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# Sustainability practices and student satisfaction in business schools: The role of notoriety and internationalization

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#### Abstract

**Purpose:** The objective of this study is to determine whether sustainability practices of business schools improve the internationalization of the institution and its notoriety and thereby increase student satisfaction.

**Design/methodology:** The sample considered in this study consisted of 272 Spanish business school graduates. The data was collected via an online survey during the first quarter of 2020. To validate the hypotheses and the model, structural equation modelling was carried out using a robust method.

*Findings:* Business schools' commitment to sustainability not only has an ethical component but also improves their positioning, leading to a greater competitive advantage.

**Practical implications:** The results obtained point to sustainability practices facilitating entry processes involving joint agreements among business schools and leading to accreditation and/or sustainability policies.

*Originality/value:* This study examines external variables which have rarely been tested and are considered as being highly relevant to achieving high satisfaction among business school graduates.

**Keywords:** Sustainability, Notoriety, Internationalization, Higher education institutions, Business schools, Satisfaction

Jel Codes: 123, M1, Q56

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# 1. Introduction

Higher education plays a central role in the promotion of productivity, innovation, and entrepreneurship as well as incorporating a gender perspective and important sociocultural issues (Miyan, 2008; Fabregá, Masferrer, Patau, & Pérez, 2020). In this sense, business schools (BS), as trainers of future managers and a fundamental part of higher education (Tarabasz, Selaković & Abraham, 2018), must provide value not only from a business point of view but also from the point of view of sustainability and good practices (Brammer & Clark, 2020; García-Feijoo, Eizaguirre, & Rica-Aspiunza, 2020). Business and sustainability values will, to a certain extent, assist the development and advancement of societies (Garavan & McGuire, 2010; Li & Yi, 2020). A well-educated and trained population can propel a nation towards rapid economic growth (Saiful, 2020).

The quality of higher education institutions (HEI), includes BS, has traditionally been evaluated based onvarious performance measures and indicators such as price and scientific prestige, the number of students and administrative staff, the student-to-teacher ratio, student assessments and curriculum (Borden, Coates & Bringle, 2018; Chen, Chen & Padro, 2017; Dill, 2009). However, there have been doubts about the reliability of these indicators informing sound decision-making that guide BS managers towards adding value to society and, of course, to companies and workers (Martini & Fabbris, 2017).

The arrival of many new competitors (Freitas, Bertero, Fleury, Mariotto & Silva, 2016; Starkey and Thomas, 2019) and the recently experienced global pandemic have accelerated the need for change in management models towards policies that adapt to the new social reality and the new needs of students. The time has come for BS to lead disruptive change, and those that do not make quick decisions and in the right direction will quickly find themselves out of the market (Winanti, Meyliana, Hidayanto, Prabowo & Gaol, 2018).

Urgel (2007) suggests that if the objective of quality assurance systems of BS is to advance, there's a need to increase quality standards given the constant increase of student numbers. Additionally, Lagrosen (2017) identifies six quality management factors for inclusion in BS' quality assurance systems including customer orientation, leadership commitment, inclusive participation, orientation processes, continuous improvement and evidence-based management. Bagur, Buil and Llach (2020) highlight in their literature review on students' service quality perceptions that there are many key performance indicators (KPIs) used, and the complexity of these quality assurance systems is enormous. However, the common finding in most of the studies analysed by the authors is that student satisfaction should be central to BS quality indicators (Gibson, 2010).

Given the significance of the current global environmental challenges, the introduction of new performance measurement parameters for both, student satisfaction and innovative initiatives (Zhao & Ferran, 2016; Htang, 2021; Martínez-Carmona, Gil del Pino & Álvarez-Castillo, 2022), sustainability practices must undoubtedly feature in these indicator systems. As such, students across all sectors should receive training in sustainability education (UNESCO, 2009; Dyllick, 2015) equipping students with knowledge and practices to tackle sustainability challenges in their given professions (Tilbury & Ross, 2006; Wu, Huang, Kuo & Wu, 2010; UNESCO, 2015).

