

Article

Sustainability at Universities as a Determinant of Entrepreneurship for Sustainability

Mina Fanea-Ivanovici ¹  and Hasnan Baber ^{2,*} 

¹ Department of Economics and Economic Policies, Faculty of Theoretical and Applied Economics, Bucharest University of Economic Studies, 010374 Bucharest, Romania; mina.ivanovici@economie.ase.ro
² Endicott College of International Studies, Woosong University, Daejeon 34606, Korea
* Correspondence: h.baber@endicott.ac.kr; Tel.: +82-42-630-9117

Abstract: The aim of this study was to investigate the role of universities in promoting sustainability and sustainable development goals among Indian students as future entrepreneurs, supporting the mission of sustainability. Using PLS-SEM ($n = 422$), we checked the influence of three constructs related to the university's role, i.e., campus sustainability, environmental sustainability, and education on sustainability at the university, on attitudes towards sustainability among students, on one hand, and on the intention to start entrepreneurship for sustainability, on the other hand. We also looked into the impact of attitude towards sustainability-related entrepreneurship on the intention to start entrepreneurship for sustainability, as well as into the mediating role of attitude on the relationship between the three mentioned constructs and sustainability entrepreneurial intentions. Results suggest that campus sustainability and education on sustainability positively influence the attitude towards sustainability of the students. Additionally, campus sustainability and environmental sustainability influence students to start entrepreneurship for sustainability. Further, a positive attitude towards sustainability-related entrepreneurship impacts the sustainability entrepreneurial intentions. Attitude towards sustainability mediates the relationship of campus sustainability and environmental sustainability with the sustainability entrepreneurial intentions. The study will be helpful for the universities, students, researchers, and curriculum developers to understand the role of educational institutes and its policies towards sustainability in shaping the intentions towards sustainable entrepreneurship.

Keywords: sustainability; university; entrepreneurship; PLS-SEM; India; campus sustainability; environmental sustainability; education on sustainability; attitude



Citation: Fanea-Ivanovici, M.; Baber, H. Sustainability at Universities as a Determinant of Entrepreneurship for Sustainability. *Sustainability* **2022**, *14*, 454. <https://doi.org/10.3390/su14010454>

Academic Editors: Haywantee Ramkissoon and Felix Mavondo

Received: 9 December 2021

Accepted: 30 December 2021

Published: 1 January 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Universities have always represented the place where knowledge is disseminated and skills are acquired; therefore, they unquestionably provide education in various disciplines and areas. In so doing, they contribute to the achievement of Sustainable Development Goal (SDG) No. 4, i.e., Quality Education [1], by promoting inclusion, equity, and equal chances in higher education and lifelong learning. As society is changing, however, the role of universities is becoming more extensive and complex, exceeding their primary vocation of providing education. First of all, their focus has recently shifted from being mostly local and national, to global concerns [2]. Second of all, due to their societal impact, universities need to be a loud voice in promoting sustainable development and to play a more active role in this respect. Some universities have already taken steps in this direction and adopted sustainability reporting standards provided by the Global Reporting Initiative (GRI) in order to inform stakeholders about their sustainable development efforts [3]. Third of all, this responsibility was sanctioned by the United Nations through the Higher Education Sustainability Initiative back in 2012—‘higher education should play a key role in building a sustainable future by providing current and future decision-makers with sufficient knowledge, skills and mindsets to make informed and effective decisions to this end’ [4].

This implies a wider coverage of SDGs by universities, which goes beyond the one concerning education—the development of human capital required for the transition [5]. From this perspective, some universities have been labelled as ‘green’ due to their involvement in the achievement of other SDGs, such as affordable and clean energy (SDG No. 7), sustainable cities and communities (SDG No. 11), responsible consumption and production (SDG No. 12), climate action (SDG No. 13), and partnership for the goals (SDG No. 14) [1,6]. Inclusion and equity are, too, among the more recent goals within universities, which address SDGs such as gender equality (SDG No. 5) and reduce inequality within and among countries (SDG No. 10) [1,6,7].

It is worth mentioning that sustainability is allocated a relatively small share in entrepreneurship education, and there is still room for improving education about sustainability in higher education entrepreneurship curricula [8]. This puts even more pressure on universities, which have to concomitantly provide education for sustainability through alternative channels—campus regulations and policies, energy and resource saving programs, dissemination of relevant information, dedicated councils and bodies, fostering research on sustainability, promoting tolerance, and providing equal chances. This multiple-level intervention should be included in universities’ social responsibility framework and should instill a certain sustainability culture [9].

Students are the first category of stakeholders that are directly influenced by universities’ policies and regulations regarding sustainable development. As such, their behavior and intentions towards sustainability are a good reflection of the universities’ efforts in this realm. In this context, the present article aimed at analyzing how campus sustainability, environmental sustainability, and education on sustainability influence students’ attitude on sustainability, and further, their intention to start entrepreneurship for sustainability. This concern is particularly important in emerging economies, such as the BRICS (Brazil, Russia, India, China, and South Africa) countries, where the pressure to save energy, be environmentally friendly, and develop efficiently is all the more important, given their high economic growth rates and intensive trade [10]. Students’ pro-environmental behaviors in developed and emerging economies have been reported to be different in the current literature [11]. Theoretical and practical implications for university management and stakeholders are derived from this research.

The remainder of this article is structured as follows: Literature Review and Hypotheses Development, Materials and Methods, Results, Discussion, and Conclusions.

