

EXPLORING ENTREPRENEURIAL INTENTION FOR SUSTAINABLE DEVELOPMENT: A STUDY OF UNIVERSITY STUDENTS IN KOLEA, ALGERIA

Amina Meslem¹, Mehdi Bouchetara², Nadia Gahlam³, Lydia Djennadi⁴, Mounir Belali⁵

¹Higher National School of Management, Algeria, Email: aminameslem21@gmail.com, ORCID: <https://orcid.org/0009-0005-0800-5353>

²Higher National School of Management, Algeria, Email: m.bouchetara@ensmanagement.edu.dz, ORCID: <https://orcid.org/0000-0001-9826-8985>

³Higher National School of Management, Algeria, Email: nadia.gahlam@gmail.com, ORCID: <https://orcid.org/0000-0002-4588-1337>

⁴Higher National School of Management, Algeria, Email: djennadi.lydia@gmail.com, ORCID: <https://orcid.org/0000-0001-6286-3491>

⁵Higher National School of Management, Algeria, Email: m.belali@ensmanagement.edu.dz, ORCID: <https://orcid.org/0000-0002-2437-255X>

Received 3 February 2024; accepted 22 May 2024

Abstract

Research purpose: Entrepreneurship's evolving role now extends beyond economic realms to encompass broader societal and environmental imperatives. Sustainable entrepreneurship emerges as a linchpin in addressing contemporary challenges, offering innovative solutions that harmonize economic resilience with environmental and social objectives. Yet, the determinants underpinning individuals' intentions towards sustainable entrepreneurship, particularly within the Algerian context, remain underexplored. Keeping this into consideration, our research endeavours to identify the motivational factors influencing the decision to engage in sustainable entrepreneurial activities among students at the Kolea University Pole.

Design / Methodology / Approach: Drawing on a quantitative approach, data from 370 student responses were analysed using linear regression analysis.

Findings: The findings reveal the significant influence of both internal and external determinants on entrepreneurial intention for sustainable development among students. Internally, factors such as perceived entrepreneurial feasibility, perceived behavioural control, and attitudes towards sustainability emerged as key drivers of entrepreneurial intention towards sustainability. Students with a strong inclination towards sustainability exhibited a heightened intention to engage in entrepreneurial activities aligned with sustainable development goals. Externally, sociological factors and social networks were found to exert a significant positive influence on sustainable entrepreneurship intention. This underscores the importance of familial, educational, and societal support structures in fostering an entrepreneurial mindset among students, shedding light on the role of information and communication technologies in shaping this intention. Yet, the study also highlights a concerning lack of awareness among students regarding the role of entrepreneurship in addressing environmental challenges underscoring the need for educational interventions aimed at cultivating an environmental ethos among students.

Originality/Value/Practical Implications: This study contributes to the discourse on sustainable entrepreneurship in developing countries, particularly in Algeria, by elucidating the factors influencing entrepreneurial intention among students. The findings underscore the importance of both internal and external determinants in shaping students' entrepreneurial aspirations, with implications for educational policy and practice.

Keywords: sustainable entrepreneurship, entrepreneurial intention, sustainable development, motivational factors, internal factors, external factors, university students, Algeria.

JEL Codes: I23, M13, O15, Q01, Q56.

Introduction

It is increasingly apparent that the imperative for contemporary and future enterprises revolves around the principles of responsibility and sustainability. This necessitates the assimilation of environmental and societal exigencies into the identification of opportunities and the subsequent establishment of novel enterprises (Reyes-Rodríguez & Ulhøi, 2022). Within this framework, there has been a discernible interest in scrutinizing the confluence of entrepreneurship and sustainable development, thereby giving rise to the conceptualization of sustainable entrepreneurship (Romero-Colmenares & Reyes-Rodríguez, 2022).

Entrepreneurs are driven by the prospect of attaining financial gains while establishing novel enterprises or expanding operations within existing businesses. Simultaneously, they play a role in addressing social, environmental, and environmental degradation issues (Bregman, 2020; Muñoz & Cohen, 2018). The crux of any sustainable entrepreneurial undertaking lies in the prospective entrepreneur's intention, representing the probability of their commitment to sustainable entrepreneurship (Bregman, 2020). The prevailing consensus posits that sustainable entrepreneurship facilitates value creation across social, economic, and environmental domains (Tehseen & Haider, 2021; Vuorio et al., 2018). Accordingly, sustainable entrepreneurship intention pertains to the volition of individuals to establish enterprises by conscientiously incorporating social, economic, and environmental dimensions.

Sustainable entrepreneurship intention can be defined as the proclivity of individuals to participate in the systematic procedure of identifying, assessing, and capitalizing on entrepreneurial prospects aimed at diminishing the ecological footprint of businesses. Simultaneously, such endeavours are intended to yield advantages for broader societal well-being and local communities by enhancing their overall quality of life (Bapoo et al., 2022; Tehseen & Haider, 2021).

To ascertain the determinants of sustainable entrepreneurial intent, recent studies have refined and expanded models derived from entrepreneurial events theory or planned behaviour theory, employing their application within the realm of sustainable entrepreneurship (Agu et al., 2021; Peng et al., 2021; Yasir et al., 2021).

By understanding these factors, educational institutions can formulate more efficacious programs aimed at fostering the incorporation of social, economic, and environmental dimensions within the entrepreneurial initiatives of young individuals. This approach consequently facilitates the cultivation of a novel generation of entrepreneurs who exhibit an awareness of their societal and environmental responsibilities.

The comprehension of factors driving engagement in sustainable entrepreneurship, as previously discussed (Reuther et al., 2023), allows governmental decision-makers. The comprehension of sustainable entrepreneurship drivers plays a pivotal role in delineating apt incentives for fostering global sustainable development (Reuther et al., 2023). Policymakers underscore the imperative of heightened proactive measures by educational institutions in shaping the forthcoming cadre of sustainable entrepreneurs (Joensuu-Salo et al., 2022). Variables steering involvement in sustainable entrepreneurship, coupled with determinants governing sustainable business practices, namely, environmental, and social values, entrepreneurial fervour, and market-driven incentives, remain subjects of sustained scholarly interest (Reuther et al., 2023). In pursuit of these objectives, universities are deploying diverse strategies to cultivate sustainable entrepreneurial intent among students and deliver high-calibre entrepreneurship education. The overarching objective is to endow students with indispensable competencies requisite for steering sustainable entrepreneurial enterprises (Tehseen & Haider, 2021). This approach seamlessly aligns with the creation of an environment conducive to sustainable entrepreneurship, concurrently contributing to the attainment of both global and local sustainable development objectives.

In pursuit of contributing to the extant discourse concerning the determinants fostering sustainable entrepreneurship in developing nations, this article aims to delineate both internal (individual) and external (environmental) motivational factors influencing the decision to undertake sustainable development business among students at the University Pole of Kolea. Therein lies the primary inquiry

at hand guiding our investigation: What are the determinants of entrepreneurial intention for sustainable development among students at the University Pole of Kolea?

The selection of this research question arises from the paucity of extant studies delving into the determinants, both internal and external, of entrepreneurial intention aligned with sustainable development (Lopes et al., 2023; Romero-Colmenares & Reyes-Rodríguez, 2022). This lacuna is particularly conspicuous in the Algerian context, despite notable strides in entrepreneurial endeavours dedicated to the pursuit of sustainable development objectives. These endeavours encompass multifaceted initiatives targeting poverty alleviation, demographic change management, health preservation and enhancement, amelioration of human settlements, and integration into environmentally linked decision-making processes. These initiatives leverage legal and financial mechanisms, exemplified by the National Economic Social and Environmental Council (Kharkhache & Zellagui, 2021). Consequently, the investigation of these determinants within the Algerian milieu is deemed pertinent, with a concurrent aim of comparative analysis vis-à-vis antecedent research to discern potential congruities.

