THE IMPACT OF UNIVERSITY-BASED ENTREPRENEURIAL ECOSYSTEMS ON STUDENTS' ENTREPRENEURIAL INTENTIONS

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ABSTRACT

This study examines the impact of University-Based Entrepreneurial Ecosystems (UBEEs) on students' entrepreneurial intentions, emphasizing the interaction between institutional ecosystems and individual entrepreneurial traits. Utilizing data from the 2023 Global University Entrepreneurial Spirit Students' Survey (GUESSS), which includes responses from 155,792 university students across various disciplines, this research evaluates how UBEEs and students' individual traits influence their entrepreneurial intentions. The findings reveal that UBEEs significantly enhance students' entrepreneurial intentions, with business students demonstrating higher entrepreneurial propensities than their peers in other disciplines. Furthermore, while individual traits positively influence entrepreneurial intention across all fields, their effect is more pronounced among business students. Statistical analyses confirm that a supportive UBEE fosters entrepreneurial intentions by providing access to resources, mentorship, and an entrepreneurial culture. The study also highlights disparities between business schools and other disciplines in fostering entrepreneurial intentions. It validates the need for UBEEs and the development of individual traits to co-exist inclusively rather than be treated as exclusive variables. These findings contribute to ongoing discussions on the role of higher education institutions in preparing students for entrepreneurial careers and have critical implications for university administrators, policymakers, and educators aiming to cultivate entrepreneurship through curriculum development and institutional support. By integrating entrepreneurship into diverse academic fields, universities can better align with innovation-driven societal and economic needs.

Keywords: Entrepreneurial University, Entrepreneurial Ecosystem, Student, STEM, Business School, Management, Higher Education

INTRODUCTION

The role of higher education institutions (universities) has been facing unprecedented challenges in defining its purpose, role, organization, and scope in society and the economy, aiming to contribute to producing 21st-century business skills and inserting their graduates into the job market (Aver et al., 2021). This concern has been translated into a response in its conceptualization and the practice of the "entrepreneurial university" epitomized by innovation throughout its research, knowledge exchange, teaching and learning, governance, and external relations. Research on the concept of entrepreneurial universities has dedicated significant attention to understanding how academic ecosystems shape the propensity of its members to establish new ventures (Moraes et al., 2020). In practice, for example, the European Commission and the OECD have developed the "HEInnovate guiding framework" for advancing entrepreneurial universities, a policy brief based on 13th countries reviews (OECD, 2022). It is

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clear that universities need to become more entrepreneurial; Fayolle and Redford (2014) contributed to the debate on how to create more entrepreneurial universities in their handbook by explaining the subjectivities of universities to professional bureaucracies focused on core missions and values in relation to education and research. Consequently, their ability/capacity to change and adopt new behaviors seems low.

The evidence shows a paradox and tension between what universities are and what they should be to deal with the evolutionary trends and the world's complexity. Previous research has tested the impact of entrepreneurship education in universities; however, most have studied the effects of pedagogical methods delivered through entrepreneurship-related courses traditionally taught at business schools (Nabi et al., 2017) and less on the university context and individual personality traits. This opens a subsequent debate concerning the entrepreneurship support provided by the different fields of study, from business to STEM and other social science schools. Moreover, Shahzad et al. (2021) pointed out that there is a need to revamp the infrastructure of educational institutions and the university curriculum by incorporating entrepreneurship training workshops, which should be essential across all undergraduate disciplines.

Consequently, understanding the effects of the university context on its students is relevant for deans, faculty, and heads of departments of any school aiming to support their students' entrepreneurship activities in any field of study. Al-Harrasi et al. (2014), for example, found in a literature review that there are four main sets of factors impacting entrepreneurial intention: personality traits factors, contextual factors, motivational factors, and personal background factors. Therefore, this empirical study underlies two main fields of study that might impact students' entrepreneurial intention: individual traits and university-based entrepreneurial ecosystems (UBEEs). UBEE is an interconnected tool to develop students' ventures within the university framework (Shil et al., 2020). UBEEs can directly affect students' likelihood of identifying and exploiting entrepreneurial opportunities, affecting their entrepreneurial intentions (Subhadrammal et al., 2023), but we argue that the effect is also a mix of the UBEE with the individual traits.