2. Literature Review and Hypotheses Development

2.1. Campus Sustainability

University campuses are a micro-environment that can both replicate and set examples of good practice for the macro approach. Participation and collaboration along with policies and practices for sustainability within campuses are one of the internal steps that universities have at hand to promote and achieve sustainable development goals [6]. Universities, either through their internal organization, or by providing support systems, including project implementation and dialogue, can foster entrepreneurship for sustainability [12]. Therefore, campus sustainability, which is an internal practice, is analyzed as part of universities’ efforts towards sustainability [6,13]. Investigating the influence of campus design from this perspective has not been explored sufficiently to identify its influence on sustainable entrepreneurship [12]. Some of the existing studies indicate that students’ involvement in sustainability is influenced by campus sustainability [6]. In addition, the real situations provided within the campus develop attitudes of caring for the environment in students [14]. The conclusions of a study on the factors affecting green entrepreneurship intentions state that the skills acquired on campus can represent a driver of such entrepreneurship intentions [15].

Hypothesis 1a (H1a). *Campus sustainability at the university will have a positive impact on the attitude towards sustainability related entrepreneurship.*

Hypothesis 1b (H1b). *Campus sustainability at the university will have a positive impact on the intention to start entrepreneurship for sustainability.*

2.2. Environmental Sustainability

The involvement of the entire academic community—faculty and management through environmental lectures and information, on one hand, and students through various activities, on the other hand—generates responsibility and impact in terms of sustainability [6]. Environmental sustainability is a key dimension of universities' sustainability strategy [16]. Sustainability education has been acknowledged as a factor that can promote sustainability values [17]. The development of this dimension has the capacity to influence the future launch of green ventures by students [18]. Universities that promote environmental sustainability can influence entrepreneurs towards eco-innovation [19].

Hypothesis 2a (H2a). *Environmental sustainability concern at the university will have a positive impact on the attitude towards sustainability related entrepreneurship.*

Hypothesis 2b (H2b). *Environmental sustainability concern at the university will have a positive impact on the intention to start entrepreneurship for sustainability.*

2.3. Education on Sustainability

Integrating sustainability in academic curricula is a desideratum in order to achieve sustainability literacy. The positive correlation between the intensity of environmental education in higher education and students' environmental knowledge has been tested [20]. Furthermore, a positive relationship has been found between sustainability knowledge and behavior for sustainability [11]. However, progress has been unequal across universities or countries. On one hand, students in North America and Lithuania have reported that the sustainability perspective is not much present in their introductory economic courses, irrespective of the course of study they are attending [6,21]. On the other hand, students in Israel do acknowledge the presence of knowledge on sustainability in their lectures, but they are dissatisfied with inconsistent learning outcomes [22]. Romanian Business Administration students have expectations from their universities to equip them with sustainability entrepreneurial skills and knowledge that are needed for their future entrepreneurship career by including those topics in curricula, programs, and lectures [23]. Knowledge on sustainable development is crucial for students' eco-entrepreneurial intentions, as shown by the results of studies in Asia [18,24]. Education on sustainability, with an environmental focus leads to green entrepreneurial support and behavior and to green venturing [18].

Hypothesis 3a (H3a). *Education on sustainability in the university curriculum will have a positive impact on the attitude towards sustainability-related entrepreneurship.*

Hypothesis 3b (H3b). *Education on sustainability in the university curriculum will have a positive impact on the intention to start entrepreneurship for sustainability.*

2.4. Attitude towards Sustainability

In some studies, attitude was not found to have a significant impact on behavior for sustainability [11]. However, interest shown by students was found to be positively correlated with future intentions to pursue sustainable or green entrepreneurship [12], whereas green value significantly influences intention among students for eco-entrepreneurship [24]. Similarly, students' perceptions on sustainability entrepreneurship were analyzed in Pakistani students as a factor of sustainable entrepreneurship [25]. Moreover, attitude towards sustainable entrepreneurship has been found to explain sustainability-driven entrepreneurial intentions in a study conducted on Pakistani students and in one conducted on South African students [26,27]. The same correlation was checked for agricultural entrepreneurial intentions [28]. Attitude towards sustainability among students enhances sustainability-

oriented entrepreneurial intentions, as concluded by a study conducted on European students from three countries [29]. By influencing attitudes, sustainable entrepreneurial intentions can be better promoted [30].

Hypothesis 4 (H4). *Attitude towards sustainability-related entrepreneurship will have a positive impact on the intention to start entrepreneurship for sustainability.*

Hypothesis 5a (H5a). *Attitude towards sustainability-related entrepreneurship will have a mediating role between campus sustainability and intention to start entrepreneurship for sustainability.*

Hypothesis 5b (H5b). *Attitude towards sustainability-related entrepreneurship will have a mediating role between environmental sustainability and intention to start entrepreneurship for sustainability.*

Hypothesis 5c (H5c). *Attitude towards sustainability related entrepreneurship will have a mediating role between education on sustainability and intention to start entrepreneurship for sustainability.*

3. Materials and Methods

3.1. Data Collection

The data were collected during the month of November 2021 from Indian university students. The countries of BRICS along with Indonesia, Mexico South Korea, Turkey, and Taiwan are considered representative emerging countries. These countries are considered as the backbone for the growth and sustenance of the world economy; however, sustainability-related entrepreneurship is still unexplored in these countries [31]. India is one of the leading emerging economies with the fastest growth rate before the pandemic [32]. The data were collected from 422 students from different universities across India. The data were collected through a two-stage sampling method. The universities were selected based on convenience sampling. Around 15 universities were selected based on a professional network, and all of these universities were in the northern part of India. Students were asked to fill the questionnaire through simple random sampling. Most of the students were in the age group of 20–29 (53%), followed by those less than 20 years of age, mostly undergraduates (32%), and 13% in the age group of 30–39. Respondents were mostly male (61%), and the rest were females. They were mostly single (70%), and 29% were married. Most of the respondents were pursuing a bachelor's degree (48%) followed by master's degree (25%), and 9% were doctoral students. As the population of the study was that of students, we did not expect them to have higher income—59% had INR 5 k–20 k income, which may be due to part-time jobs and/or pocket money from families. Around 5% were earning between INR 50,000–100,000 per month, which may be due to an established business or a permanent job of PhD candidates. The sample of the study belonged to different education streams—Business/Management/Commerce (38%), Science/Medical (28%), Engineering/Non-Medical (13%), and others, as shown in Table 1.