The insights gained from our study carry significant implications for various stakeholders ranging from educational institutions to policymakers and practitioners. Through the discernment of determinants influencing entrepreneurial intention for sustainable development among students, policymakers can devise tailored strategies to cultivate an environment conducive to sustainable entrepreneurship within academic settings (El-Gohary et al., 2023). Such initiatives are poised to cultivate a cohort of entrepreneurs characterized not only by financial acumen but also by a commitment to social and environmental responsibility, thereby advancing both local and global sustainable development objectives (Lopes et al., 2023).

The subsequent section entails a comprehensive review of extant literature concerning the determinants of entrepreneurial intention in Favor of sustainable development. Following this, the outcomes of the conducted quantitative analysis will be expounded upon, followed by an in-depth discussion of the results vis-a-vis the scrutinized literature. Ultimately, the article concludes by delineating identified limitations and proposing avenues for prospective research.

Literature Review

The literature has delved into the determinants of sustainable entrepreneurial intention akin to its scrutiny of classical entrepreneurship determinants (Romero-Colmenares & Reyes-Rodríguez, 2022). The objective of investigating the determinants of sustainable entrepreneurship is to discern entrepreneurs categorized as "sustainable" from those classified as "conventional." Thus, it is deemed valuable to delineate the attributes influencing an entrepreneur's inclination towards prioritizing the pursuit of not only economic objectives but also social and environmental goals (Gahlam, 2019).

The entrepreneurial intention for sustainable development is conceptualized as: "A cognitive state indicative of an individual's conviction and commitment to the prospective establishment of a novel commercial enterprise that generates economic, social, and environmental values" (Agu et al., 2021, p.5). The significance of delving into the study of sustainable entrepreneurial intention emanates from the differentiation between a sustainable entrepreneur and a conventional entrepreneur. Whereas a sustainable entrepreneur prioritizes environmental and social considerations, a traditional entrepreneur predominantly emphasizes economic facets (Arru, 2020).

The studies scrutinized in our investigation have categorized the determinants of entrepreneurial intention toward sustainable development into two delineated classifications: internal determinants and environmental determinants.

Internal Determinants

These determinants pertain to the attributes of the entrepreneur per se (Alfalih & Ragmoun, 2020).

Table 1 encapsulates the internal determinants derived from an analysis of the extant literature on this subject.

Table 1. Internal determinants shaping entrepreneurial intentions toward sustainable development
(Source: Authors' processing)

Determinants	Author(s)	Description
Altruism	Romero-Colmenares & Reyes-Rodríguez, (2022)	Expressed as an individual's volition to enhance welfare, demonstrated through responsibility for the natural environment and the community.
ATS	(Diepolder et al., 2021)	Relates to the manner in which a person positively or negatively perceives becoming a sustainable entrepreneur.
Sustainable entrepreneurship education		Inculcates students with competencies to assess commercial opportunities in line with environmental and societal demands, fostering sustainable enterprise creation and operational sustainability.
PDSD		Captures cognitive processes, enthusiasm, and inclination for sustainability entrepreneurship, indicating the intensity of attraction for behavioural success.
PFSD		Tan et al (2021)
PBC	Lopes et al. (2023)	In the TPB, it concerns the subjective perception of one's capability to execute entrepreneurial behaviours, encompassing perceived competence and controllability.
Proactivity	Fatoki (2020)	Reflects individual differences in the propensity for proactive initiatives across diverse activities and situations.
Risk-taking propensity		The perceived likelihood of rewards crucially influences individual engagement before facing the potential consequences of failure.
Perceived creativity	Zhu et al. (2022)	Denotes the manner in which individuals assess their aptitude for producing novel and advantageous ideas.

Notes: ATS = Attitude toward sustainability, PDSD = Perceived desirability towards sustainable development, PFSD = Perceived feasibility towards sustainable development, PBC = Perceived behavioural control.

Our review of the literature has led us to posit the initial hypothesis:

H1: Internal determinants (individual factors) exert a statistically significant positive effect on the entrepreneurial intention for sustainable development among students at the University of Kolea.

External Determinants

These determinants pertain to the entrepreneurial environment, encompassing the individual decision-making of the entrepreneur (Alfalih & Ragmoun, 2020; Gahlam, 2019). Gahlam (2019) identifies five categories of determinants associated with the environment that have the potential to influence sustainable entrepreneurship, utilizing the strategic management tool known as the PESTEL model.

Table 2. Determinants associated with the environment influencing entrepreneurial intention for sustainable development (Source: Adapted from Gahlam, 2019)

Determinants	Description
Economical	In light of sustainable development, nascent opportunities arise from market failures. These opportunities seek to address these failures by considering market determinants and the monetary/cognitive resources available to entrepreneurs as crucial resource-related factors.
Institutional	These determinants can be classified into two categories: legal (encompassing laws related to sustainable development and fiscal regulations, including fiscal incentives for sustainable development) and normative (comprising standards and certifications).
Ecological	The environmental challenges, encompassing environmental degradation.
Sociological	These determinants are associated with the diverse environments frequented by the entrepreneur (family, educational institutions, universities, societal structures, corporations, professions, territories), exerting either a positive or negative influence on the entrepreneurial act.
Technological	These determinants pertain to the effect of innovation on the establishment of sustainable enterprises.

Social Media

The advent of the fourth industrial revolution, encompassing social media, has facilitated market accessibility for entrepreneurs (Barrera-Verdugo & Villarroel-Villarroel, 2022; Kusumawardhany & Dwiarta, 2020;). Social media platforms have permeated cyberspace, constituting a robust business ecosystem and engendering substantial demand for entrepreneurs, characterized by low entry barriers (El-Gohary et al., 2023; Holden & Rada, 2011). Proficiency in basic marketing skills is requisite for website creation and online product showcasing, fostering an entrepreneurial mindset conducive to sustained entrepreneurial intent targeting a global market (Yasir et al., 2021). Commencing a business necessitates a modest budget allocation for augmenting sustainable entrepreneurial intent through the utilization of social media channels and electronic payment systems (El-Gohary et al., 2023; Martínez et al., 2017; Ooi & Nasiru, 2015). Contemporary challenges for nascent entrepreneurs transcend market expansion concerns, focusing instead on navigating competitive pressures exerted by globally recognized brands (Nawi et al., 2019). As a fledgling startup, social media platforms emerge as sophisticated instruments for brand recognition, and the burgeoning demand in the digital realm serves as a catalyst for individuals to embark on endeavours in sustainable entrepreneurship.

Each of the enumerated factors (economic, institutional, sociological, ecological, technological, and social media) constitutes potential influencers on entrepreneurial intention vis-à-vis sustainable development. These determinants wield the capacity for both positive and negative effects on an entrepreneur's proclivity to engage in sustainable entrepreneurial pursuits.

A propitious economic milieu, institutional backing, societal consciousness, ecological considerations, and the assimilation of sustainable technologies collectively serve as motivational forces propelling entrepreneurs towards active involvement in endeavours conducive to sustainable development. In essence, the intricate interplay among these factors orchestrates their combined impact on entrepreneurial intention favouring sustainable development.

Drawing upon these factors, we posit the following hypothesis:

H2: External determinants, specifically those pertaining to the student's environmental milieu, exert a statistically significant positive influence on the entrepreneurial intention for sustainable development among students within the academic domain of the University of Kolea.