This article highlights the scarcity of research on sustainability practices as a factor that influences student satisfaction and the assessment of service quality of BS (Mai, 2005), and as such, analyses whether BS which have and give effect to sustainability practices and policies have positive effects on their notoriety and internationalization capacities thereby increasing student satisfaction. While the importance of sustainability education and training as it relates to the added value for society and the planet is acknowledged, the distinguishing feature of this study is that it analyses whether sustainability practices and policies can also indirectly boost the notoriety and internationalization capacities of BS through increased student satisfaction.

With this introduction, what follows is a review of the literature focusing on the variables that drive service quality in BS. This is followed by empirical analysis and subsequently closes with a discussion of the results, conclusions and implications of the study results, and future research areas addressing identified limitations of this study.

## 2. Literature review

#### 2.1. Student satisfaction in business schools

Maximizing student satisfaction should be central to the strategy of any BS executive, especially if the objective is to improve competitiveness and increase the market share of the business school (Abdullah, 2006). Importantly, as the intended recipient of BS is to service the students, and based on their degree of satisfaction, the students can become friends or foes in terms of achieving expansion objectives.

There are a vast number of studies that analyse the various variables that affect students' perception of the quality of BS. In a recent study, Bagur Femenías et al. (2020), categorized these variables into two main groups: internal and external factors.

Internal factors controllable by BS include academic and teaching staff, number and size of classes, curriculum and resultant skills developed as well as student support services such as counselling. All these factors have been explained and analysed in-depth by a multitude of studies (Leblanc & Nguyen, 1997, 1999; Tsinidou, Gerogiannis & Fitsilis, 2010). However, less frequent is literature on external factors. External factors include preparing students for the future, services and facilities, sustainability, institutional image and branding, preenrolment factors and research and development (Gibbs, 2010). Mai (2005) was the first author to argue that factors such as sustainability, internationalization and image have not been sufficiently investigated by BS. Some recent research has included these dimensions as factors of students' satisfaction in higher education (Manzoor, Ho & Mahmud, 2021; Qazi, Qazi, Raza, & Yousufi, 2021; Santos, Marques, Justino & Mendes, 2020), however, limited research has been carried out by BS (Bagur et al., 2020). The limited research by BS compounded by the momentum of disruption and the constant changes in demand and needs makes strategic reviews mandatory including considering the market and overall ecosystem (Tarabasz et al., 2018; Brammer & Clark, 2020). This literature review focuses on those variables which have been rarely investigated, namely, external factors that should be considered given the current economic environment (Barrett, Gaskins & Haug, 2019; Starkey & Thomas, 2019). The authors deem it essential for BS to maintain a high degree of student satisfaction through three variables: sustainability practices, notoriety, and internationalization bringing about increased student recommendations.

## 2.2. Sustainability practices and its relationship with notoriety and internationalization

The concept of sustainability competencies has been defined as the complex and integrated set of knowledge, skills, abilities, attitudes, and values that people apply in different contexts (education, employment, social and family life) to resolve environmental concerns (Geli, Junyent & Sánchez, 2004). As highlighted by Barth and Rieckmann (2012), the inclusion of sustainability competencies in university and BS curricula represents a new challenge for academic systems.

Generally, sustainability approaches in BS, have focused on establishing recommendations and guidelines on how to manage teaching, research and operations (Godeman, Herzig, Moon & Powell 2011; Leal-Filho et al., 2018; Drahein, De Lima & Da Costa, 2019). The involvement of different stakeholders within academic ecosystems coming together to address sustainability challenges is a key factor for the BS's commitment to sustainability in social marketing messages (Nóbrega, 2017). Additionally, BS must integrate a holistic approach into its mission and culture, have oversight across the ecosystem, and communicate the collective sustainability commitment of the stakeholders (Ramísio, Pinto, Gouveia, Costa & Arezes, 2019).