Table 1. Demographic profile.

Item	Options	Frequency	Percentage
Age	Less than 20	135	32.0
	20–29	225	53.3
	30–39	58	13.7
	40–49	4	0.9
Gender	Male	260	61.6
	Female	162	38.4
Marital Status	Single	297	70.4

Table 1. *Cont.*

Item		Options	Frequency	Percentage
		Married	122	28.9
		Divorced/Separated	2	0.5
		Other	1	0.2
Education	College Graduate/Bachelor's Degree	College Graduate/Bachelor's Degree	203	48.1
		Master's Degree	109	25.8
		Ph.D./Doctorate Degree	40	9.5
		Other	70	16.6
Income		INR 0–5000	75	17.8
		INR 5000–20,000	249	59.0
		INR 20,000–50,000	75	17.8
		INR 50,000–100,000	23	5.5
Stream	Business/Management/Commerce	Business/Management/Commerce	161	38.2
		Science/Medical	121	28.7
		Engineering/Non-Medical	57	13.5
		Arts	47	11.1
		Other	36	8.5

3.2. Measurement Model

A partial least squares (PLS) structural equation modeling (SEM) approach was used to analyze the data, using the SmartPLS 3.2 software. Partial least squares structural equation modelling (PLS-SEM) is a commonly used method for analyzing complex inter-relationships between observed and latent variables [33]. PLS-SEM is suitable for testing a research framework where it is important to predict the dependent variable and where normality of data may be an issue.

The model, as shown in Figure 1, was tested for the first time; however, the items of the constructs were adapted from previous studies. The items of the constructs of sustainability at universities' campuses were adapted from [6], attitude on sustainability from [34], and sustainable entrepreneurial intentions from [35]. The factor loadings of all items of five constructs were assessed, and the values were above the acceptable minimum value of 0.70 [36].

To examine the reliability and validity of the items in the constructs, Cronbach's alpha and composite reliability (CR) were analyzed. All values of alpha and CR were above the recommended standard value of 0.70 [36], as shown in Table 2. Therefore, the reliability of all factors was established. To assess the validity of data, this means that items assess the specific construct for which these were meant to measure. The values of AVE (Average Variance Extracted) for each construct were higher than the acceptable value of 0.50 [36].

Further, it is important to assess the divergent or discriminant validity of the items, which means that each item measures a different factor than the other items. Fornell–Larcker criteria are widely known to measure divergent validity, as shown in Table 3. The square root of all values of AVEs was greater than the correlation between constructs; hence, discriminant validity was established [37]. We also measured the HTMT ratio, which further supports divergent validity, as all values (in brackets) were less than the standard maximum level value of 0.85 [38].

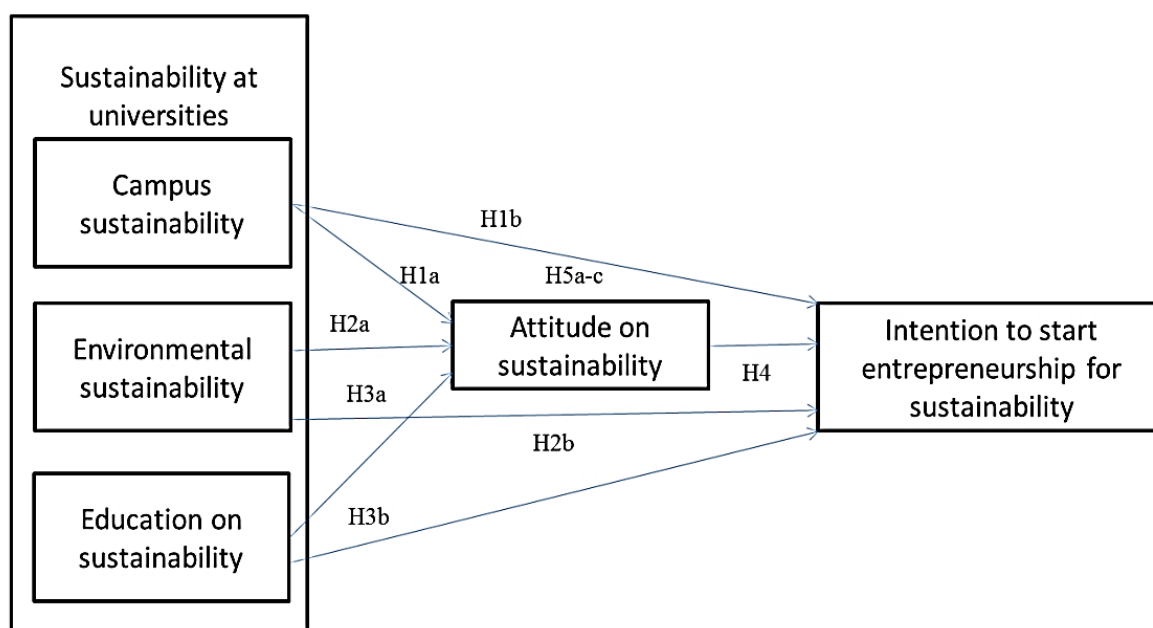


Figure 1. Research model.

