H4b): Social norms positively influence perceived sustainable entrepreneurial feasibility in the case of youth with higher education.

Hypothesis 5 (H5): Perceived sustainable entrepreneurial desire positively influences sustainable entrepreneurial intention in the case of youth with higher education.

Hypothesis 6 (H6): Perceived sustainable entrepreneurial feasibility positively influences sustainable entrepreneurial intention in the case of youth with higher education.

The conceptual research model (Figure 1) aims to establish the antecedents of sustainable entrepreneurial intentions in the case of students who have benefited from entrepreneurial education through their academic curriculum. On one hand, it was followed the existence of causal relations between environmental values and personal attitude towards entrepreneurial behavior, subjective norms, respectively perceived behavioral control. On the other hand, it was investigated the existence of some indirect connections and effects that personal attitude on entrepreneurial behavior, social normal and perceived behavioral control may have over sustainable entrepreneurial intentions, through the perceived desire and feasibility of sustainable entrepreneurship.



**Figure 1.** Conceptual research model regarding the influencing factors of sustainable entrepreneurial intentions

Source: Authors' own compilation

The originality of the research model consists in the integration of the variables specific to the theory of planned behavior in the model of the entrepreneurial event, as well as their adaptation to the context of sustainable entrepreneurship.

### Research Methodology, Variables and Sample Structure

In order to empirically evaluate the proposed research model (Figure 1), from the quantitative methods, the survey was chosen, similar to several studies in this domain (Mustuc *et al.*, 2020; Niţu-Antonie and Feder, 2015; Sher *et al.*, 2020).

The technique of implementing the questionnaire was online, considering the pandemic context between the April-June 2021 time-interval. The online questionnaire in the form of access link and short presentation regarding the study was sent on the targeted student groups at the Faculty of Economics and Business Administration within the West University of Timisoara. The main motives to opt for circulating the questionnaire in the online environment considers the pandemic context, the online educational activities, the anonymity assurance for participants, the flexibility regarding the moment of completion, along with rapidity of data collection.

The data-set for present research consisted of the voluntary responses obtained from 170 students pursuing economic or business university education in Romania (Table 1). Participants were youth of different ages, ranging from 19 to 38 years, of which 60% were between 19-22 year old and 40% were over 23 years. Regarding gender, 51.77% of the participants were male and slightly less (48.23%) were female. The sample included a higher percentage of respondents from undergraduate level (61.77%), and a lower percentage from master level (38.23%). The most common majors in the sample were international business,

**Table 1.** Demographic profile of the surveyed participants from Romania

Criteria	Classes	Sample distribution
Age	19-22	60.00%
	23-38	40.00%
Gender	Male	51.77%
	Female	48.23%
Study level	Undergraduate	61.77%
	Master	38.23%
Role model	With entrepreneurial exposure	45.88%
	Without entrepreneurial exposure	54.12%

Source: Authors' calculations

management, marketing, and economical informatics. Slightly more respondents stated that they have no entrepreneur in their extended family or friend circle (54.12%), while the rest of the participants (45.88%) reported having an entrepreneur as role model in their entourage.

For primary data collection, a questionnaire was specially created for this research topic. In this sense, several measurement scales (Table 2) have been borrowed from the sustainable entrepreneurship or entrepreneurial intention specific literature and adapted where necessary to the current study in order to operationalize the constructs within the research model. Consequently, the studies of Mair and Noboa (2006), Liñán and Chen (2009), Koe *et al.* (2014), and of Sher *et al.* (2020) were regarded. Similar to the original studies, he current research included multiple items for each construct, items being evaluated by respondents on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

**Table 2.** Construct operationalization, measurement scale reliability and validity

Construct	Source of	Cronbach's	Composite	Factor	AVE
	measurement	alpha	reliability	loadings	(square
	scale			(min-max)	root)
Environmental	Mair and	0.841	0.932	0.560 -	0.867
values	Noboa (2006)			0.826	
Personal attitude	Liñán and	0.864	0.945	0.720 -	0.899
	Chen (2009)			0.939	
Perceived	Liñán and	0.788	0.921	0.738 -	0.887
behavioral control	Chen (2009)			0.846	
Subjective norms	Liñán and	0.854	0.951	0.857 -	0.938
	Chen (2009)			0.904	
Perceived sustainable	Koe et al.	0.929	0.967	0.555 -	0.923
entrepreneurial	(2014)			0.958	
desire					
Perceived sustainable	Koe et al.	0.968	0.974	0.565 -	0.863
entrepreneurial	(2014)			0.825	
feasibility					
Sustainable	Sher et al.	0.919	0.966	0.655 -	0.920
entrepreneurial	(2020)			0.934	
intention					