Assessing the impact of the UBEEs on the students' experience is also relevant for university managers, considering that the Association to Advance Collegiate Schools of Business (AACSB) and the European Foundation for Management Developments (EQUIS) on the value of entrepreneurship suggest a more entrepreneurial perspective in a business school's culture and strategic processes for obtaining and sustaining a business school's reputation, and to do so they must link entrepreneurship with the school's strategy (Hazeldine & Miles, 2010). Thus, as entrepreneurship support has become one of the core criteria of the AACSB and EQUIS-accredited business schools, this study aims to analyze the contextual effect differences between UBEEs of business schools versus other schools and how this, mixed with the student's individual traits, can influence their entrepreneurial intentions.

UNIVERSITY-BASED ENTREPRENEURIAL ECOSYSTEMS (UBEES)

Universities are increasingly being pressured to perform their third mission, playing as a catalyst of technological change, innovation, and societal and economic development (Patrício & Ferreira, 2022). Policy-related discussions increasingly view universities as engines of economic growth (Hayter et al., 2018). Universities play a significant role in nurturing entrepreneurs and disseminating entrepreneurial culture while also providing diverse resources and capabilities to support entrepreneurial endeavors (Kordshouli et al., 2024). In this context, the "entrepreneurial

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universities" emerge, playing an important role in knowledge-producing and disseminating institutions; they can be defined as survivors of competitive environments with a common strategy oriented to being the best in all its activities (e.g., having sound finances, selecting good students and teachers, producing quality research) and tries to be more productive and creative in establishing links between education and research (Kirby, 2005; Guerrero & Urbano, 2012). On the other hand, borrowing from biology, the metaphor of an "entrepreneurial ecosystem" is increasingly used by scholars (Stam, 2015; Spigel, 2017; Acs et al., 2017) and practitioners (Feld, 2012; Isenberg, 2010) to understand the context in which entrepreneurship occurs in particular territories (countries, regions, cities), or this case, universities. Despite being widely explored concepts, the entrepreneurial university and entrepreneurial ecosystem are still fragmented and muddled in the literature, holding a wide margin for theorization development (Patrício & Ferreira, 2022). However, researchers highlight that the entrepreneurial university itself can form an entrepreneurial ecosystem (Miller & Acs, 2017; Wang et al., 2021).

The entrepreneurial ecosystem developed with an academic campus as a context is referred to as the "University-based Entrepreneurial Ecosystem" (UBEE) (Correia et al., 2024). For instance, the UBEE concept is relatively new and a part of the current trends in researching the determinants of support for the commercialization of research results (Kobylińska & Lavios, 2020). For Brush (2014), the concept of entrepreneurship education is a central component of the UBEEs, where there is a dynamic network interaction between actors who support entrepreneurial education. To study UBEEs, Hayter et al. (2018) found that scholars have focused mainly on individual ecosystem elements and characteristics, eschewing strategic and systemic conceptualizations of entrepreneurship ecosystems. Nevertheless, for Fetters et al. (2010), there are seven factors contributing to the evolution of UBEEs: senior leadership, strong teaching and programmatic capacity, long-term commitment, the commitment of financial resources, the commitment to continuous innovation in programs and curricula, adequate organizational infrastructure, and the commitment to increasing critical mass and creating enterprises. Graham (2014) also identifies seven factors that underpin UBEEs: institutions, culture, university leadership, university research capacity, regional or governmental support, effective institutional strategies, and strong demand for entrepreneurial students.