Table 2. Measurements and validity.

Item Code	Item	Factor Loading *	Alpha	Composite Reliability	AVE
Campus sustainability			0.910	0.937	0.790
CAMS1	University has an active sustainability student council or organization(s).	0.908			
CAMS2	University encourages the use of electric vehicles, public transport, bikes.	0.934			
CAMS3	University encourages recycling of waste at university.	0.895			
CAMS4	University encourages no plastic policy within the campus.	0.813			
Environmental sustainability			0.944	0.959	0.855
ENVS1	The university website presents a lot of information regarding the university's position on environmental sustainability.	0.929			
ENVS2	University organizes many activities to reassure environmental sustainability.	0.938			
ENVS3	University contributes to energy and resource-saving.	0.936			
ENVS4	I receive the majority of environmental and sustainability-related information during lectures or events organized by the university.	0.897			
Education on sustainability			0.942	0.958	0.851
EDUS1	University contributes to environmental education, ecology, and environmental activities.	0.908			

Table 2. Cont.

Item Code	Item	Factor Loading *	Alpha	Composite Reliability	AVE
EDUS2	University promotes research on sustainability.	0.928			
EDUS3	University contributes to the inclusion of sustainability aspects in study programs.	0.944			
EDUS4	University contributes to social well-being, tolerance (e.g., gender, race, religious equality).	0.909			
	Attitude on sustainability		0.866	0.909	0.715
ATTS1	Participating in crowdfunding for sustainability is an affirmative behavior.	0.766			
ATTS2	Participating in crowdfunding for sustainability is a beneficial behavior.	0.885			
ATTS3	Participating in crowdfunding for sustainability is an essential behavior.	0.895			
ATTS4	Participating in crowdfunding for sustainability is a legitimate behavior.	0.829			
	Sustainable Entrepreneurial intentions		0.960	0.969	0.864
SENTI1	I am willing to do anything to become an entrepreneur supporting sustainability.	0.943			
SENTI2	I intend to set up a company supporting sustainability in the future.	0.968			
SENTI3	A career as an entrepreneur supporting sustainability is attractive for me.	0.972			
SENTI4	My career goal is to become an entrepreneur who supports sustainability.	0.945			
SENTI5	Being an entrepreneur supporting sustainability would entail great satisfaction for me.	0.808			

* All values are significant at 5%.

Table 3. Fornell–Larcker criteria and HTMT ratio for divergent validity.

Constructs	CAS	ENS	EDS	AOS	SEI
Campus sustainability (CAS)	0.889				
Environmental sustainability (ENS)	0.720 (0.777)	0.924			
Education on sustainability (EDS)	0.573 (0.615)	0.553 (0.586)	0.922		
Attitude on sustainability (AOS)	0.722 (0.804)	0.582 (0.644)	0.612 (0.675)	0.845	
Sustainable entrepreneurial intentions (SEI)	0.667 (0.710)	0.601 (0.631)	0.500 (0.524)	0.692 (0.756)	0.930

4. Results

The hypothesized relationships were measured with and without control variables. Using the PLS-SEM approach, most of the hypothesized relationships in the structural model were supported. There was evidence of the positive influence of campus sustainability on attitude towards sustainability and sustainable entrepreneurial intentions in both models. Thus, we accepted our first hypothesis, H1a and H1b. Environmental sustainability concept

or culture in university did not show any influence over the attitude towards sustainability. However, it influenced positively the sustainable entrepreneurial intentions in both models. Educating students about sustainability did positively impact their attitude towards sustainability, but it did not result in positive entrepreneurial intentions related to sustainable projects. Nonetheless, existing literature shows that entrepreneurial education positively influences entrepreneurship intentions [39]. Attitude on sustainability positively influenced sustainable entrepreneurial intentions with and without control variables. Therefore, H4 supported our proposition. The majority of path coefficients were statistically significant at 1% level, as shown in Table 4. Only two hypotheses, H2a and H3b, were not supported. In Model 2, control variables were tested with sustainable entrepreneurial intentions. Only education and income showed a positive influence on the entrepreneurial intentions related to sustainable projects. This implies that people who are highly educated and have high income tend to have high intentions to be entrepreneurs and to contribute towards sustainability. Demographic variables such as age, gender, marital status, and stream of education did not impact such intentions in students. The R^2 value of both models was greater than 0.55, which means that 55% of the variance in the entrepreneurial intentions about sustainability is explained by the endogenous and exogenous variables, as shown in Figure 2.

Table 4. Estimated path relationships.