Source: Authors' calculations

Following the suggestions of Hair *et al.* (2019) regarding the measurement scales, first the reliability of each construct was tested using Cronbach's alpha ( $\alpha$ ) and composite reliability (CR), afterwards continuing with the evaluation of validity, in its convergent and discriminant form.

For each construct, Cronbach's alpha registered high values between 0.788 and 0.968, along with composite reliability between 0.921 and 0.974, both higher than the recommended threshold value of 0.70, therefore assuring internal consistency.

Moreover, based on factor analysis, all the seven constructs integrated within the research model, included in their structure items with loading above the 0.5 threshold value, thus assuring convergent validity. Complementary, based on data from Table 2 and 3, the square root of average variance extracted (AVE) calculated for each construct (values between 0.863 and 0.938) were higher than the correlations with all the other constructs, hence discriminant validity was assured as well.

Furthermore, collected data have been statistically analyzed, considering the methodological and empirical recommendations of Hair *et al.* (2019) regarding the descriptive analysis, association analysis and hypothesis testing via regression analysis, in a step-wise manner. For all data analysis purposes IBM SPSS 22 was used.

### Research results, ascertainment and implications

Data analysis included two main parts, the first one considered an initial evaluation of the responses via descriptive and correlation statistics, while the second part focused on the evaluation of the relations within the research model.

Descriptive statistics (Table 3), in the form of mean values, in the case of all the seven variables, show high levels. The perceived behavioral control accounted for the lowest mean score of 3.595, followed by perceived sustainable entrepreneurial feasibility and sustainable entrepreneurial intentions with 3.86 and 3.88 as mean scores, and environmental values with a slightly higher mean score of 3.963. Particularly high mean scores were identified for personal attitude, subjective norms, and perceived sustainable entrepreneurial desire, all having mean values above 4 from the maximum of 5 points. Moreover, standard deviations shows limited values, between 0.612 and 0.965, therefore distribution normality is assured.

**Table 3.** Descriptive statistics and correlation matrix for the modeled constructs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mean	3.963	4.076	3.595	4.093	4.050	3.860	3.880
Standard deviation	0.612	0.872	0.747	0.735	0.843	0.777	0.965
Environmental values (1)	1						
Personal attitude (2)	0.346*	1					
Perceived behavioral	0.272	0.618**	1				
control (3)	0.272						
Subjective norms (4)	$0.288^{*}$	0.458**	0.600**	1			
Perceived sustainable		0.613** 0.759**	0.523**	0.384**	1		
entrepreneurial desire (5)	0.613** 0.759**		0.523 0.384		1		
Perceived sustainable 0.528**		0.620**	0.557**	0.221*	0.719**	1	
entrepreneurial feasibility (6)	0.526	0.628**	0.557	0.331	0./19	1	
Sustainable entrepreneurial	0.372**	0.892**	0.681**	0.410**	0.777**	0 604**	1
intentions (7)		0.092	0.001	0.419	0.777	0.004	1

Note: \* correlations significant at 0.05 level (2-tailed);

Source: Authors' calculations

The Pearson correlation type associations between the modeled variables are all positive and mainly statistically significant, except for the linkage between environmental values and perceived behavioral control (r=0.272 with p>0.05). Strong positive and significant relations were found between environmental values and perceived sustainable entrepreneurial desire (r=0.613), environmental values and perceived sustainable entrepreneurial feasibility (r=0.528), personal attitude and perceived behavioral control (r=0.618), personal attitude and perceived sustainable entrepreneurial desire (r=0.759), personal attitude and perceived sustainable entrepreneurial feasibility (r=0.628), personal attitude and sustainable entrepreneurial intentions (r=0.892), perceived behavioral control and subjective norms (r=0.600), perceived behavioral control and perceived sustainable entrepreneurial desire (r=0.523), perceived behavioral control and perceived sustainable entrepreneurial feasibility (r=0.557), perceived behavioral control and sustainable entrepreneurial intentions (r=0.681), perceived sustainable entrepreneurial desire and feasibility (r=0.719), perceived sustainable entrepreneurial desire and sustainable entrepreneurial intentions (r=0.777), respectively perceived sustainable entrepreneurial feasibility and sustainable entrepreneurial intentions (r=0.684).