There are a few studies on sustainability as a variable for measuring student satisfaction and the subsequent impact of student recommendations (Dyllick, 2015; Siva, Gremyr, Bergquist, Garvare, Zobel & Isaksson, 2016). Another measurement framework established (Shriberg, 2002) is the inter-institutional assessment of sustainability in higher education which includes such factors as the identification and comparative assessment of leaders and best practices, the communication of common objectives, experiences and methods, and the provision of directional tools to measure progress towards the concept of a "sustainable campus". The results of this study provide critical parameters to achieve sustainability: decrease performance, pursue gradual and systemic change simultaneously, include sustainability education as a central part of the curricula, and participate

in cross-functional and inter-institutional initiatives. In addition, the Audit Instrument for Sustainability in Higher Education (AISHE) (Roorda, 2002) is a framework used to strengthen and progress sustainability practices in HEI which have recently incorporated this measurement variable into their structure (Robinson, 2021). The AISHE facilitates improvements in sustainability decision-making and its relationship with the overall quality of institutional management.

Delving into sustainability practices and service quality, Ezeokoli and Ayodele (2014) examine the dimensions of service quality (SERVQUAL) that students identify in BS. The study concludes that quality services at the tertiary level (of higher education) are the most important factors in promoting academic excellence in sustainability. It is from 2020 that some more studies on the introduction of sustainability in SERVQUAL started to appear (Chaudhary & Dey, 2020; Sadia, 2020). This study aims to continue along the lines of the recent research, specifically, to consider sustainability practices as an important factor in academic excellence in higher education. It is for this reason that the research model proposed in Figure 1 starts with sustainability practices and their relationship with other dimensions. The other dimensions selected come from the evidence described in the following paragraphs.

The notoriety dimension predominately includes factors related to brand and ranking (Avolio & Benzaquen, 2020; Jewett 2012). These variables are more important when choosing a BS than the qualifications of the teaching staff, the importance of the mission, and continuous improvements in quality and assessment (Jewett, 2012). In addition, Jewett (2012) concludes that factors that imply notoriety and a positive image of the business school are more important than those related to the academic characteristics of the programmes. Notoriety, therefore, is a highly studied dimension in terms of its relationship with student satisfaction (Alves & Raposo, 2007). One identified research study, though relating to higher education institutions, concerns sustainability and the effect it can have on the institution's image and indirectly on the perceived student satisfaction (Manzoor et al., 2021). Following Manzoor et al. (2021), this study aims to respond to the identified knowledge gap by providing evidence on the dimension of notoriety and its relationship with other dimensions of student satisfaction in BS. Hypotheses H1 and H2 are articulated at the end of this section.

The internationalization of BS is understood as the way in which institutions respond to globalization, i.e., global economic and social processes (Cantwell & Maldonado-Maldonado, 2009). Internationalization strategies help improve the quality of BS (Urbanovič & Wilkins, 2013). Additionally, internationalization assists the financial sustainability of BS as its included in the total quality management (TQM) of BS – improving organizational learning and increasing competitive advantage (Antunes, Mucharreira, Texeira Fernandes Justino & Texeira Quirós, 2018). The main reasons why institutions decide to invest in internationalization are commonly political, cultural, economic or educational (Vieiria, 2019). Note, the internationalization of BS in achieving financial sustainability is not within the scope of this study. The internationalization of BS has increased in recent decades and increased in importance (Freitas et al, 2016; Starkey & Thomas, 2019). BS aim to attract a greater number of, not only domestic but international students as well. This trend generates recognition and prominence in academic rankings and the likelihood of creating a competitive advantage (Vieiria, 2019).

Few recent studies have analysed the relationships between the various dimensions defined as external factors that influence student satisfaction when choosing a BS (Hwang & Choi, 2019; Osman & Saputra, 2019). Osman and Saputra (2019) identified a relationship between service quality, programme quality, institutional image and student satisfaction using structural equation models. The results of that research demonstrate that image plays a mediating role between service quality and student satisfaction. Likewise, Hwang and Choi (2019) use a similar model to determine the relationships between internationalization and service quality, student satisfaction and institutional image. The results of that study show that service quality affects the perceived institutional image and student satisfaction – having a direct impact on behavioural intention. As such, H1 and H2 of this study are formulated in this way. Moreover, following the previous and more recent research, the relationship between the various dimensions defined as external factors of student satisfaction in BS, a research model is proposed which connects the dimensions analysed in this literature review as illustrated in Figure 1.