H#	Path Relationships	Model 1 without Control Variables	Model 2 with Control Variables	Remarks
H1a	Campus sustainability → Attitude on sustainability	0.526 *** (9.986)	0.526 *** (9.725)	Supported
H1b	Campus sustainability → sustainable entrepreneurial intentions	0.224 *** (4.341)	0.216 *** (4.191)	Supported
H2a	Environmental sustainability → Attitude on sustainability	0.046 (0.881)	0.046 (0.842)	Not Supported
H2b	Environmental sustainability → sustainable entrepreneurial intentions	0.192 *** (4.058)	0.192 *** (3.909)	Supported
H3a	Education on sustainability → Attitude on sustainability	0.285 *** (6.422)	0.285 *** (6.470)	Supported
H3b	Education on sustainability → sustainable entrepreneurial intentions	0.015 (0.343)	0.018 (0.384)	Not Supported
H4	Attitude on sustainability → sustainable entrepreneurial intentions	0.409 *** (7.798)	0.413 *** (8.191)	Supported
	Age → sustainable entrepreneurial intentions		0.021 (0.492)	Not Supported
	Gender → sustainable entrepreneurial intentions		−0.021 (0.558)	Not Supported
	Education → sustainable entrepreneurial intentions		−0.087 *** (2.031)	Supported
	Income → sustainable entrepreneurial intentions		0.120 *** (2.725)	Supported
	Marital Status → sustainable entrepreneurial intentions		−0.034 (0.953)	Not Supported
	Stream → sustainable entrepreneurial intentions		0.048 (1.518)	Not Supported

Table 4. Cont.

H#	Path Relationships	Model 1 without Control Variables	Model 2 with Control Variables	Remarks
	R ²	0.556	0.568	
	Adjusted R ²	0.552	0.557	
	n	422	422	

*** statistically significant at 1%.

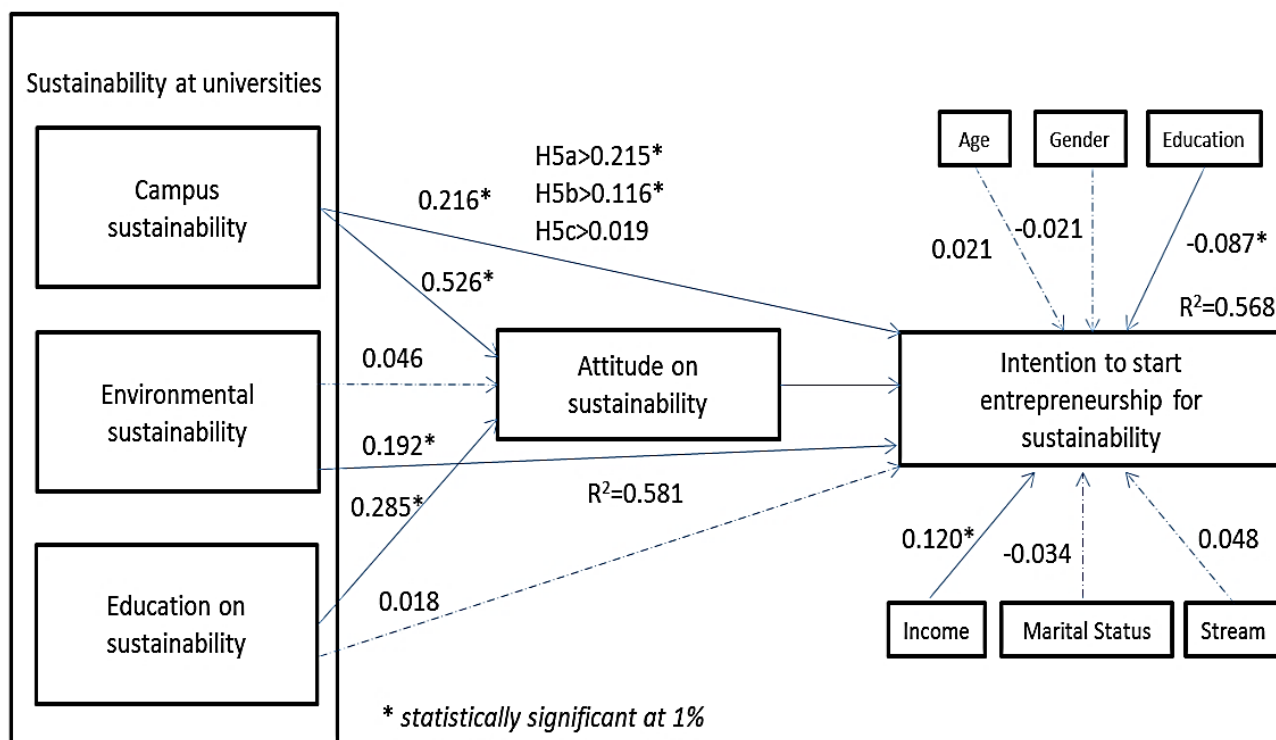


Figure 2. PLS-SEM estimated model.

The mediating role of attitude on sustainability was assessed. It was revealed that attitude on sustainability plays a significant mediating role between campus sustainability and sustainable entrepreneurial intentions and between education on sustainability and sustainable entrepreneurial intentions. Hence H5a and H5b were supported. Surprisingly, attitude towards sustainability did not offer any mediating effect between education on sustainability and intention to start entrepreneurship for sustainability. Therefore, H5c was not supported, as shown in Table 5.

As this model was tested for the first time, it was important to confirm the fitness of the structural model through various indices, e.g., adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), root mean square residuals (RMSR), root mean square error of approximation (RMSEA), normed fit index (NFI), TLI (Tucker Lewis Index), and parsimony normed fit index (PNFI) were checked. The structural model values of the goodness-of-fit revealed a good structural model fit of the data for the proposed research model in this study, as shown in Table 6.

Table 5. Mediating effects.

H#	Path Relationships	β	t-Value	p-Values
H5a	Campus sustainability → Attitude on sustainability → sustainable entrepreneurial intentions	0.215	5.771	0.000
H5b	Environmental on sustainability → Attitude on sustainability → sustainable entrepreneurial intentions	0.116	5.336	0.000
H5c	Education on sustainability → Attitude on sustainability → sustainable entrepreneurial intentions	0.019	0.870	0.385

Table 6. The goodness of fit indices.