<sup>\*\*</sup> correlations significant at 0.01 level (2-tailed).

**Table 4.** Results of hypotheses testing for the Romanian sample

Hypotheses	Relation	β	р	Decision
Н1а	Environmental values → Personal attitude	0.346	0.014	supported
H1b	Environmental values → Perceived	0.272	0.056	limited
	behavioral control			support
H1c	Environmental values → Subjective norms	0.288	0.043	supported
Н2а	Personal attitude → Perceived sustainable entrepreneurial desire	0.759	0.000	supported
H2b	Personal attitude → Perceived sustainable entrepreneurial feasibility	0.628	0.000	supported
НЗа	Perceived behavioral control → Perceived sustainable entrepreneurial desire	0.523	0.000	supported
H3b	Perceived behavioral control → Perceived sustainable entrepreneurial feasibility	0.557	0.000	supported
Н4а	Subjective norms → Perceived sustainable entrepreneurial desire	0.384	0.006	supported
H4b	Subjective norms → Perceived sustainable entrepreneurial feasibility	0.331	0.019	supported
Н5	Perceived sustainable entrepreneurial desire → Sustainable entrepreneurial intentions	0.777	0.000	supported
Н6	Perceived sustainable entrepreneurial feasibility → Sustainable entrepreneurial intentions	0.684	0.000	supported

Source: Authors' calculations

Considering the evaluation of the 11 relations foreseen within the research model in the form of hypothesis, mainly positive and statistically significant results (Table 4) were obtained after testing them via linear regression analysis on the sample of Romanian youth with higher education studies.

In this sense, regarding the first three hypotheses, environmental values positively and significantly influence personal attitude ( $\beta$ =0.346 with p<0.05), perceived behavioral control ( $\beta$ =0.272 with p<0.1), and subjective norms ( $\beta$ =0.288 with p<0.05) of youth with academic background. Empirical results fully support hypotheses H1a and H1c, while hypothesis H1b has limited support.

Considering the next two hypotheses, personal attitude positively and significantly influences both perceived sustainable entrepreneurial desire ( $\beta$ =0.759 with p<0.001) and perceived sustainable entrepreneurial feasibility ( $\beta$ =0.628 with p<0.001) for youth with university studies, thus results validate hypotheses H2a and H2b.

Referring to the following two hypotheses, perceived behavioral control positively and significantly influences both perceived sustainable entrepreneurial desire ( $\beta$ =0.523 with p<0.001) and perceived sustainable entrepreneurial feasibility ( $\beta$ =0.557 with p<0.001) for youth with higher education background, thus results validate hypotheses H3a and H3b.

About the subsequent two hypotheses, subjective norms positively and significantly influence both perceived sustainable entrepreneurial desire ( $\beta$ =0.384 with p<0.01) and perceived sustainable entrepreneurial feasibility ( $\beta$ =0.331 with p<0.05) for youth with academic background, thus results validate hypotheses H4a and H4b.

Finally, perceived sustainable entrepreneurial desire ( $\beta$ =0.77 with p<0.001) and perceived sustainable entrepreneurial feasibility ( $\beta$ =0.684 with p<0.001) both positively and significantly influences the sustainable entrepreneurial intentions of youth with higher education studies, thus results validate hypotheses H5 and H6.