Overall, we have meticulously analysed existing literature on the determinants of entrepreneurial intention towards sustainable development. We have synthesized a comprehensive understanding of the factors influencing individuals' inclinations towards sustainable entrepreneurship. As Figure 1 shows, our analysis encompasses both internal determinants, which relate to individual attributes, as well as external determinants, which encompass the broader entrepreneurial environment including economic, institutional, ecological, sociological, technological, and social media factors.

The internal determinants underscore the importance of individual characteristics and attitudes in shaping entrepreneurial intentions towards sustainability, highlighting concepts such as altruism, perceived desirability, and feasibility towards sustainable development, perceived behavioural control, proactivity, risk-taking propensity, and perceived creativity. These factors contribute to an individual's predisposition towards sustainable entrepreneurship, reflecting their personal values, beliefs, and capabilities. On the other hand, the external determinants shed light on the environmental context within which entrepreneurs operate, emphasizing the significant influence of economic conditions, institutional frameworks, ecological challenges, societal norms, technological advancements, and the impact of social media on entrepreneurial intention towards sustainability. These external factors not only shape the opportunities and constraints faced by entrepreneurs but also influence their perceptions and motivations towards engaging in sustainable entrepreneurial activities.

These insights have led us to formulate hypotheses that explore the relationship between these determinants and entrepreneurial intention among students at the University Pole of Kolea in Algeria. By elucidating these hypotheses, we aim to contribute to the advancement of knowledge in the field of sustainable entrepreneurship and provide valuable insights for both researchers and practitioners seeking to foster sustainable development through entrepreneurial endeavours.

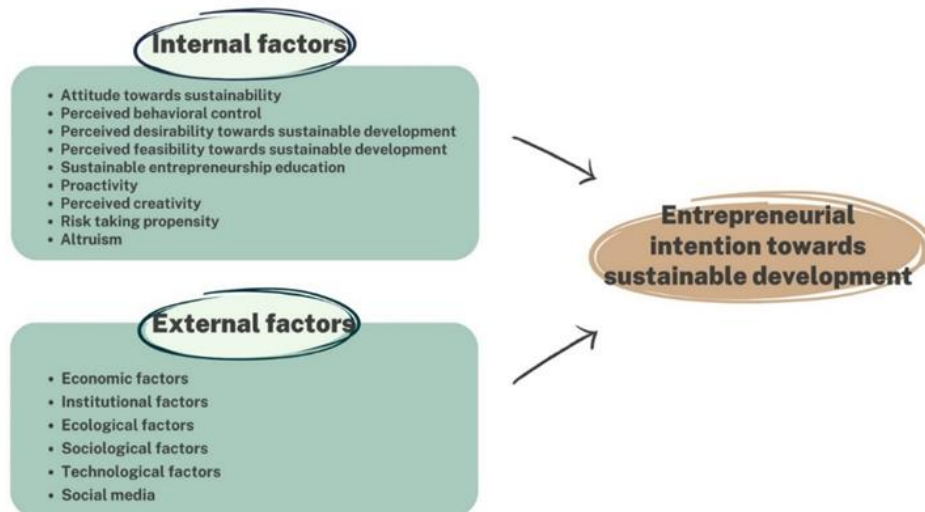


Fig 1. Proposed research model (Source: Developed by authors)

Research Methodology

Data

A survey was administered to the students across the five schools of the University Pole of Kolea through social media platforms (Facebook and Instagram) and the distribution of printed copies. A total of 370 responses were gathered. To ensure sample representativeness, the sample size was determined using Cochran's formula, yielding a sample size of 336 students. This formula is denoted as:

$$N = \frac{Z^2 \times P \times (1 - P)}{E^2} \quad (1)$$

Where:

N: represents the sample size.

Z: This symbolizes the *Z*-score, which corresponds to the level of confidence desired for the estimate. It's typically derived from the standard normal distribution and represents the number of standard deviations a data point is from the mean (for instance, $Z=1.96$ for a confidence level of 95%).

P: This stands for the estimated proportion of the population with the characteristic of interest.

E: This denotes the margin of error, indicating the maximum allowable deviation of the estimate from the true population parameter. It signifies the precision of the estimate.

The confidence interval employed in this study is set at 95%, accompanied by an approximate margin of error of 5%. The percentages were derived from calculations made through <https://fr.checkmarket.com/calculateur-taille-echantillon/>, a website highly endorsed by statisticians. The survey comprehensively investigates factors outlined in the literature review, incorporating both internal and external dimensions. Internal determinants encompass variables such as attitude towards sustainability, perceived behavioural control, perceived desirability regarding sustainable development, perceived feasibility, education in sustainable entrepreneurship, proactivity, perceived creativity, propensity for risk-taking, and altruism. External determinants include economic, institutional, ecological, sociological, technological, and social media factors.

Method

To ascertain the determinants of entrepreneurial intention toward sustainable development among university students at the Kolea University Pole, our literature review guided us to adopt a quantitative methodology. Specifically, we employed inferential analysis through linear regression to examine the relationships between variables. This method proves particularly apt for hypothesis testing and addressing the research question. The quantitative approach facilitates the collection of an extensive dataset, conducive to studying a large sample size (Meghari, 2020). Data are gathered from students via a questionnaire constructed using the Google Forms tool. In accordance with prior research, the gathered data underwent statistical processing utilizing the Excel tool, XLSTAT and the SPSS program (Statistical Package for the Social Sciences: Version 25).

Results

Descriptive Analysis

In this section, we delineate the profiles and attributes of the students who participated in our survey, thereby constituting our sample. This analysis was executed employing the SPSS software.

Table 3. Profile of respondents (Source: Authors' processing using SPSS)

Variables	Classes	Sample distribution	Percentage (%)
Gender	Female	124	33,5%
	Male	246	66,5%
Age	Less than 18	1	0,3%
	18-22	292	78,9%
	23-27	69	18,6%
	28-32	1	0,3%
	33 and above	7	1,9%
Institution	ENSM	77	20,8%
	EHEC	51	13,8%
	ESC	74	20%
	ESGEN	53	14,3%
	ENSSEA	115	31,1%
Study level	Preparatory classes	120	32,4%
	Common core	57	15,4%
	Master 1	87	23,5%
	Master 2	98	26,5%
	Doctoral candidates	8	2,2%
Entrepreneurship education	Yes	94	25,4%
	No	275	74,6%
Familiarity with the phenomenon of sustainable entrepreneurship	Yes	178	48,1%
	No	192	51,9%
Participation in projects related to sustainable entrepreneurship activities	Yes	56	15,1%
	No	314	84,9%

Table 3 points to a discernible pattern that emerges wherein females constitute two-thirds of our sampled population, while males represent merely one-third. The predominant demographic within our sample falls within the age bracket of 18 to 22 years, accounting for a substantial 78.9%, succeeded by the age group of 23 to 27 years, comprising 18.6%. In terms of academic affiliation, the preeminent majority of participants are enrolled at ENSSEA, constituting 31.1%, followed by students from ENSM and ESC, contributing proportions of 20.8% and 20%, respectively.

Upon scrutinizing the tabulated data, it becomes apparent that the prevailing majority of participants belong to preparatory classes, followed by those in Master 2, then Master 1, and ultimately individuals in the common core. Doctoral candidates represent the concluding category within the sample.