Fit index	χ^2/df	AGFI	CFI	RMSR	RMSEA	NFI	TLI	PNFI
Recommended value [40]	<3	>0.80	>0.90	<0.10	<0.08	>0.90	>0.90	>0.60
Structural model	2.188	0.900	0.925	0.0511	0.053	0.963	0.975	0.793

5. Discussion

Higher education institutes play an important role in the adaptation of sustainable practices in society and particularly within the campus. The trend of green campuses is gaining popularity, and students have to change their behavior when they are within the campus to comply with go-green culture [18,20]. There is a hope that this behavior will be extended outside the campus to bring change in society. Sustainability practices within the campus not only will bring changes within the campus but also will result in a change in the mindset of all people associated with the institution to implement it in their outside life. Environmental sustainability in the university campus will be a prototype for the outside world, and hence will help in building a positive attitude towards much-debated sustainability in the environment, e.g., global warming. Educating students about sustainability will play a vital role in shaping their attitude and intention to do something about it at an individual level. Education on sustainability will aid the attitude about sustainability practices on the campus along with the already established green campus slogan.

Our results indicate that campus sustainability has a positive and significant impact on attitudes towards sustainability and on entrepreneurial intentions in sustainable projects. Therefore, the campus as a microenvironment prepares and shapes students' and graduates' attitudes and also influences their future intentions to get involved in such projects as entrepreneurs. In other words, campus sustainability is the strongest factor analyzed that can help achieve sustainable goals, as demonstrated by previous studies [6,12–15]. The internal organization of universities that is in charge of sustainability has to be a component in any such organization that strives for the accomplishment of sustainable development goals. It is within such frameworks that projects can be implemented and dialogue maintained, and students have the opportunity to get involved and acquire hands-on practical and management experience in sustainability issues. Skills thus acquired will be of use in future entrepreneurial careers. Therefore, we address the literature gap signaled by [12] and posit that the existence of internal councils or bodies responsible for sustainability issues in universities is a must.

The conclusion reached in this study, according to which environmental sustainability at universities has the potential to foster positive attitudes towards green entrepreneurship, has been confirmed previously [18]. In light of this finding, environmental sustainability needs to be part of the university strategy, which will in the end have a positive impact on the business environment of that society. Greening the economic activity is a necessity, especially in emerging economies such as India's [10]. Agriculture along with energy consumption is a critical determinant of CO₂ emissions in India [41], so there is need to work on environmental sustainability.

The original function of universities, which is that of education, is confirmed by the results of this research. More precisely, education on sustainability is credited with the potential to shape students' attitudes towards sustainability, which greatly contributes to their future active roles as responsible citizens. Whereas previous studies mostly connect sustainability education to entrepreneurial intentions [18,23,24] or actual behavior [11], the present paper does not validate this correlation for Indian students. However, we retain that attitudes are influenced by education, which has a much larger scope in the students' career and societal impact than the mere influence over entrepreneurial choices. Attitudes have been previously analyzed as part of students' entrepreneurial profile in the context of SDGs, and the current research extends the analysis by looking into entrepreneurship intentions for sustainability [42]. A plausible explanation for the lack of significant correlation between education and entrepreneurial intentions could be that sustainability is not yet present enough in academic curricula. In this respect, universities should make sure that enough sustainable development topics are included and tackled in economics-related courses.

Universities do not only prepare specialists. They are responsible for the creation of socially responsible people, and higher education is credited with the potential to strengthen social and economic growth [43]. The education provided will, in the end, shape positive attitudes, which further on can foster entrepreneurial intentions towards sustainability. Attitudes have the capacity to influence the role of campus sustainability and environmental sustainability onto entrepreneurial intentions, but also in a direct way.

Considering all of the above, the current research brings new insights, in that it proposes and tests a new model. Future research can replicate the present study to identify similarities and differences between the constructs both in other emerging economies and in developed countries.

6. Conclusions

The present study reveals critical aspects that universities should consider in order to address sustainable development concerns. First of all, university managers need to reorganize or redesign the campus and the practices therein so as to better respond to students' and faculty's need for socially responsible action and results. Second of all, the environmental sustainability policies within universities have to be assessed or reassessed in order to better match the larger sustainability goals, which also refer to social inclusion, equal chances, tolerance, environmentally friendly behaviors, etc. Third of all, academic curricula review, updates, and improvement have to be undertaken in view of students' claims as to the insufficient coverage of sustainability-related topics in their courses. To this end, research projects should focus on sustainable development goals to a larger extent. Fourth of all, concerted efforts should also engage the university in broader initiatives beyond the campus, so that academia becomes an active presence in sustainability-related policies and programs, so as to create sustainability-oriented innovative spin-offs and start-ups [44].