Before concluding this literature review, it's necessary to comment on students' perceived service quality and the extent of its relationship with resultant student recommendations (Purnomo & Qomariah, 2020). There is

consensus that the extent of perceived service quality has a direct impact on student recommendations (Carter, 2009; Chandra, Martha-Martha, Chandra & Priyono, 2018). Other studies (Jiewanto, Laurens & Nelloh, 2012) have focused on identifying the impact of service quality (SERVQUAL) on student recommendations facilitated by student satisfaction and image. The authors of this study recommend increasing SERVQUAL to increase the intentionality of student recommendations in relation to sustainability education and training in BS. Moreover, it's also noted that increasing student satisfaction improves the institution's reputation improving positioning in BS rankings as reflected in H5 below.

Taking into account the identified knowledge gaps in this literature review, the hypotheses to be tested in this study are:

H1: Sustainability practices have a direct and positive effect on the notoriety of BS.

H2: Sustainability practices have a direct and positive effect on the internationalization of BS.

H3: The notoriety of BS has a direct and positive effect on student satisfaction.

H4: The internationalization of BS has a direct and positive effect on student satisfaction.

H5: The extent of student satisfaction has a corresponding positive effect on student recommendations.

These hypotheses are represented in Figure 1 below:

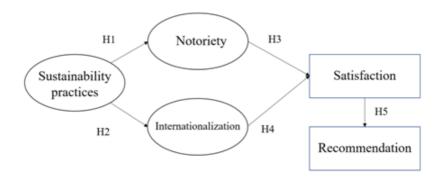


Figure 1. Proposed research model

# 3. Sample and method

The data used for this study comes from a recently completed survey questionnaire that analysed the quality-satisfaction-loyalty chain in the context of business schools. Specifically, for this study, information was derived from the following sections of the survey: variables related to sustainability practices of BS; variables related to internationalization; variables related to notoriety; comments where students articulated their overall assessment of the programme and their likelihood of recommending the BS to a third party as well as sociodemographic information of the survey respondents.

For this study, sustainability practices include four facets: commitment to gender equality policies, the existence of accreditation or a sustainability policy, the extent of the environmental commitment, and contribution to society. The notoriety dimension includes gender equality policies, accreditation in sustainability or clear policies regarding sustainability, commitment to the environment, and contributions to society. Lastly, internationalization includes four aspects: being part of international business school network(s), holding international accreditations, having agreements with other universities, and having agreements enabling students to pursue studies and obtain study credits in other BS. All three variables and the corresponding dimensions and respective reference sources are detailed in Appendix A.

All questions, except for the sociodemographic information, were compulsory in the survey questionnaire and were answered using a 5-point Likert scale indicating the extent of students' agreement/disagreement with statements regarding the three variables included in the survey questionnaire.

The survey targeted graduates only as the survey findings were intended to be analysed for this research study. The survey respondents eligible to complete the questionnaire must have completed, what is commonly called the "student journey", understood as the process of obtaining information prior to enrolment, during the programme, and entry/re-entry into the labour market (Weaver, 2013; Humphrey & Love, 2017).

The data used in this study was obtained during the first quarter of 2020 using an online survey questionnaire. The total number of respondents and the corresponding sociodemographic details within the final sample used for this study are detailed in Table 1 below.

		n	0/0
	Male	130	47.8%
Gender	Female	142	52.2%
	Total	272	100.0%
	< 25 years	6	2.2%
	Between 25 and 30 years	5 years ween 25 and 30 years ween 31 and 35 years  ween 36 and 40 years  ween 41 and 45 years  66 years  67 years  77 years  78 years  79 years  70 years  71 years  72 years  73 years  74 years  75 years  76 years  77 years  78 years  79 years  70 years  70 years  71 years  72 years  73 years  74 years  75 years  76 years  77 years  78 years  79 years  70 years  70 years  71 years  72 years  73 years  74 years  75 years  76 years  77 years  77 years  78 years  79 years  70 years  70 years  70 years  71 years  72 years  73 years  74 years  75 years  76 years  77 years  77 years  78 years  79 years  70 years  70 years  70 years  71 years  70 years  71 years  72 years  73 years  74 years  75 years  76 years  77 years  77 years  78 years  78 years  78 years  78 years  79 years  70 years  7	23.2%
Age	Between 31 and 35 years	75	27.6%
	Between 36 and 40 years	71	26.1%
	Between 41 and 45 years	50	18.4%
	> 46 years	7	2.6%
	Total	272	100.0%
	Spain	262	96.3%
	Male       130         Female       142         Total       272         < 25 years	1.1%	
Country		6	2.2%
Journay ,	Other	1	0.4%
	Total	272	100.0%
	Official Master	194	71.3%
Type of course	Non Official Master	65	23.9%
	Other	13	4.8%
	Total	272	100.0%