Moreover, Liu et al. (2021) studied UBEEs in the USA and found that the key elements consist of six units (colleges and universities, learners, educators, government, industry, and community) acting as initiators and seven factors (entrepreneurship curriculum, entrepreneurial activities and practices, organizational structure, resources, leadership vision, core faculty, and operating mechanism) acting as the intermediaries; These key elements constitute three independent functional subsystems, namely, teaching and innovation, support, and operation that the universities interconnect. However, for our study of UBEEs, we must consider that unlike clusters or innovation ecosystems, the entrepreneurial ecosystem places individual entrepreneurs, rather than firms, at the framework's core (Stam & Spigel, 2017; Wurth et al., 2022), which in university contexts mean placing the students at the core, as the institution's primary function is to educate students with the 21st century needed skills for the job market (Aver et al., 2021). Therefore, we hypothesize that:

H1 *Supportive UBEEs likely encourage entrepreneurial intentions among all types of students.*

H2 *Supportive UBEEs likely encourage entrepreneurial intentions only significantly to business students.*

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ENTREPRENEUR'S INDIVIDUAL TRAITS

A growing number of studies emphasize the impact of individual traits on entrepreneurial behavior in academic contexts (O'Shea et al., 2014). In the uncertain and competitive environment of new venture creation, many researchers hypothesized that entrepreneurs thrive on a strong sense of personal self-efficacy to execute their visions and a keen eye for innovation to identify new products and markets (Kerr et al., 2018). Self-efficacy describes a person's "belief that he/she can perform tasks and fulfill roles, and is directly related to expectations, goals and motivation" (Cassar & Friedman, 2009). Subhadrammal et al. (2023) conducted a study of UBEEs in India and found that entrepreneurial self-efficacy has a mediating effect between extracurricular support programs and the entrepreneurial intentions of engineering students.

Moreover, academics have found that entrepreneurs' subjective well-being can be improved by entrepreneurial characteristics (Hmieleski & Sheppard, 2019) and entrepreneurial context (Abreu et al., 2019; Fritsch et al., 2019; Xu et al., 2021). This highlights a potential interaction between the individual traits and the UBEEs to enhance entrepreneurial intentions. Specifically, subjective well-being refers to the degree to which people are satisfied with their lives and their jobs (Naudé et al., 2014). Scholars define it as entrepreneurs' overall assessment and subjective feelings about their quality of life, job satisfaction, and personal growth and development during the creation and operation of the business (Yang et al., 2021). For Wiklund et al., (2019), earlier measures do not capture the subjective and core general experience of well-being in entrepreneurship, but context-specific conceptualizations (e.g. in UBEEs) and measures of subjective well-being in entrepreneurship should provide a more complete estimation of the subjective rewards experienced by entrepreneurs and expand theoretical and empirical research horizons.

Another key trait for entrepreneurs is resilience; most research shows that resilience is mainly the result of individuals interacting with their environments and the processes that either promote well-being or protect them against the overwhelming influence of risk factors (Zautra et al., 2010). Resilience is also used to characterize individuals who can overcome setbacks related to their life and career aspirations (Hedner et al., 2017); it is also best understood as a process. Such processes can be individual coping strategies or may be helped by supporting families, schools, communities, and social policies that make resilience more likely to develop (Leadbeater et al., 2005). Entrepreneurial resilience can be augmented by enhancing networking and forming a professional network of coaches and mentors, accepting that change is a part of life, and avoiding seeing crises as insurmountable (Davidson, 2000). In university contexts, some of these functions aim to augment entrepreneurial resilience and are equivalent to the responsibilities of the faculty and staff. For example, professors act as educators to form professionals and as coaches and mentors of students, sometimes motivating and guiding students to pursue entrepreneurial ventures.

Therefore, we hypothesize that:

> ***H3*** *Students' individual traits related to entrepreneurial self-efficacy, subjective well-being, and resilience likely encourage entrepreneurial intentions.*

> ***H4*** *Students' individual traits related to entrepreneurial self-efficacy, subjective well-being, and resilience are only significant among business students, who are likely to have more significant entrepreneurial intentions.*

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STUDENT'S ENTREPRENEURIAL INTENTIONS