Considering the above presented results, the present research highlight at the level of the investigated student population in Romania. that sustainable entrepreneurial intentions have as direct antecedents the desire and feasibility perceived by the respondents regarding sustainable entrepreneurship, meanwhile as indirect influencing variables the individual attitude regarding entrepreneurial behavior, subjective norms and perceived behavioral control, all these three variables being directly influenced by environmental values. The integration of the theoretical model of planned behavior in the theoretical model of entrepreneurial event and the extension of the resulting research model to the context of sustainable entrepreneurship was based on previous integration attempts of Agu et al. (2021), Alferaih (2017), Iakovleva and Kolvereid, (2009), Peng et al. 2021, Schlaegel and Koenig (2014), Tehseen and Haider (2021). The existence of direct and significant relationships between the perceived desire along with the perceived feasibility regarding the sustainable entrepreneurship and the sustainable entrepreneurial intention correspond to the results obtained by Tehseen and Haider (2021), respectively by Peng et al. (2021). Extant research mostly validated the existence of a direct relation between individual attitude regarding entrepreneurial behavior, subjective norms, perceived behavioral control and entrepreneurial intentions (Alferaih, 2017; Niţu-Antonie and Feder, 2015), respectively sustainable entrepreneurial intention (Agu et al., 2021; Peng et al., 2021). The results of the present research indicate indirect causal relationships, through

the variables related to the perceived desire and feasibility of sustainable entrepreneurship, being consistent with the model proposed by Iakovleva and Kolvereid (2009) which was not empirically validated, nor adapted for sustainable entrepreneurship. Environmental values are a direct antecedent of personal attitude towards entrepreneurship, subjective norms and perceived behavioral control, according to the empirical results obtained in previous research conducted by Peng *et al.* (2021).

The empirically validated research model is suitable for stimulating sustainable entrepreneurial intentions in the case of the investigated student population in Romania. Considering that environmental values stimulate respondents to feel attracted to the entrepreneurial behavior and to perceive that they have the necessary competencies to follow it, under a social pressure that promotes this behavior, there are created the perceptions to desire and to want to pursue a sustainable entrepreneurial career, along with the awareness that it is a feasible option, all leading to the formation of the belief that a sustainable business should be started in the future.

### Conclusions, limitations and future research directions

In the current research, the determinant factors of sustainable entrepreneurial intention were established for students from a Romanian university, attending entrepreneurship courses through the university curriculum.

The theory of planned behavior and the theory of entrepreneurial event were the theoretical framework of reference. The variables specific to these theories have been integrated and extended in order to adapt them to the context of sustainable entrepreneurship.

The conceptual research model was validated, as a result of the confirmation of all research hypotheses for the considered sample of students. Accordingly, perceived desire and feasibility for sustainable entrepreneurship were established as direct antecedents of sustainable entrepreneurial intentions, whilst personal attitude towards entrepreneurial behavior, subjective norms and perceived behavioral control were identified as antecedents of perceived desire and feasibility regarding sustainable entrepreneurship, under the condition of delimiting environmental values as antecedent for individual attitude, subjective norms, and perceived behavioral control.

The research can be useful on theoretically plain because it has identified an integrative and extended model to the context of sustainable entrepreneurship, improving the combined and complementary impact of planned behavior theory and entrepreneurial event theory, and thus established the variables that influence sustainable entrepreneurial intention in the case of youth.

The research model validated within the present empirical study proves its practical utility for the Romanian academic world, on one hand because it opens new research perspectives on sustainable entrepreneurial intentions, on the other hand because it highlights the need to adopt educational programs on entrepreneurship that promotes environmental values in order to stimulate the sustainable entrepreneurial intention of youth. The direct causal relationship between perceived feasibility and sustainable entrepreneurial intention reveals the importance government decision-makers should attach to ensure an opportune socioeconomic environment for sustainable entrepreneurship that gives young university graduates the necessary confidence to start new a new business to a greater extent, rather than becoming employees in the public or private sectors (Sharahiley, 2020).

The results obtained through the empirical research were validated for the sample of considered respondents, it would be useful an increase in the number of surveyed students in order to generalize the results. The research model could also be applied in comparative studies, by taking into account respondents from different countries, from different generations, or even based on a combination of quantitative and qualitative methodologies. Research could be extended, by including in the research model other individual and exogenous factors, with mediating or moderating role, as well as the effective entrepreneurial behavior, as a result of the implementation of sustainable entrepreneurial intentions.

### REFERENCES

Agu, A. G., Kalu, O. O., Esi-Ubani, C. O., and Agu, P. C. (2021). Drivers of sustainable entrepreneurial intentions among university students: an integrated model from a developing world context. *International Journal of Sustainability in Higher Education*, Vol. 22, No. 3, pp. 659-680.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, Vol. 50, No. 2, pp. 179-211.