Table 1. Sociodemographic information

# 4. Results

To test the proposed research model, this section has been divided into two main parts. The first involves an exploratory factor analysis (EFA) that serves to delimit the variables and integrate them into the three dimensions of the model, namely, sustainability practices, notoriety, and internationalization. Once the dimensions were initially delimited providing more robustness, consistency was analysed. In this process, different analyses were performed. The first was to test the internal consistency and reliability of each dimension using Cronbach's alpha coefficient, compound reliability and the average variance extracted (AVE).

As shown in Table 2, these criteria were fully met in all cases: Cronbach's alpha, exceeded 0.6 (Churchill, 1979); composite reliability, exceeded 0.7; and AVE, exceeded 0.5 (Barclay, Higgins, & Thompson, 1995).

	Sustainability practices	load	Internationalization	ationalization load		load
	SUST1	0.728	INT1	.800	NOT1	.787
	SUST2	0.812	INT2	.821	NOT2	.732
	SUST3	0.841	INT3	.822	NOT3	.828
	SUST4	0.788	INT4	.777	NOT4	.789
% Explained variance		7.575	5.015			4.858
Chrombach's Alpha		0.798	0.819		0.789	
Range of Alpha if one item is removed	0.710 - 0.789		0.761 - 0.789		0.713 - 0.764	
Composite Reliability		0.871	71 0.880			0.864
Average variance extracted (AVE)		0.629	0.648			0.615

Table 2. EFA and Reliability analysis

To conclude the first phase of the analysis, as seen in Table 3, the discriminant validity of the proposed model was tested, confirming the reliability of the model.

	Sustainability practices	Internationalization	Notoriety
Sustainability practices	.793		
Internationalization	.487***	.805	
Notoriety	.378***	.606**	.784

<sup>\*\*</sup>Significant at 0.01 (bilateral)

Note: Diagonal represents the square root of AVE

Table 3. Discriminant validity analysis

To refine the model and obtain more robust dimensions, confirmatory analysis was performed (see Table 4). Note, that variables with a load greater than 0.6 are incorporated into the final model following the parameters set by the literature.

Dimension	Ite	ms	Lo	ad	t-v	value	r2
Sustainability practices	SU	ST1		0.600		9.27	0.360
	SU	ST2		0.735		12.05	0.540
	SU	ST3		0.699		11.92	0.489
	SU	ST4		0.750		12.14	0.562
Internationalization	IN	T1		0.748	-		0.560
	IN	T2		0.746		12.05	0.556
	IN	Т3		0.750		11.07	0.562
	IN	T4		0.668		9.88	0.446
Notoriety	NC	)T1		0.719		-	0.517
	NC	T2		0.636		10.97	0.405
	NC	)T3		0.749		11.39	0.561
	NC	)T4		0.691		8.53	0.477
Fit indices of the model (ROBUST method)		Value		Cut-off vo	ılue	Reference	
Satorra-Bentler X2			235.7071				
Degrees of freedom			74				
X2/DF			3.185			Wheaton,	Muthen, Alwin and
				<5		Summers (1977)	
Comparative Fit Index (CFI)			0.851 Close to 0.9		to 0.9	Hu and Bentler (1999)	
RMSEA			0.090			MacCallum, Browne and	
				< 0.1		Sugawara (1996)	
BBNFI			0.800 >0.9		).9	Byrne (1994)	
BBNNFI			0.817	0.817 >0.8 Byrne (1994)		94)	

Table 4. Confirmatory factor analysis (CFA) and structural equation model fit indices

To validate the relationships between dimensions, structural equations modelled with EQS 6.1 software and a robust method were used. In the lower part of Table 4, the main fit indices are detailed, confirming the informative power of the results, i.e., at least three of the five parameters measured are within the values recommended by the literature (Schermelleh-Enge, Moosbrugger & Müller, 2003).