Emerging literature examines students' entrepreneurial intentions as they are encouraged in business schools at universities, which aligns with research on entrepreneurs' individual characteristics (O'Shea et al., 2014). In addition, Souitaris et al. (2007) suggested that entrepreneurial education programs augment entrepreneurial intentions and increase the chances of students attempting an entrepreneurial career at some point in their lives. Moreover, entrepreneurial education is crucial in mediating relationships and motivating students to choose entrepreneurship as a future occupation (Mujtaba et al., 2025). Therefore, studying UBEE cannot be separated from the effects of entrepreneurship education, as it is central to explaining the interactions within the ecosystem (Brush, 2014). Furthermore, Maheshwari et al. (2023) conducted a systematic literature review from 2005 to 2022 and identified seven main themes (factors) (cognitive, personality, environmental, social, educational, contextual, and demographic) of entrepreneurial intention determinants. Cognitive and personality factors, such as self-efficacy, individual attitudes, desire for achievement, and behavioral control, significantly influence students' intentions toward entrepreneurship (Nasip et al., 2017; Shah & Soomro, 2017; Biswas & Verma, 2021). Environmental, educational, and contextual factors, which are part of the UBEEs, influence students' entrepreneurial intentions (Subhadrammal et al., 2023). Therefore, we formulate this hypothesis:

> ***H5*** *Students' entrepreneurial intentions are significantly encouraged when UBEEs and individual traits are both significant.*

METHODOLOGY

The study pursued a quantitative research design. It relies on the Global University Entrepreneurial Spirit Students' Survey (GUESSS) 2023 dataset to empirically test the importance of individual traits, the moderating impact of the UBEE, and the benefits of studying business degrees versus other fields of study to produce entrepreneurial intentions. In two to three-year intervals, GUESSS has been gathering entrepreneurship-related data with its validated instrument since 2003 and has grown into one of the largest entrepreneurship research consortia with a multitude of national data collection teams (cf., www.guesssurvey.org). In April 2023, the latest global dataset with 224,000 surveys from 57 countries was released privately to involved researchers only. National research teams administer the survey across institutions, the participation is voluntary, and the design follows a convenience sampling of students. In the 2023 dataset, 18.7% of students study business, 16.5% in engineering, 11.9% in social sciences, 10.9% in human medicine or health sciences, 7.6% in IT or computer sciences, 6.1% in economics, 5.7% in law, 5% natural sciences, and other fields are represented with smaller groups. 41.6% are male, 57.5% female, and 0.9% identify differently. 76.7% study at the undergraduate level. Graduate students account for 14%. 3.5% pursue a PhD, and the remaining study participants are involved in other programs.

Measurements

As for the operationalization of the variables, we repeatedly relied on forming indices, which allowed for a less pseudo-metric nature of the variable and an acknowledgment of the constructs' multidimensionality. For the dependent variable in the form of *entrepreneurial intentions*, Liñán & Chen (2009) suggested six indicators, leading to items included in the GUESSS survey that ought to be evaluated on a 7-point Likert scale ranging from "strongly

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disagree" to "strongly agree": "I am ready to do anything to be an entrepreneur", "My professional goal is to become an entrepreneur", "I will make every effort to start and run my own business", "I am determined to create a business in the future", "I have very seriously thought of starting a business", and "I have the strong intention to start a business someday". Indexing foresaw a mere addition of answers with each item carrying the same weight with a subsequent standardization to see the variable cover the 1-37 range.

A similar approach was applied to the *individual traits* as independent variables. The index first relied on Diener et al.'s (1985) five dimensions of subjective well-being and included items to be evaluated on the same Likert scale: "In most ways, my life is close to my ideal", "The conditions of my life are excellent", "I am satisfied with my life", "So far, I have gotten the important things I want in life", and "If I could live my life over, I would change almost nothing". In addition, four items based on entrepreneurial self-efficacy as suggested by Zhao et al. (2005) were included: "I am convinced that I can successfully discover new business opportunities", "I am convinced that I can successfully create new products", "I am convinced that I can think creatively", and "I am convinced that I can successfully commercialize ideas". In addition, Sinclair and Wallston (2004) were the inspiration and foundation for four resilience-related items: "I believe I can grow in positive ways by dealing with difficult situations", "I actively look for ways to replace the losses I encounter in life", "Regardless of what happens to me, I believe I can control my reaction to it", and "I look for creative ways to alter difficult situations". Together, these items formed a three-partite index of individual traits. In order to allocate the same weight to well-being, self-efficacy, and resilience in the entrepreneurial trait index, the number of items was weighted so that each of them contributed 33% of the final index, though the number of sub-items diverged slightly.