Author Contributions: Introduction, literature review, discussion, conclusion, and proofreading: M.F.-I.; conceptualization, model development, data collection, data analysis, method, and results: H.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Woosong University Academic Research in 2021.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: We would like to thank participants in this research for their support in providing the data that added to the accomplishment of this research.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. United Nations. The 17 Goals. Available online: <https://sdgs.un.org/goals> (accessed on 3 December 2021).
2. Chankseliani, M.; Qoraboyev, I.; Gimranova, D. Higher Education Contributing to Local, National, and Global Development: New Empirical and Conceptual Insights. *High. Educ.* **2020**, *81*, 109–127. [CrossRef]
3. del Mar Alonso-Almeida, M.; Marimon, F.; Casani, F.; Rodriguez-Pomeda, J. Diffusion of Sustainability Reporting in Universities: Current Situation and Future Perspectives. *J. Clean. Prod.* **2015**, *106*, 144–154. [CrossRef]
4. United Nations. Higher Education Sustainability Initiative. Available online: <https://sustainabledevelopment.un.org/sdinaction/hesi> (accessed on 4 December 2021).
5. Khalili, N.R.; Duecker, S.; Ashton, W.; Chavez, F. From Cleaner Production to Sustainable Development: The Role of Academia. *J. Clean. Prod.* **2015**, *96*, 30–43. [CrossRef]
6. Dagiliūtė, R.; Liobikienė, G.; Minelgaitė, A. Sustainability at Universities: Students' Perceptions from Green and Non-Green Universities. *J. Clean. Prod.* **2018**, *181*, 473–482. [CrossRef]
7. Groulx, M.; Nowak, N.; Levy, K.; Booth, A. Community Needs and Interests in University–Community Partnerships for Sustainable Development. *Int. J. Sustain. High. Educ.* **2020**, *22*, 274–290. [CrossRef]
8. Wyness, L.; Jones, P.; Klapper, R. Sustainability: What the Entrepreneurship Educators Think. *Educ. Train.* **2015**, *57*, 834–852. [CrossRef]
9. Adams, R.; Martin, S.; Boom, K. University Culture and Sustainability: Designing and Implementing an Enabling Framework. *J. Clean. Prod.* **2018**, *171*, 434–445. [CrossRef]
10. Ren, B.; Li, H.; Shi, J.; Liu, Y.; Qi, Y. Identifying the Key Sectors and Paths of the Embodied Energy in BRICS Nations: A Weighted Multilayer Network Approach. *Energy* **2022**, *239*, 122091. [CrossRef]
11. Vicente-Molina, M.A.; Fernández-Sáinz, A.; Izagirre-Olaizola, J. Environmental Knowledge and Other Variables Affecting Pro-Environmental Behaviour: Comparison of University Students from Emerging and Advanced Countries. *J. Clean. Prod.* **2013**, *61*, 130–138. [CrossRef]
12. Fichter, K.; Tiemann, I. Factors Influencing University Support for Sustainable Entrepreneurship: Insights from Explorative Case Studies. *J. Clean. Prod.* **2018**, *175*, 512–524. [CrossRef]
13. Brinkhurst, M.; Rose, P.; Maurice, G.; Ackerman, J.D. Achieving Campus Sustainability: Top-down, Bottom-up, or Neither? *Int. J. Sustain. High. Educ.* **2011**, *12*, 338–354. [CrossRef]
14. Zain, S.M.; Basri, N.E.A.; Mahmood, N.A.; Basri, H.; Yaacob, M.; Ahmad, M. Innovation in Sustainable Education and Entrepreneurship through the UKM Recycling Center Operations. *Int. Educ. Stud.* **2013**, *6*, 168. [CrossRef]
15. Alvarez-Risco, A.; Młodzianowska, S.; García-Ibarra, V.; Rosen, M.A.; Del-Aguila-Arcentales, S. Factors Affecting Green Entrepreneurship Intentions in Business University Students in COVID-19 Pandemic Times: Case of Ecuador. *Sustainability* **2021**, *13*, 6447. [CrossRef]
16. León-Fernández, Y.; Gomera, A.; Antúnez, M.; Martínez-Esrich, B.; Villamandos, F.; Vaquero, M. Enhancing Environmental Management in Universities through Participation: The Case of the University of Córdoba. *J. Clean. Prod.* **2018**, *172*, 4328–4337. [CrossRef]
17. Lourenço, F.; Sappleton, N.; Lei, W.S.; Cheng, R. Sustainable Development in Business Education. The Role of Entrepreneurship as Pedagogy. In *Handbook of Research on Pedagogical Innovations for Sustainable Development*; Thomas, K.D., Muga, H.E., Eds.; IGI Global: Hershey, PA, USA, 2014; pp. 116–135. [CrossRef]
18. Hameed, I.; Zaman, U.; Waris, I.; Shafique, O. A Serial-Mediation Model to Link Entrepreneurship Education and Green Entrepreneurial Behavior: Application of Resource-Based View and Flow Theory. *Int. J. Environ. Res. Public Health* **2021**, *18*, 550. [CrossRef] [PubMed]
19. Gonzalez-Moreno, A.; Saez-Martinez, F.J.; Hogan, T. The Role of University in Eco-Entrepreneurship: Evidence from The Eurobarometer Survey on Attitudes of European Entrepreneurs Towards Eco-Innovation. *Environ. Eng. Manag. J.* **2014**, *13*, 2541–2549. [CrossRef]
20. Zsóka, Á.; Szerényi, Z.M.; Széchy, A.; Kocsis, T. Greening Due to Environmental Education? Environmental Knowledge, Attitudes, Consumer Behavior and Everyday pro-Environmental Activities of Hungarian High School and University Students. *J. Clean. Prod.* **2013**, *48*, 126–138. [CrossRef]
21. Green, T.L. Teaching (Un)Sustainability? University Sustainability Commitments and Student Experiences of Introductory Economics. *Ecol. Econ.* **2013**, *94*, 135–142. [CrossRef]
22. Mintz, K.; Tal, T. Sustainability in Higher Education Courses: Multiple Learning Outcomes. *Stud. Educ. Eval.* **2014**, *41*, 113–123. [CrossRef]
23. Badulescu, D.; Bugau, C.; Badulescu, A. Sustainable Development Through Sustainable Business. An Empirical Research Among Master Students. *J. Environ. Prot. Ecol.* **2015**, *16*, 1101–1108.
24. Nuringasih, K.; Puspitowati, I. Determinants of Eco Entrepreneurial Intention Among Students: Study in the Entrepreneurial Education Practices. *Adv. Sci. Lett.* **2017**, *23*, 7281–7284. [CrossRef]
25. Soomro, B.A.; Almahdi, H.K.; Shah, N. Perceptions of Young Entrepreneurial Aspirants towards Sustainable Entrepreneurship in Pakistan. *Kybernetes* **2020**, *50*, 2134–2154. [CrossRef]
26. Sher, A.; Abbas, A.; Mazhar, S.; Azadi, H.; Lin, G. Fostering Sustainable Ventures: Drivers of Sustainable Start-up Intentions among Aspiring Entrepreneurs in Pakistan. *J. Clean. Prod.* **2020**, *262*, 121269. [CrossRef]