Figure 2 shows the validated relationships (\*\*significant at 0.05) between dimensions as well as their relevant coefficients.

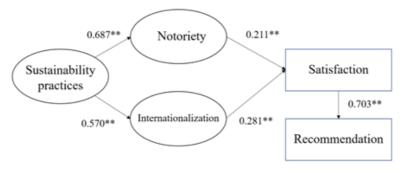


Figure 2. Research model

### 5. Discussion of results

All five hypotheses proposed in this study have been confirmed by the resulting statistical analyses. H1 proposes that the sustainability practices of BS have a direct and positive effect (0.687\*) on their notoriety. Additionally, H3 confirms that sustainability practices have an indirect and positive effect on the extent of student satisfaction because of notoriety (0.211\*). One possible explanation for the results is that when an institution's image of its sustainability practices is favourable and has positive societal impact, students are proud to be part of that institution.

Osman and Saputra (2019) and Hwang and Choi (2019) established the image of HEI as an indicator of student satisfaction. The current research study goes one step further and is one of the first studies to establish that the sustainability practices of BS positively impact its image and, in turn, student satisfaction. In addition, participating in initiatives focusing on improving the environment and social outcomes through sensitivity to the environment and gender equality, among other sustainability practices, increases student satisfaction and thus, increases student recommendations (H5). These results are consistent with those provided by Jewett (2012) by confirming that notoriety and a positive image of BS are relevant factors in student satisfaction.

In addition, H2 is confirmed; that is, sustainability practices have a direct and positive effect (0.570\*) on the internationalization of BS, as noted by several studies (Alves and Roposo, 2007; Urgel, 2007; Jewett, 2012). In addition, H4 is accepted; that is, sustainability practices have an indirect and positive effect on the extent of student satisfaction through internationalization (0.281\*). The results obtained point to sustainability practices facilitating the entry of BS into joint agreements and obtaining clear accreditations and/or sustainability policies. In addition, BS with accredited sustainable practices makes international accreditations by EQUIS, AMBA or ACCSB more likely. This result clarifies the recommendation made by Snelson-Powell, Grosvold and Millington (2006), who stated that EQUIS, AMBA and ACCSB were beginning to highlight sustainability but that it was necessary to design concrete practices. Other studies indicate that EQUIS-accredited schools offer more courses related to sustainability (Wu et al., 2010). Likewise, ethics, responsibility and sustainability are a set of vital criteria to achieve EQUIS accreditation (Roos, 2017).

Another novelty of this study is that it finds a direct and positive relationship between sustainability practices and internationalization that, in turn, impacts student satisfaction and student recommendations. Most studies have found a positive relationship between internationalization and the quality of HEI (Jang, 2009; Maringe & Foskett, 2012). Additionally, the results of the data analysis in this study confirm the existence of a positive and significant influence of service quality on student satisfaction; and indicate that student satisfaction positively and significantly influences the extent of student recommendations for BS and their programmes. The university's image has a positive and significant influence on both, student satisfaction and loyalty (Chandra, Hafni, Chandra, Purwati & Chandra, 2019). Sustainability practices positively affect the notoriety of BS (0.670\*), slightly higher than the impact on internationalization (0.570\*).

Another relevant and novel aspect of this study is that the results suggest that the extent of student satisfaction, obtained directly or indirectly from sustainability practices, has a positive effect on the number of student recommendations. Therefore, hypothesis H5 is accepted. There are few articles that focus on the external variables essential for maintaining high satisfaction among students who recommend the business school in which they study (Barrett et al., 2019; Starkey & Thomas, 2019).