The first part of the variable *UBEE* has been operationalized by connecting insights from Franke and Luethje (2004) on the university environment, education and training as suggested by Wang et al. (2002). The authors contributed survey items for evaluation on a 7-point Likert scale: "The atmosphere at my university inspires me to develop ideas for new businesses", "There is a favorable climate for becoming an entrepreneur at my university", "My university encourages students to engage in entrepreneurial activities", and "At my university, students can get entrepreneurship-related advice and guidance easily". In addition, six additional items were added, with Souitaris et al. (2007) providing the foundation for the first four on program learning and Davidsson et al. (2020) adding two more survey items on external enabler mechanisms: "The courses and events I attended increased my understanding of the attitudes, values, and motivations of entrepreneurs", "The courses and events I attended increased my understanding of the actions someone has to take to start a business", "The courses and events I attended enhanced my practical management skills to start a business", "The courses and events I attended enhanced my ability to develop networks", "The courses and events I attended encouraged me to identify business opportunities closely aligned with my own knowledge and interests", and "The courses and events I attended… - encouraged me to identify business opportunities closely aligned with current trends, shocks, breakthroughs, or other changes in the business environment". The addition of individual Likert-scale scores and subsequent standardization led to an index score per student represented in the dataset. Each of the index items carried the same weight and the index ranged from 1 to 64.

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RESULTS AND DISCUSSION

Multivariate and linear regression analyses confirmed (H5) a statistically significant impact of individual traits and UBEE on entrepreneurial intentions. Table 1 summarizes descriptive statistics for the three main variables in index form. Table 1 indicates that UBEE is slightly left-skewed, indicating a few smaller values and a platykurtic shape of the value distribution, indicating a flatter distribution compared to a normal distribution. In turn, the second index on individual traits is equally somewhat left-sewed, indicating lower values, and leptokurtic, indicating a more peaked distribution. The third index for entrepreneurial intention is slightly right-skewed, indicating a few larger values, and platykurtic, indicating a flatter distribution. Table 2 provides the correlation matrix for the three main variables in index form.

Table 1
DESCRIPTIVE STATISTICS FOR THE THREE INDICES

	Minimum	**Maximum**	**Mean**	**STD Deviation**	**Skewness**		**Kurtosis**	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Index1 UBEE	1.00	61.00	32.4397	15.44326	-0.119	0.006	-0.768	0.013
Index2 Individual traits	1.00	19.00	12.5495	3.16018	-0.415	0.006	0.261	0.012
Index3 Entrepreneurial intentions	1.00	37.00	17.2868	11.09824	0.123	0.006	-1.149	0.012

Table 2
CORRELATION MATRIX FOR THE THREE INDICES BASED ON THE PEARSON COEFFICIENTS

	Index1_UBEE	**Index2_Individual traits**	**Index3_Entrepreneurial_intentions**
Index1 UBEE	1		
Index of individual traits	.507**	1	.390**
Overall entrepreneurial intentions	.404**	** .390	1

Adding UBEE to the conceptual and statistical analysis improves variance explanation in the rather large dataset. The fitted regression model was: Index3_Entrepreneurial_intentions = -0.214 + 0.198*Index1_UBEE + 0.884*Index2_Individual_traits. The overall regression with both indices on individual traits as well as UBEE as independent variables was statistically significant, with its R^2 = .210, F (2, 149338) = 19876.32, and p<.001. It was found that Index1_UBEE and Index2_Individual_traits significantly predicted Index3_Entrepreneurial_intentions with Index1_UBEE's β = 0.276, p = 0.000 and Index2_Individual_traits's β = 0.251, p = 0.000. Simultaneously, considering individual traits and UBEE explains entrepreneurial intentions better than merely relying on one of these independent variables (see Table 3 for model details).