Table 4. Sustainable entrepreneurship intention (Source: Authors' processing using SPSS)

Questions	Mean	Standard Deviation	Response Pattern	Relative importance ¹
I have a strong intention to establish a sustainable enterprise	3.80	0.935	Positive (agreed)	3
I have very seriously idea about engaging in sustainable entrepreneurship	3.74	0.942	Positive (agreed)	5
Compared to having a stable job, I am more willing to start a business with sustainable innovations.	3.89	0.958	Positive (agreed)	2
It is very likely that in the foreseeable future, I will start my own sustainable entrepreneurial venture.	3.54	1.020	Positive (agreed)	6
My professional goal is to become an entrepreneur who supports sustainable business practices	3.75	0.995	Positive (agreed)	4
I will do my best to create and manage my own sustainable business	3.91	0.927	Positive (agreed)	1

Based on the mean values derived from responses to questions within this axis, all of which surpass the midpoint of the Likert scale (3), we deduce an inclination towards the affirmative, denoting agreement. Furthermore, the observed low standard deviations suggest a notable homogeneity in the responses.

Table 5. Internal determinants (Source: Authors' processing using SPSS)

Determinants	Mean	Standard Deviation	Response Pattern	Relative importance
Attitude toward sustainability	3.87	0.67	Positive (agreed)	3
Perceived behavioural control	3.32	0.82	Positive (agreed)	7
Perceived desirability towards sustainable development	3.89	0.84	Positive (agreed)	2
Perceived feasibility towards sustainable development	3.22	0.77	Positive (agreed)	8
Sustainable entrepreneurship education	3.135	0.75	Positive (agreed)	9
Proactivity	3.85	0.82	Positive (agreed)	4
Perceived creativity	3.76	0.81	Positive (agreed)	5
Risk-taken propensity	3.59	0.74	Positive (agreed)	6
Altruism	3.99	0.73	Positive (agreed)	1

Within this axis, the mean values of responses predominantly exceed the midpoint of the Likert scale (3), indicative of a prevalent positive inclination toward affirmation. Notably, the observed low standard deviations suggest a limited degree of variability among responses, reflecting a noteworthy homogeneity in participants' perspectives.

¹Ranking based on the highest mean. In the event of two equal means, priority is given to the question with the smallest standard deviation.

Table 6. External determinants (Source: Authors' processing using SPSS)

Determinants	Mean	Standard Deviation	Response Pattern	Relative importance
Economic factors (Opportunities)	2.57	0.97	Negative (disagreed)	6
Economic factors (Statements)	3.67	0.76	Positive (agreed)	3
Institutional factors	3.24	0.80	Positive (agreed)	5
Ecological factors	2.50	1.04	Negative (agreed)	7
Sociological factors	3.56	0.70	Positive (agreed)	4
Technological factors	3.81	0.77	Positive (agreed)	1
Social media	3.81	0.83	Positive (agreed)	2

The mean values of responses to Economic Factors (statements), Institutional Factors, Sociological Factors, Technological Factors, and Social media are found to surpass 3, suggesting a positive inclination in responses (toward agreement). Conversely, the mean values of responses to Economic Factors (opportunities) and Ecological Factors exhibit a negative tendency, indicative of disagreement. It is noteworthy that all standard deviation values are low, implying a homogeneity in responses, irrespective of their alignment toward agreement or disagreement.

Multidimensional Analysis

Multiple Factor Correspondence Analysis

The outcomes of Multiple Correspondence Analysis (MCA) reveal the following (Fig.2):

- Age cohorts spanning 23 to 27 years, 28 to 32 years, and surpassing 33 years are enrolled in the master's program at ENSM, with some individuals concurrently enrolled in doctoral programs. Predominantly male, these students actively engage in projects and activities associated with sustainable entrepreneurship, indicative of their substantial familiarity with this phenomenon. Their mean agreement levels concerning Sustainable Entrepreneurial Intention, as well as internal and external determinants, consistently exceed a score of 4.
- The demographic bracket encompassing those below 18 to 22 years is predominantly comprised of female students from other institutions within the Pole. Presently enrolled in preparatory and some in common core programs, this cohort exhibits minimal involvement in projects and activities related to sustainable entrepreneurship, reflecting a relative unfamiliarity with the phenomenon. Their mean agreement levels concerning internal and external determinants do not surpass a score of 4, inclusive of both agreement and strong agreement.

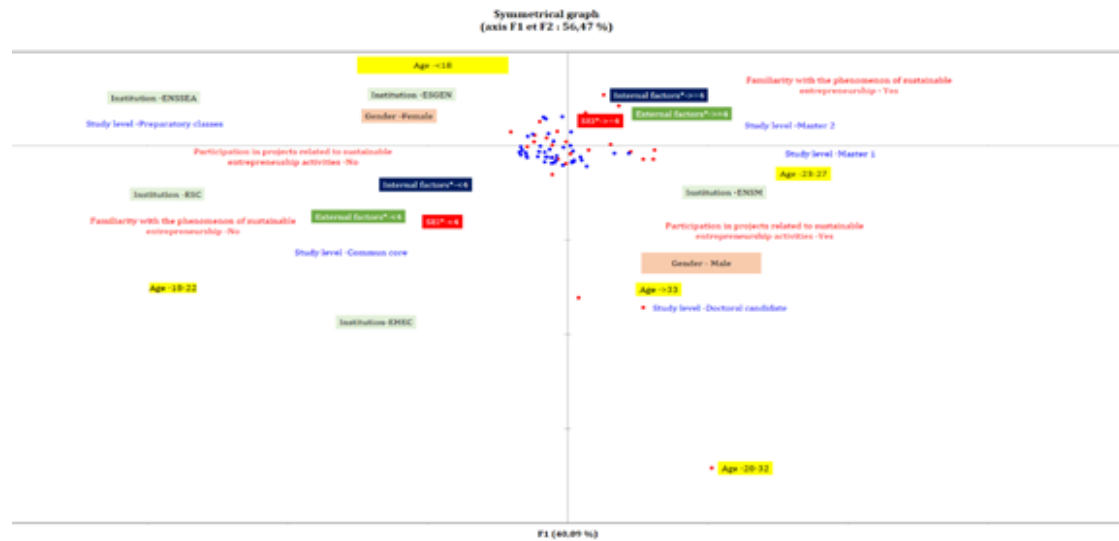


Fig 2. Results of MFA (Source: Authors' processing using XLSTAT)

Inferential Analysis

Testing the First Hypothesis

H1: Internal determinants exert a statistically significant and positive impact on the entrepreneurial intention for sustainable development among students at the University of Kolea.

Table 7. Regressions results (Source: Authors' processing using SPSS)

Dependent variable	Independent variables	ANOVA F-stat (Sig.)	R	R ²	Regression coefficient B (Sig.)	Significant
Entrepreneurial intention towards sustainable development	Attitude toward sustainability	54.54 (0.000)	0.359	0.129	2.161 (0.000)	Yes
	Perceived behavioural control	97.763 (0.000)	0.458	0.210	2.328 (0.000)	Yes
	Perceived desirability towards sustainable development	180.926 (0.000)	0,576	0,332	1,700	Yes
	Perceived feasibility towards sustainable development	70.298 (0.000)	0.400	0.160	2.474 (0.000)	Yes
	Sustainable entrepreneurship education	32.774 (0.000)	0.389	0.152	0.380 (0.000)	Yes
	Proactivity	50.951 (0.000)	0.349	0.122	0.329 (0.000)	Yes
	Perceived creativity	64.470 (0.000)	0.386	0.149	0.368 (0.000)	Yes
	Risk-taken propensity	89.597 (0.000)	0.442	0.196	0.465 (0.000)	Yes
	Altruism	28.829 (0.000)	0.270	0.073	0.287 (0.000)	Yes
	Internal Determinants(ID)	136,072	0,520	0,270	0,691	YES

Internal determinants (ID) exhibit a statistically significant and positive impact on entrepreneurial intention towards sustainable development at a 5% significance level (Sig = 0.000 < 0.05). The correlation coefficient (R = 0.520) signifies a moderate positive correlation between entrepreneurial intention towards sustainable development and ID. Moreover, the coefficient of determination (R² = 0.27) suggests that 27% of the variability in entrepreneurial intention for sustainable development can be elucidated by internal determinants, leaving the remaining 73% ascribed to other factors. The regression coefficient (B = 0.691) denotes that a unitary increase in internal determinants results in a 0.691% elevation in entrepreneurial intention towards sustainable development. These findings underscore a substantial association between internal determinants and entrepreneurial intention towards sustainable development, underscoring the pivotal role of these determinants in comprehending entrepreneurial motivations pertinent to sustainable development.