27. Fatoki, O. Determinants of Sustainability-Oriented Entrepreneurial Intentions of University Students. *South. Afr. Bus. Rev.* **2020**, *24*, 27. [\[CrossRef\]](#)
28. Sargani, G.R.; Zhou, D.; Raza, M.H.; Wei, Y. Sustainable Entrepreneurship in the Agriculture Sector: The Nexus of the Triple Bottom Line Measurement Approach. *Sustainability* **2020**, *12*, 3275. [\[CrossRef\]](#)
29. Vuorio, A.M.; Puumalainen, K.; Fellnhofer, K. Drivers of Entrepreneurial Intentions in Sustainable Entrepreneurship. *Int. J. Entrep. Behav. Res.* **2017**, *24*, 359–381. [\[CrossRef\]](#)
30. Yasir, N.; Mahmood, N.; Mehmood, H.S.; Rashid, O.; Liren, A. The Integrated Role of Personal Values and Theory of Planned Behavior to Form a Sustainable Entrepreneurial Intention. *Sustainability* **2021**, *13*, 9249. [\[CrossRef\]](#)
31. Borthakur, A. Policy Approaches on E-Waste in the Emerging Economies: A Review of the Existing Governance with Special Reference to India and South Africa. *J. Clean. Prod.* **2020**, *252*, 119885. [\[CrossRef\]](#)
32. Luthra, S.; Mangla, S.K. Evaluating Challenges to Industry 4.0 Initiatives for Supply Chain Sustainability in Emerging Economies. *Process. Saf. Environ.* **2018**, *117*, 168–179. [\[CrossRef\]](#)
33. Cheah, J.-H.; Roldán, J.L.; Ciavolino, E.; Ting, H.; Ramayah, T. Sampling Weight Adjustments in Partial Least Squares Structural Equation Modeling: Guidelines and Illustrations. *Total Qual. Manag. Bus.* **2020**, *32*, 1594–1613. [\[CrossRef\]](#)
34. Kim, M.J.; Hall, C.M. Do Value-Attitude-Behavior and Personality Affect Sustainability Crowdfunding Initiatives? *J. Envir. Manag.* **2021**, *280*, 111827. [\[CrossRef\]](#) [\[PubMed\]](#)
35. Fanea-Ivanovici, M.; Baber, H. Predicting Entrepreneurial and Crowdfunding Intentions—A Study of Romania and South Korea. *Amfiteatru Econ.* **2021**, *23*, 1003–1014. [\[CrossRef\]](#)
36. Hair, J.F.; Risher, J.J.; Sarstedt, M.; Ringle, C.M. When to Use and How to Report the Results of PLS-SEM. *Eur. Bus. Rev.* **2019**, *31*, 2–24. [\[CrossRef\]](#)
37. Fornell, C.; Larcker, D.F. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *J. Mark. Res.* **1981**, *18*, 39–50. [\[CrossRef\]](#)
38. Henseler, J.; Ringle, C.M.; Sarstedt, M. A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling. *J. Acad. Mark. Sci.* **2014**, *43*, 115–135. [\[CrossRef\]](#)
39. da Silva, R.J.R.; Oliveira, C.; Rodrigues, M. Entrepreneurial Intention in First-Year Higher Education Students. *Acad. Entrep. J.* **2021**, *27*, 1–20.
40. Hair, J.F.J.; Black, W.C.; Babin, B.J.; Anderson, R.E.; Tatham, R.L. *Multivariate Data Analysis*; Pearson Prentice Hall, Pearson Education: Upper Saddle River, NJ, USA, 2010.
41. Orhan, A.; Adebayo, T.S.; Genç, S.Y.; Kirikkaleli, D. Investigating the Linkage between Economic Growth and Environmental Sustainability in India: Do Agriculture and Trade Openness Matter? *Sustainability* **2021**, *13*, 4753. [\[CrossRef\]](#)
42. Castro, M.P.; Zermeno, M.G.G. Identifying Entrepreneurial Interest and Skills among University Students. *Sustainability* **2021**, *13*, 6995. [\[CrossRef\]](#)
43. Castro, M.P.; Scheede, C.R.; Zermeno, M.G.G. The Impact of Higher Education on Entrepreneurship and the Innovation Ecosystem: A Case Study in Mexico. *Sustainability* **2019**, *11*, 5597. [\[CrossRef\]](#)
44. Paniccia, P.; Baiocco, S. Co-Evolution of the University Technology Transfer: Towards a Sustainability-Oriented Industry: Evidence from Italy. *Sustainability* **2018**, *10*, 4675. [\[CrossRef\]](#)