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Table 3
RESULTS OF THE LINEAR REGRESSION MODEL

Coefficients	**Index3_Entrepreneurial_intentions**		
	Beta	t	Sig.
Index1_UBEE	0.251	94.258	0
Index2_Individual_traits	0.277	103.736	0
R square .210, Adj. R square .210, Std. error 9.85461 df 2, 149338, F = 19876.323, Sig. <.001			

We equally tested with an independent sample, a t-test, to determine whether it is advantageous to study business versus other fields. Several insights emerged (see Table 4 for the full results). First, as for Index1_UBEE scores, group means juxtaposing business students versus others revealed that the former enjoy a more favorable ecosystem regarding entrepreneurship. Business students also score higher – on average – on the Index2_Individual_traits. Finally, business students also portray higher scores on the Index3_Entrepreneurial_intentions. This has repercussions, as discussed in the following section. In summary, for both business and non-business students, the UBEE, individual traits, and entrepreneurial intentions were significant for both groups, but higher scores were observed from business schools naturally. Consequently, H1 and H3 were not rejected, and H2 and H4 were rejected. These results challenge the role of higher education institutions and, more importantly, their management toward becoming entrepreneurial universities that truly support their students across business and non-business disciplines.

Table 4
RESULTS ON COMPARING BUSINESS STUDENTS TO NON-BUSINESS

Descriptive statistics

Variables/indices	**Study field**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Indexl UBEE -	Business	25771	39.4044	13.46092	0.08385
	Non-busines	123531	30.9859	15.43377	0.04391
lndex2 Individual	Business	26517	13.103	3.03786	0.01866
	Non-busines	129230	12.436	3.17254	0.00883
	Business	26517	20.8617	10.80333	0.06634

Independent Samples Test for lndexl UBEE

	Levene's Test for Equality of		t-test for Equality of Means							
Index3 Entreprene	F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence	
					One-Sided p	Two-Sided p			Lower	Upper
Equal variances assumed	1041.387	0	81.347	149300	0	0	8.41846	0.10349	8.21563	8.6213
Equal variances not assumed			88.94	41196.825	0	0	8.41846	0.09465	8.23294	8.60399
	Non-busines		129230		16.5521		11.01508		0.03064	

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Independent Samples Test for lndex2 Individual traits										
	Levene's Test for Equality of		t-test for Equality of Means							
	F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence	
					One-Sided p	Two-Sided p			Lower	Upper
Equal variances assumed	88.462	0	31.407	155745	0	0	0.66697	0.02124	0.62534	0.70859
Equal variances not assumed			32.318	39308.046	0	0	0.66697	0.02064	0.62652	0.70742
Independent Samples Test for lndex2 Individual traits										
	Levene's Test for Equality of		t-test for Equality of Means							
	F	Sig.	t	df	Significance		Mean Difference	Std. Error Differenc	95% Confidence	
					One-Sided p	Two-Sided p			Lower	Upper
Equal variances assumed	88.462	0	31.407	155745	0	0	0.66697	0.02124	0.62534	0.70859
Equal variances not assumed			32.318	39308.046	0	0	0.66697	0.02064	0.62652	0.70742
assumed										
Independent Samples Test for lndex3 Entrepreneurial intentions										
	Levene's Test for Equality of		t-test for Equality of Means							
	F	Sig.	t	df	Significance		Mean Difference	Std. Error Differenc e	95% Confidence	
					One-Sided p	Two-Sided p			Lower	Upper
Equal variances assumed	64.885	0	58.223	155745	0	0	4.30956	0.07402	4.16449	4.45464
Equal variances not assumed			58.973	38673.999	0	0	4.30956	0.07308	4.16633	4.4528

IMPLICATIONS AND LIMITATIONS

This study offers one of the first in-depth analyses of this substantive international dataset. It allows for several insights. First, business students rate their UBEE significantly more positively than non-business students. Therefore, study results acknowledge the positive and effective efforts of deans, academic vice-presidents in charge of student experiences, other leaders in charge of academic affairs, and professors in creating conducive learning environments for entrepreneurship. The ecosystem they create positively impacts entrepreneurial intentions in a statistically significant way.