Testing the Second Hypothesis

H2: Determinants related to the environment exert a statistically significant and positive effect on the entrepreneurial intention for sustainable development among students at the University Pole of Kolea.

Table 8. Regressions results (Source: Authors' processing using SPSS)

Dependent variable	Independent variables	ANOVA F-stat (Sig.)	R	R ²	Regression coefficient B (Sig.)	Significant
Entrepreneurial intention towards sustainable development	Economic factors	9.007 (0.000)	0.262	0.069		
	EF1				0.120 (0.003)	Yes
	EF2				0.200 (0.000)	Yes
	EF3				-0.035 (0.721)	Yes
	Institutional factors	11.244 (0.000)	0.172	0.030	0.166 (0.001)	Yes
	Ecological factors	2.752 (0.000)	0.086	0.007	0.064 (0.000)	Yes
	Sociological factors	31.948 (0.000)	0.283	0.080	0.313 (0.000)	Yes
	Technological factors	36.367 (0.000)	0.300	0.090	0.030 (0.000)	Yes
	Social media	47.297 (0.000)	0.337	0.114	0.313 (0.000)	Yes
	External determinants (ED)	40.481 (0.000)	0.315	0.099	0.498 (0.000)	YES

In the context of our analysis, external determinants exhibit a statistically significant and positively oriented impact on entrepreneurial intention concerning sustainable development at a 5% significance threshold (Sig = 0.000 < 0.05). Within these external determinants, sociological factors and social networks manifest the most robust influence, delineated by a coefficient ($\beta = 0.313$), signifying a conspicuously positive sway on entrepreneurial intention towards sustainable development. Upon scrutiny of the correlation between external determinants and entrepreneurial intention for sustainable development, a correlation coefficient (R) of 0.315 is discerned, indicative of a weak yet positive correlation between these two variables. The coefficient of determination (R²) assumes a value of 0.099, intimating that merely 9.9% of the variance in entrepreneurial intention for sustainable development is explicable by the identified external determinants. The residual 99.1% of the variance is ostensibly ascribed to unaccounted factors beyond the purview of our model. Interpreting the regression coefficient (B = 0.498), an augmentation of one unit in external determinants corresponds to a concomitant increase of 0.498% in entrepreneurial intention towards sustainable development.

Discussion

Romero-Colmenares & Reyes-Rodríguez (2022) underscored the imperative for a comprehensive inquiry into entrepreneurial intention within specific entrepreneurial types. Nevertheless, despite a wealth of research on sustainable entrepreneurship (Arru, 2020), understanding regarding the determinants of entrepreneurial intention in sustainable entrepreneurship remains circumscribed (Tehseen & Haider, 2021).

Internal Factors

Concerning individual determinants (internal factors), our results evince that sustainability orientation, identified as the first determinant of entrepreneurial intention according to the Theory of Planned Behaviour, exerts a statistically significant positive impact on entrepreneurial intention for sustainable development. This signifies that heightened favourability in attitudes towards establishing an enterprise conducive to advancing societal and ecological objectives corresponds with a commensurate increase in the intention to assume the role of a sustainable entrepreneur (Lopes et al., 2023).

The outcomes of our investigation align with antecedent studies conducted by Abdelwahed (2022), Agu et al. (2021), Lopes et al. (2023), Ndofirepi (2023), Romero-Colmenares & Reyes-Rodríguez (2022), Sher et al. (2020), Yasir et al. (2022). Instances where the attitude towards sustainability lacks statistical significance are infrequent. Noteworthy exceptions were identified during the COVID-19 pandemic in Vietnam, as elucidated by Nguyen et al. (2021), and in Indonesia, as explicated by Prabowo et al. (2022). In the latter scenario, when the nexus between the attitude towards sustainability and entrepreneurial intention for sustainable development (SD) is tempered by contextual variables such as infrastructural and relational support, the impact becomes statistically significant albeit with an adverse effect. Hence, contextual factors were observed to mitigate the influence of attitudes on entrepreneurial intention for sustainable development (Lopes et al., 2023).

Perceived behavioural control, a key determinant within the framework of the Theory of Planned Behaviour, exerts a significant and positive influence on the entrepreneurial intention for sustainable development. The findings underscore that students exhibiting the highest likelihood of transitioning into sustainable entrepreneurs possess the requisite competencies and aptitudes, a trend supported by extant literature (Fatoki, 2020; Joensuu-Salo et al., 2022; Lopes et al., 2023; Romero-Colmenares & Reyes-Rodríguez, 2022; Yasir et al., 2021). Interestingly, this stands in contrast to outcomes observed in studies conducted in Liechtenstein, Austria, and Finland (Vuorio et al., 2018).

Consistent with Shapero and Sokol's (1982) Entrepreneurial Event Model, our study reveals that perceived entrepreneurial desirability and feasibility are salient determinants of entrepreneurial intention. These factors exhibit a statistically significant and positive impact on the entrepreneurial intention specifically directed towards sustainable development.

Our findings align with prior investigations involving student cohorts across diverse nations (Abdelwahed, 2022; Sher et al., 2020; Vuorio et al., 2018). Furthermore, the presence of mentors, guidance, and role models contributes to the development of perceived feasibility, instilling greater confidence in the belief that a certain potential exists, and that the implementation of entrepreneurial ideas is entirely attainable (Tan et al., 2021).

Education in sustainable entrepreneurship significantly and positively influences, according to our findings, entrepreneurial intent towards sustainable development. Broadly, our results suggest that individuals who have undergone training in sustainable entrepreneurship through pedagogically sound approaches exhibit heightened interest in establishing enterprises aligned with sustainable development goals (Diepolder et al., 2021; Foucrier & Wiek, 2019; Romero-Colmenares & Reyes-Rodríguez, 2022; Sharma et al., 2020).

These findings underscore the paramount importance of specific knowledge acquisition within academic settings, facilitated through tangible experiences and education tailored towards sustainability considerations. Furthermore, it is imperative to acknowledge the substantial influence of the institutional context, encompassing policies governing university programs, institutional culture, and strategies implemented to incentivize students towards engagement in sustainable entrepreneurial

endeavours (Agu et al., 2021; Kummitha & Kummitha, 2021; Romero-Colmenares & Reyes-Rodríguez, 2022; Sharma et al., 2020). This emphasis serves to fortify the positive impact of education aimed at cultivating an entrepreneurial mindset and sustainable ethos, thereby fostering potential entrepreneurial initiatives in response to environmental and societal imperatives (Diepolder et al., 2021; Fatoki, 2020; Kummitha & Kummitha, 2021).