- Ajzen, I. (2002). The Theory of Planned Behavior. *Organisational Behavior and Human Decision Processes*, Vol. 50, pp. 179-211.
- Alferaih, A. (2017). Weight-and meta-analysis of empirical literature on entrepreneurship: Towards a conceptualization of entrepreneurial intention and behaviour. *The International Journal of Entrepreneurship and Innovation*, Vol. 18, No. 3, pp. 195–209.
- Belz, F. M., and Binder, J. K. (2017). Sustainable entrepreneurship: A convergent process model. *Business Strategy and the Environment*, Vol. 26, No. 1, pp. 1-17.
- Corraliza, J. A., and Berenguer, J. (2000). Environmental values, beliefs, and actions: A situational approach. *Environment and behavior*, Vol. 32, No. 6, pp. 832-848.
- Feder, E.S., and Niţu-Antonie, R.D. (2017). Connecting Gender Identity, Entrepreneurial Training, Role Models and Intentions. *International Journal of Gender and Entrepreneurship*, Vol. 9, No. 1, pp. 87-108.
- Georgescu, M. A., and Herman, E. (2020). The Impact of the Family Background on Students' Entrepreneurial Intentions: An Empirical Analysis. *Sustainability*, Vol. 12, No. 11, 4775, pp. 1-18.
- Hair, J.F., Black, W.C., Babin, B.J., and Anderson, R.E. (2019), *Multivariate data analysis*, Hampshire, UK: Cengage Learning.
- Herman, E, and Ştefănescu, D. (2017). Can higher education stimulate entrepreneurial intentions among engineering and business students? *Educational Studies*, Vol. 43, No. 3, pp. 312-327.
- Iakovleva, T., and Kolvereid, L. (2009). An integrated model of entrepreneurial intentions. *International Journal of Business and Globalisation*, Vol. 3, No. 1, pp. 66-80.
- Koe, W., Omar, R. and Sa'ari, J.R. (2014). Factors influencing propensity to sustainable entrepreneurship of SMEs in Malaysia, *Procedia Social and Behavioral Sciences*, Vol. 172, pp. 570-577.
- Krueger, N. F. J. a. B., D.V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, Vol. 18, No. 3, pp. 91-104.
- Krueger, N. F., Jr., Reilly, M. D., and Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, Vol. 15, No. 5–6, pp. 411–432.
- Liñán, F. and Chen, Y. (2009), Development and Cross Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions, *Entrepreneurship Theory and Practice*, Vol. 33, No. 3, pp. 593-617.
- Mair, J., and Noboa, E. (2006). Social entrepreneurship: How intentions to create a social venture are formed. In *Social entrepreneurship* (pp. 121-135). Palgrave Macmillan, London.
- Muñoz, P., and Cohen, B. (2018). Entrepreneurial narratives in sustainable venturing: Beyond people, profit, and planet. *Journal of Small Business Management*, Vol. 56, pp. 154-176.