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Second, marketing, selection, and admission matter as business programs portray diverging student bodies. The way institutions communicate the value of their education, the type of student they aspire to attract, and the thoroughness while choosing, admitting, but also retaining individuals cannot be ignored. When it comes to a combined self-assessment of their well-being, self-efficacy, and resilience, business students stand out in a statistically significant way, which in turn impacts entrepreneurial intentions positively and, once more, in a statistically significant way. Granted, higher education systems vary internationally. Some countries have more restrictive admission systems to higher education in place than others, which are more inclusive and provide study opportunities for larger groups. Self-selection is likely to matter as well. Yet, to the degree to which higher education institutions or their regional and even national higher education policies foresee quality control gates and stricter admission policies, their influence on the type of students pursuing business studies can impact future decisions. Zooming out, this study contributes statistically significant evidence from a rather unique and large dataset that it is not just the individual student profile and traits that matter. Efforts in actively shaping the ecosystem in higher education can make a noteworthy difference when explaining entrepreneurial intentions as a crucial prerequisite to see more entrepreneurship and its positive consequences. Therefore, our findings are relevant to different stakeholders as developing entrepreneurs within the university framework will enhance the industry-academy relationship and directly impact new employment generation in any country (Shil et al., 2020).

There are several limitations, which the authors would like to make explicit. The GUESSS dataset is comprehensive, encompassing numerous additional variables including gender, institution types, age, regional differences, etc. This opens up many avenues to render the analysis of the importance of UBEEs more detailed. Our initial intention with this study is to build the case for considering both the individual traits as well as the ecosystem as relevant and statistically significant factors shaping entrepreneurship orientation based on a very recent and international dataset. Further studies ought to selectively add further variables in order to advance the discovery of further insights regarding moderating and mediating variables. In addition, a further limitation is the reduction of higher education contexts to selected, perception-based quantitative measures. Additional qualitative research can be beneficial when exploring if the higher education context can change on a short-term basis and to what extent national visions and industrial policies even render entrepreneurship more urgent. Contexts differ, and the index-based two drivers chosen as independent variables for this study are, to some extent, reductionist.

One additional limitation stems from the difficulty of referring to business students as if they were a homogeneous group and if business colleges, university units, and institutions of higher education, in general, can be clustered with ease. As Amann (2024) reviews critically, there are several typologies of business schools, and D'Alessio and Avolio (2011) equally conclude that there is "no single model or size for business schools" (p. 21). Ivory et al. (2006) categorize them according to stakeholders and priorities activities to identify four models – professional school, knowledge economy, social science and liberal arts. Kitchener et al. (2017) map four different types based on their strategic focus, purpose orientation, and engagement levels – traditional, purposeful, purpose-led, and neo-liberal business schools. In turn, Lorange (2008) identifies five types based on how proactively they shape markets and categorizes institutions as either adaptive, proactive, entrepreneurial, rationally governed, or dynamically managed. Finally, Iniguez de Onzono (2011) adopts market and regional scope as criteria and arrives at seven gestalt types, including boutiques, executive education centers, local providers, international postgraduate schools, globally integrated schools, regional champions, and bigger

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public universities. While this study measures perceptions of what their academic homes provide for them in terms of enabling entrepreneurship-related learning, the latter may not necessarily be the institution's main strategic focus and purpose. Future research can add richer layers to the analysis.

CONCLUSION

This study provided a large-scale statistical analysis of the importance of focusing on students and the larger ecosystem in place to promote entrepreneurship. Based on data from the international GUESSS research program, multivariate linear regression analysis showed that UBEEs, if managed well, can foster entrepreneurial intention. There are lessons to be learned for both the type of students non-business programs attract and how non-business institutions enable – or not – an entrepreneurship intention. If non-business programs and the institutions that organize them aspire to promote more entrepreneurship programs, then learning can occur from their business counterparts. In turn, business programs and the institutions that form part of the more prominent university and entrepreneurial ecosystem find confirmation with this study that their approach is worthwhile to sustain and possibly even improve as it matters. Finally, this research is relevant to the individual learner as a key stakeholder. Their entrepreneurial intentions seem to be honed best if pursuing business studies as they find a rather and more conducive environment and ecosystem for entrepreneurship.

ENDNOTES

1. An earlier version of this manuscript is currently under review for publication at the Academy of Management Annual Meeting 2025 Proceedings.

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