Fatoki (2020) underscores the association between the proactivity trait and the implementation of anticipatory measures for environmental preservation and sustainable engagement. Our results reveal a statistically significant positive correlation between proactivity and entrepreneurial intention in sustainable development. This implies that individuals exhibiting a proactive personality are predisposed to a heightened interest in the establishment of enterprises oriented towards sustainability (Lopes et al., 2023).

Creativity is highly important in the initial phases of the entrepreneurial process, specifically in the genesis of entrepreneurial intent. This stems from the imperative for entrepreneurs to engender novel ideas and discern opportunities aligned with sustainability objectives. The study's findings elucidate that perceived creativity exerts a notably positive impact on entrepreneurial intent concerning sustainable development (SD). Furthermore, Cheng (2019) underscores that creativity serves to augment individuals' intrinsic motivation toward environmental sustainability, thereby implying an intricate association between creativity and the inclination for sustainable entrepreneurship.

The proactive personality and perceived creativity vital in entrepreneurship can indeed be cultivated, as noted by Lopes et al. (2023). Recognized as catalysts for sustainable development, innovation and creativity (Cheng, 2019) should be integrated into the educational journey of students, spanning from foundational to tertiary levels. This necessitates the inclusion of subjects like innovation, entrepreneurship, and business inception early on. Furthermore, fostering idea competitions, brainstorming sessions, and establishing university-based business incubators are recommended. Universities ought to create conducive environments that support and nurture student creativity, recognizing that perceived organizational and emotional support are pivotal in enhancing creativity levels, as evidenced by Anjum et al. (2021) and Laguía et al. (2019).

Despite Fatoki's (2020) findings indicating a lack of significant correlation between risk-taking propensity and entrepreneurial intention for sustainable development (SD) among students, and the observation of an indirect relationship between these variables, our present study reveals a statistically significant and positive influence of risk-taking propensity on entrepreneurial intention for SD. This is substantiated by the research of Hoogendoorn et al. (2019) and Lopes et al. (2023).

Altruism, characterized as a proclivity towards environmental safeguarding and an inclination towards social well-being (Rosário et al., 2022), exerts a statistically significant positive influence on entrepreneurial intention for sustainable development. Prior research has underscored its pronounced importance in sustainability, manifesting positive and statistically significant outcomes in its association with sustainable entrepreneurship (Rosário et al., 2022; Thelken & de Jong, 2020; Vuorio et al., 2018). The present survey's findings corroborate with prior evidence, affirming that this value yields an influence on entrepreneurial intention towards sustainable development. Consequently, one can deduce that the philosophy advocated by universities may contribute to such outcomes, a factor considered pivotal for furthering these intentions (Rosário et al., 2022).

Consistent with the findings of Abdelwahed (2022), Agu et al. (2021), El-Gohary et al. (2023), Joensuu-Salo et al. (2022), Lopes et al. (2023), Ndofirepi (2023), and Romero-Colmenares & Reyes-Rodríguez (2022), our results substantiate our initial hypothesis asserting that internal (individual) determinants exert a statistically significant positive influence on entrepreneurial intention for sustainable development among students at the University of Kolea.

External Factors

Regarding the second category of determinants, namely external determinants associated with the student's environment, our findings reveal a statistically significant and positively oriented general influence, at a 5% level of significance, of economic factors on the entrepreneurial intention for sustainable development.

Students discern the opportunities inherent in the market concerning sustainable development. The discernment of opportunities stemming from market inadequacies in sustainable development is inherently characterized as a 'Pull' factor within the framework of Shapero's perspective (Gahlam, 2019). Nevertheless, it is noteworthy that banking finance does not manifest as a sufficiently compelling incentive for these students to orient themselves toward sustainable entrepreneurship.

According to our empirical findings, institutional factors exhibit a statistically significant and positive influence on entrepreneurial intention towards sustainable development. More precisely, legal frameworks, regulatory standards, certifications, and fiscal incentives conducive to sustainable practices are observed to stimulate students' involvement in the establishment of sustainable enterprises (Gahlam, 2019). This observation aligns with Algeria's concerted endeavours in the realm of entrepreneurship, directed towards the pursuit of sustainable development goals (Kharkhache & Zellagui, 2021).

Paradoxically, our findings suggest that Algerian students lack a comprehensive awareness regarding the pivotal role of entrepreneurship in mitigating environmental challenges. Specifically, our results underscore that ecological factors exhibit negligible impact on entrepreneurial intention geared towards sustainable development.

Nevertheless, our findings indicate that sociological factors exert a statistically significant positive impact on entrepreneurial intention towards sustainable development among students at the campus. This suggests that engaging in sustainable entrepreneurship is positively influenced by familial, educational, societal, and territorial factors, as well as by businesses and professions (Gahlam, 2019; Meek et al., 2010).

Technological factors exhibit a statistically significant and positive impact at the 5% significance level on entrepreneurial intention for sustainable development. This observation reflects the concerted efforts of the Algerian government to enhance investments, support scientific and technological research, facilitate the transfer and adoption of technologies, and integrate scientific and technological advancements into commercial activities (Kharkhache & Zellagui, 2021).

In accordance with our findings, there exists a statistically significant and positive correlation between the utilization of social networks and entrepreneurial intent specifically geared towards sustainable development. Consequently, our recommendation advocates for heightened investments in information and communication technologies, along with the establishment of dedicated creative spaces within the precincts of business schools. Concurrently, students stand to benefit by not only acquiring augmented confidence in their technological proficiencies but also by witnessing an enhancement in their entrepreneurial skills, thereby potentially charting a trajectory towards a future career in entrepreneurship (El-Gohary et al., 2023).

Consistent with the research conducted by Alfalih and Rasmoun (2020), El-Gohary et al. (2023), Gahlam (2019), our empirical results substantiate our second hypothesis. This hypothesis posits that external determinants, those associated with the student's environment, exert a statistically significant positive influence on the entrepreneurial intention for sustainable development among students at the University Pole of Kolea.

Conclusions

This study aimed to elucidate the determinants influencing students' engagement in sustainable development initiatives at the Kolea University campus. The research hypotheses posited that both internal and external determinants significantly impact entrepreneurial intent for sustainable development among students. Through a quantitative study involving 370 students, the analysis differentiated internal factors related to individual students from external factors linked to their environment. The results confirmed that internal determinants, such as perceived entrepreneurial feasibility, perceived behavioural control, and attitude towards sustainability, exerted a substantial positive influence on the entrepreneurial intention for sustainable development among students. Additionally, external determinants, particularly sociological factors, and social networks, were empirically validated as principal contributors to this statistically significant impact on entrepreneurial

intention. However, a notable finding was the students' limited awareness of the role of entrepreneurship in addressing environmental issues, attributed to a lack of tangible engagement with environmental projects. This underscores the need for cultivating an environmental ethos among the student body. The study's uniqueness lies in the nascent state of sustainable entrepreneurship in Algeria, particularly at the Kolea University hub, comprising five institutions specializing in economics and management.