- Mustuc, M., Savan, E.E., and Gica, O.A., (2020), An investigation of some determinants of entrepreneurial intentions of students, *Studia UBB Negotia*, Vol. 65, Issue 4, pp. 69-90.
- Nguyen, C. (2017). Entrepreneurial intention of international business students in VietNam: a survey of the country joining the Trans-Pacific Partnership. *Journal of Innovation and Entrepreneurship*, Vol. 6, No. 7, pp. 1-13.
- Nguyen, C. (2018). A qualitative study of factors that influences entrepreneurial intentions among business students and small business owners. *Journal of Asia Entrepreneurship and Sustainability*, Vol. 14, No. 1, pp. 3-27.
- Nguyen, C. (2021). A review of literature in entrepreneurial intention Research: Global perspectives and Vietnamese perspectives. *Journal of Asia Entrepreneurship and Sustainability*, Vol. 17, No. 1, pp. 48-84.
- Niţu-Antonie, R.D., and Feder, E.S. (2013). Youths' Entrepreneurial Behaviour and Intentions. Empirical Study on Students with Entrepreneurship Education. *The Romanian Economic Journal*, Vol. XVI, No. 50, pp. 65-86.
- Niţu-Antonie, R.D., and Feder, E.S. (2015). The Role of Economic Academic Education on Entrepreneurial Behaviour. *Amfiteatru Economic*, Vol. 17, No. 38, pp. 261-276.
- Niţu-Antonie, R.D, and Feder, E.S. (2017a). Entrepreneurial intention amongst students in diverse cultural contexts. *Business Excellence and Management journal* (BEMAN), Vol. 7, No. 1, pp. 14-27.
- Niţu-Antonie, R.D., and Feder, E.S. (2017b). Exploratory Study on Student's Entrepreneurial Intentions in Developed and Emerging Countries. *Review of International Comparative Management*, Vol. 18, No. 1, pp. 31-43.
- Niţu-Antonie, R.D., Sîrghi, N., Haţegan, C.-D., Feder E. S., and Socoliuc O.R. (2014), Education-Vector of Entrepreneurship Development, *Transformation in Business and Economics*, Vol. 13(3C), No. 33(C), pp. 348-369.
- Păunescu, C., Popescu, M.C., and Duennweber, M. (2018). Factors determining desirability of entrepreneurship in Romania. *Sustainability*, Vol. 10, No. 11, 3893, pp. 1-22.
- Pejic Bach, M., Aleksic, A., and Merkac-Skok, M. (2018). Examining determinants of entrepreneurial intentions in Slovenia: Applying the theory of planned behaviour and an innovative cognitive style. *Economic research-Ekonomska istraživanja*, Vol. 31, No. 1, pp. 1453-1471.
- Peng, H., Li, B., Zhou, C., and Sadowski, B. M. (2021). How Does the Appeal of Environmental Values Influence Sustainable Entrepreneurial Intention?. *International Journal of Environmental Research and Public Health*, Vol. 18, No. 3, 1070, pp. 1-25.

- Phong, N. D., Thao, N. T. P., and Nguyen, N. P. (2020). Entrepreneurial intent of business students: Empirical evidence from a transitional economy. *Cogent Business and Management*, 7 (1), 1747962.
- Popescu, C. C., Bostan, I., Robu, I. B., and Maxim, A. (2016). An analysis of the determinants of entrepreneurial intentions among students: A romanian case study. *Sustainability*, Vol. 8, No. 8, 771, pp. 1-22.
- Schaltegger, S., and Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: categories and interactions. *Business strategy and the environment*, Vol. 20, No. 4, pp. 222-237.
- Schlaegel, C., and Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. Entrepreneurship Theory and Practice, Vol. 38, No. 2, pp. 291–332.
- Shapero, A., and Sokol, L. (1982). The social dimensions of entrepreneurship. *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.*
- Sharahiley, S. M. (2020). Examining entrepreneurial intention of the Saudi Arabia's university students: Analyzing alternative integrated research model of TPB and EEM. *Global Journal of Flexible Systems Management*, Vol. 21, No. 1, pp. 67-84.
- Shepherd, D. A., and Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking "what is to be sustained" with "what is to be developed". *Entrepreneurship theory and practice*, Vol. 35, No. 1, pp. 137-163.
- Sher A., Abbas A., Mazhar S., Azadi H., and Lin G. (2020), Fostering sustainable ventures: Drivers of sustainable start-up intentions among aspiring entrepreneurs in Pakistan. *Journal of Cleaner Production.* Vol. 262, No. 121269, pp. 1-13.
- Solesvik, M. Z., Westhead, P., Kolvereid, L., and Matlay, H. (2012). Student intentions to become self-employed: The Ukrainian context. Journal of Small Business and Enterprise Development, Vol. 19, No. 3, pp. 441–460.
- Vodă, A. I., and Florea, N. (2019). Impact of personality traits and entrepreneurship education on entrepreneurial intentions of business and engineering students. *Sustainability*, Vol. 11, No. 4, 1192, pp. 1-34.
- Yasir, N., Mahmood, N., Mehmood, H. S., Babar, M., Irfan, M., and Liren, A. (2021). Impact of environmental, social values and the consideration of future consequences for the development of a sustainable entrepreneurial intention. *Sustainability*, Vol. 13, No. 5, 2648, pp. 1-20.
- Zhang, P, Wang, D. D, and Owen, C. L. (2015). A study of entrepreneurial intention of university students. *Entrepreneurship Research Journal*, Vol. 5, No. 1, pp. 61–82.