Policy Implication

The implications arising from this investigation carry significant weight for a multitude of stakeholders, encompassing governmental bodies, financial institutions, and educational establishments. The comprehension of factors influencing sustainable entrepreneurship stands as a linchpin for these entities, aiding in the cultivation of an ecosystem conducive to entrepreneurial endeavours and their enduring success. Academic institutions wield considerable influence in advancing sustainable entrepreneurship initiatives. They can spearhead the introduction of specialized curricula dedicated to sustainable entrepreneurship, orchestrate competitions geared towards fostering innovation in sustainability-centric business planning, and forge alliances with business incubators to bolster support mechanisms for nascent entrepreneurial ventures. Moreover, academic institutions hold the mandate to fortify students' resilience and risk tolerance through immersive experiential learning endeavours and structured entrepreneurship education. By orchestrating platforms for seasoned sustainable entrepreneurs to impart experiential wisdom, academia can catalyse the tacit knowledge acquisition process among students, thereby enhancing their acumen in identifying and capitalizing on entrepreneurial opportunities. Furthermore, the integration of sustainable practices within the operational frameworks of educational institutions, exemplified by the advocacy for digital learning resources over conventional materials and the implementation of eco-conscious initiatives, serves as a testament to their commitment towards instilling a culture of sustainability among the student populace. Policymakers are instrumental in sculpting the contours of sustainable entrepreneurship through the formulation of enduring policy frameworks aligned with the principles enshrined in Agenda 2030 and sustainable development goals. They hold the prerogative to incentivize sustainable entrepreneurship through a multipronged approach encompassing financial support mechanisms, institutional scaffolding, and regulatory frameworks calibrated to streamline the establishment and operational processes of sustainable ventures. Policy interventions such as debt alleviation mechanisms tailored for sustainable enterprises and tax incentives aimed at fostering a conducive business environment can serve as catalysts for stimulating entrepreneurial activity within the sustainable domain. The symbiotic collaboration between governmental bodies and academic institutions assumes paramount significance in the establishment of robust incubation ecosystems designed to nurture the next generation of innovative sustainable entrepreneurs. Additionally, cognizance of the pivotal role played by social networks, both within familial and broader societal spheres, underscores the necessity for concerted efforts aimed at imbuing aspiring sustainable entrepreneurs with values emblematic of altruism and self-efficacy, thus fostering an ecosystem conducive to the germination and sustenance of sustainable entrepreneurial endeavours. In summation, the implications delineated herein underscore the imperative for synergistic engagement among diverse stakeholders in fostering sustainable entrepreneurship, thus heralding a paradigm shift towards socioeconomic progress and environmental stewardship.

Limitations

The emergence of sustainable entrepreneurship as a phenomenon in Algeria is of recent origin, thereby resulting in a paucity of research pertaining to this subject within the Algerian context. Additionally, challenges were encountered during the data collection phase for the empirical investigation, owing to a notable reluctance among a significant proportion of students to engage with the provided questionnaires. This phase consequently proved to be temporally extensive, demanding substantial investments in both time and effort.

Recommendations for Future Studies

This study provides a comprehensive exploration of the multifaceted determinants shaping entrepreneurial inclination towards sustainable development among students within the academic setting of the University Pole of Kolea. Prospective investigations may deepen quantitative analyses by

selectively scrutinizing either internal or external factors, thereby enhancing conceptual clarity. Future inquiries could extend the examination of entrepreneurial intent towards sustainable development among students by targeting diverse academic institutions and faculties, particularly encompassing cohorts from various disciplinary backgrounds, notably the natural sciences, to facilitate subsequent comparative assessments with the findings of the present study. Such endeavours would enable the extrapolation of results and facilitate a nuanced comprehension of potential contextual disparities within educational frameworks. Moreover, employing mixed-method approaches integrating quantitative surveys and qualitative interviews would yield a more holistic understanding of the intricacies underpinning students' entrepreneurial intentions towards sustainable development.

References

- Abdelwahed, N. A. A. (2022). Developing entrepreneurial sustainability among Saudi Arabia's University students. *Sustainability*, 14(19), 19. <https://doi.org/10.3390/su141911890>
- Agu, A. G., Kalu, O. O., Esi-Ubani, C. O., & 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*, 22(3), 659-680. <https://doi.org/10.1108/IJSHE-07-2020-0277>
- Alfalih, A.A., & Ragmoun, W. (2020). Drivers of sustainable entrepreneurship orientation for students at business school in Saudi Arabia. *Journal of Entrepreneurship Education*, 23(2), 1-6.
- Anjum, T., Farrukh, M., Heidler, P., & Díaz Tautiva, J. A. (2021). Entrepreneurial intention: Creativity, entrepreneurship, and university support. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 11. <https://doi.org/10.3390/joitmc7010011>
- Arru, B. (2020). An integrative model for understanding the sustainable entrepreneurs' behavioural intentions: An empirical study of the Italian context. *Environment, Development and Sustainability*, 22(4), 3519-3576. <https://doi.org/10.1007/s10668-019-00356-x>
- Bapoo, M. A., Tehseen, S., Haider, S.A., Yusof, M., & Motaghi, H. (2022). Sustainability orientation and sustainable entrepreneurship intention: The mediating role of entrepreneurial opportunity recognition. *Academy of Entrepreneurship Journal*, 28(2), 1-23.
- Barrera-Verdugo, G., & Villarroel-Villarroel, A. (2022). Evaluating the relationship between social media use frequency and entrepreneurial perceptions and attitudes among students. *Heliyon*, 8, e09214. <https://doi.org/10.1016/j.heliyon.2022.e09214>
- Bregman, M. (2020). *Perceptual variables as drivers of sustainable entrepreneurship: A comparative Study*. Ph.D. thesis. University of Groningen.
- Cheng, V. M. Y. (2019). Developing individual creativity for environmental sustainability: Using an everyday theme in higher education. *Thinking Skills and Creativity*, 33, 100567. <https://doi.org/10.1016/j.tsc.2019.05.001>
- Diepolder, C. S., Weitzel, H., & Huwer, J. (2021). Competence frameworks of sustainable entrepreneurship: A systematic review. *Sustainability*, 13(24), 24. <https://doi.org/10.3390/su132413734>
- El-Gohary, H., Sultan, F., Alam, S., Abbas, M., & Muhammad, S. (2023). Shaping sustainable entrepreneurial intentions among business graduates in developing countries through social media adoption: A moderating-mediated mechanism in Pakistan. *Sustainability*, 15(3), 2489. <https://doi.org/10.3390/su15032489>
- Fatoki, O. (2020). Determinants of sustainability-oriented entrepreneurial intentions of university students. *Southern African Business Review*, 24. <https://doi.org/10.25159/1998-8125/7795>
- Foucrier, T., & Wiek, A. (2019). A process-oriented framework of competencies for sustainability entrepreneurship. *Sustainability*, 11(24), 24. <https://doi.org/10.3390/su11247250>
- Gahlam, N. (2019). *L'entrepreneuriat durable: Essai de modélisation d'un processus innovant*. Ph.D. thesis. Sciences de l'Homme et Société. Université de Reims Champagne Ar-denue (URCA).
- Holden, H., & Rada, R. (2011). Understanding the influence of perceived usability and technology self-efficacy on teachers' technology acceptance. *Journal of Research on Technology in Education*, 43, 343-367. <https://doi.org/10.1080/15391523.2011.10782576>
- Hoogendoorn, B., van der Zwan, P., & Thurik, R. (2019). Sustainable entrepreneurship: The role of perceived barriers and risk. *Journal of Business Ethics*, 157(4), 1133-1154. <https://doi.org/10.1007/s10551-017-3646-8>

- Joensuu-Salo, S., Viljamaa, A., & Varamäki, E. (2022). Sustainable entrepreneurs of the future: The interplay between educational context, sustainable entrepreneurship competence, and entrepreneurial intentions. *Administrative Sciences*, 12(1), 23. <https://doi.org/10.3390/admsci12010023>
- Kharkhache, S., & Zellagui, W. (2021). Entrepreneurship a pivotal mechanism for achieving sustainable development in Algeria reality and expectations. *Journal of Business Economics and Trade*, 6(1), 111-122.
- Kummitha, H. R., & Kummitha, R. K. R. (2021). Sustainable entrepreneurship training: A study of motivational factors. *The International Journal of Management Education*, 19(1), 100449. <https://doi.org/10.1016/j.ijme.2020.100449>
- Kusumawardhany, P., & Dwiarta, I. M. (2020). Entrepreneurial intention among millennial generation: Personal attitude, educational support, and social media. *Advances in Economics, Business and Management Research*, 115, 63-68.
- Laguía, A., Moriano, J. A., & Gorgievski, M. J. (2019). A psychosocial study of self-perceived creativity and entrepreneurial intentions in a sample of university students. *Thinking Skills and Creativity*, 31, 44-57. <https://doi.org/10.1016/j.tsc.2018.11.004>
- Lopes, J. M., Suchek, N., & Gomes, S. (2023). The antecedents of sustainability-oriented entrepreneurial intentions: An exploratory study of Angolan higher education students. *Journal of Cleaner Production*, 391, 136236. <https://doi.org/10.1016/j.jclepro.2023.136236>
- Martínez, K., Fernandez-Laviada, A., & Herrero-Crespo, Á. (2017). Influence of business incubators performance on entrepreneurial intentions and its antecedents during the pre-incubation stage. *Entrepreneurship Research Journal*, 8. <https://doi.org/10.1515/erj-2016-0095>
- Meek, W. R., Pacheco, D. F., & York, J. G. (2010). The impact of social norms on entrepreneurial action: Evidence from the environmental entrepreneurship context. *Journal of Business Venturing*, 25(5), 493-509. <https://doi.org/10.1016/j.jbusvent.2009.09.007>
- Meghari, R. (2020). *Les déterminants du choix d'une carrière entrepreneuriale*. Ecole des Hautes Etudes Commerciales HEC.
- Muñoz, P., & Cohen, B. (2018). Sustainable entrepreneurship research: Taking stock and looking ahead: Sustainable entrepreneurship research. *Business Strategy and the Environment*, 27(3), 300-322. <https://doi.org/10.1002/bse.2000>
- Nawi, N. C., Mamun, A. A., Nasir, N. A. M., & Muniady, R. (2019). Factors affecting the adoption of social media as a business platform: A study among student entrepreneurs in Malaysia. *Vision*, 23(1), 1-11. <https://doi.org/10.1177/0972262918821200>
- Ndofirepi, T. M. (2023). Predicting the sustainability-oriented entrepreneurship intentions of business school students: The role of individualistic values. *Social Sciences*, 12(1), 13. <https://doi.org/10.3390/socsci12010013>
- Nguyen, T. T., Phan, H. T. T., & Pham, V. T. (2021). Impact of creativity on student entrepreneurial intention. *International Journal of Innovation*, 9(3), 3. <https://doi.org/10.5585/iji.v9i3.19659>
- Ooi, Y., & Nasiru, A. (2015). Entrepreneurship education as a catalyst of business start-ups a study on Malaysian community college students. *Asian Social Science*, 11. <https://doi.org/10.5539/ass.v11n18p350>
- Peng, H., Li, B., Zhou, C., & Sadowski, B. M. (2021). How does the appeal of environmental values influence sustainable entrepreneurial intention? *International Journal of Environmental Research and Public Health*, 18(3), 1070. <https://doi.org/10.3390/ijerph18031070>
- Prabowo, H., Ikhsan, R. B., & Yuniarty, Y. (2022). Drivers of green entrepreneurial intention: Why does sustainability awareness matter among university students? *Frontiers in Psychology*, 13. <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.873140>
- Reuther, K., Dahle, Y., Schmidt, C., & Schösser, F. (2023). Motivational facets of sustainable entrepreneurship: A systematic review and future research agenda. *Sustainability*, 15(3), 2272. <https://doi.org/10.3390/su15032272>
- Reyes-Rodríguez, J. F., & Ulhøi, J. P. (2022). Justifying environmental sustainability in small- and medium-sized enterprises: An analysis of complementary assets in the printing industry. *Business Strategy and the Environment*, 31(1), 59-75. <https://doi.org/10.1002/bse.2874>
- Romero-Colmenares, L. M., & Reyes-Rodríguez, J. F. (2022). Sustainable entrepreneurial intentions: Exploration of a model based on the theory of planned behaviour among university students in North-east Colombia. *The International Journal of Management Education*, 20(2), 100627. <https://doi.org/10.1016/j.ijme.2022.100627>

- Rosário, A., Raimundo, R., & Cruz, S. (2022). Sustainable entrepreneurship: A literature review. *Sustainability*, 14(9), 5556. <https://doi.org/10.3390/su14095556>
- Shapero, A., & Sokol, L. 1982. The social dimensions of entrepreneurship. In C. Kent, D. Sexton, & K. H. Vesper (Eds.), *The Encyclopedia of Entrepreneurship*, 72-90. Englewood Cliffs, NJ: Prentice-Hall.
- Sharma, S., Goyal, D. P., & Singh, A. (2020). Systematic review on sustainable entrepreneurship education (SEE): A framework and analysis. *World Journal of Entrepreneurship, Management and Sustainable Development*, 17(3), 372-395. <https://doi.org/10.1108/WJEMSD-05-2020-0040>
- Sher, A., Abbas, A., Mazhar, S., Azadi, H., & Lin, G. (2020). Fostering sustainable ventures: Drivers of sustainable start-up intentions among aspiring entrepreneurs in Pakistan. *Journal of Cleaner Production*, 262, 121269. <https://doi.org/10.1016/j.jclepro.2020.121269>
- Tan, L. P., Pham, L. X., & Bui, T. T. (2021). Personality traits and social entrepreneurial intention: The mediating effect of perceived desirability and perceived feasibility. *The Journal of Entrepreneurship*, 30(1), 56-80. <https://doi.org/10.1177/0971355720974811>
- Tehseen, S., & Haider, S. A. (2021). Impact of universities' partnerships on students' sustainable entrepreneurship intentions: A comparative study. *Sustainability*, 13(9), 5025. <https://doi.org/10.3390/su13095025>
- Thelken, H. N., & de Jong, G. (2020). The impact of values and future orientation on intention formation within sustainable entrepreneurship. *Journal of Cleaner Production*, 266, 122052. <https://doi.org/10.1016/j.jclepro.2020.122052>
- Vuorio, A. M., Puumalainen, K., & Fellnhofer, K. (2018). Drivers of entrepreneurial intentions in sustainable entrepreneurship. *International Journal of Entrepreneurial Behavior & Research*, 24(2), 359-381. <https://doi.org/10.1108/IJEBR-03-2016-0097>
- Yasir, N., Mahmood, N., Mehmood, H. S., Babar, M., Irfan, M., & Liren, A. (2021). Impact of environmental, social values and the consideration of future consequences for the development of a sustainable entrepreneurial intention. *Sustainability*, 13(5), 2648. <https://doi.org/10.3390/su13052648>
- Yasir, N., Xie, R., & Zhang, J. (2022). The impact of personal values and attitude toward sustainable entrepreneurship on entrepreneurial intention to enhance sustainable development: Empirical evidence from Pakistan. *Sustainability*, 14(11), 6792. <https://doi.org/10.3390/su14116792>
- Zhu, R., Zhao, G., Long, Z., Huang, Y., & Huang, Z. (2022). Entrepreneurship or employment? A survey of college students' sustainable entrepreneurial intentions. *Sustainability*, 14(9), 5466. <https://doi.org/10.3390/su14095466>