## 6. Conclusions

BS have a fundamental role to play in increasing the awareness of future managers on sustainability practices supporting sustainable economic development and sustainable environmental practices (UNESCO, 2015; Htang, 2021; Martínez-Carmona et al., 2022). Furthermore, in an increasingly globalized world, notoriety and internationalization are increasingly essential factors for BS to be competitive.

Within this landscape, the objective of this study was to determine whether BS's sustainability practices improve student satisfaction by improving their notoriety and internationalization. The results obtained provide various insights for academia, BS executives and policymakers.

For the academic community, this study appears to suggest that the implementation of sustainability practices improves the notoriety and internationalization of BS. Therefore, a commitment to sustainability not only has an ethical component but also improves the positioning of BS, leading to increased competitive advantage. Similarly, internationalization and a greater global presence will have a positive effect on student satisfaction. Considering that student satisfaction is a key factor that influences an institution's reputation resulting in promoting the institution through increased student recommendations (Qazi et al., 2021), this study also demonstrates that sustainability practices are likely to have a notable positive impact on the institution's economic profitability.

This research differs from previous studies as the sustainability practices dimension was limited to social aspects rather than also including economic and environmental aspects (Dyllick, 2015; Siva et al., 2016). Few research studies have focused on external variables essential for maintaining high student satisfaction, which subsequently leads to student recommendations (Barrett et al., 2019; Starkey & Thomas, 2019). Acquiring a reputable institutional image has a positive and significant influence on both, student satisfaction and loyalty (Chandra et al., 2019).

Secondly, for BS executives, this study sheds further light on the research by Antunes et al. (2018) which held that investments in sustainability practices have a positive impact on the financial health of institutions. Implementing sustainability policies and practices should not be considered by BS as an additional cost but instead, as long-term investments where returns are likely to materialize in increases in enrolments (Freitas et al, 2016; Starkey & Thomas, 2019). In addition, sustainability practices help BS have a greater presence in international rankings and in the media, helping to improve their visibility and competitiveness.

Notably, there is growing interest by key accrediting bodies (such as EQUIS, AMBA or ACCSB) in certifying BS that not only participate to maximize institutional benefits but also provide value to society through sustainable economic development, improved environmental practices and increased social outcomes. Concrete sustainability policies and practices, corporate social responsibility (Proitz, Stensaker & Harvey, 2004; Roos, 2017) as well as the incorporation of sustainability values in the mission and strategy of BS can provide three benefits: improve student satisfaction, facilitate international accreditation processes, and improve long-term economic benefits through increased notoriety and internationalization.

Finally, for policymakers, this research articulates cultural transformation as an attitude towards life, where the environment is included as a great opportunity to generate sustainable economic development. Finding a balance between economic, environmental and social objectives; and integrating them into solutions reflecting the actual needs of society are crucial to generating sustainable development. Thus, the implementation of sustainability practices in BS should be promoted at the highest levels of policy making. Ultimately, the benefits of implementing sustainability policies and practices will, either directly or indirectly, materialize for BS as well as benefit social and environmental outcomes and business school graduates' future employment opportunities.

Four limitations have been identified in this research study that provide opportunities for further research. First, common to most surveys of its kind, as the survey questionnaire was conducted in a specific region, the findings may be difficult to extrapolate to other countries with different environments. Thus, further studies could carry out the same survey in other countries with different environments, better yet, carry out a cross-country comparative analysis. Second, the survey questionnaire was completed in February 2020 just before the global pandemic and lockdowns. A post-pandemic study could be of interest to analyze the impact of the global pandemic on student perceptions, particularly the prominence and impact of global challenges such as internationalization and globalization, for example, the interconnectedness of human movement including international students and university exchange programs, international business and supply chains; and their impact on sustainable economic development, improved environmental and social outcomes including gender equality, inclusiveness and equality. Similarly, a longitudinal study would also more easily identify the impact of the global pandemic on business school graduates' perceptions. Third, the relatively limited sample size and the high number of variables included in the research model did not provide the ability to perform sub-sample analysis. A larger sample size would provide the opportunity to identify differences, for example, by gender, age, work, or field of study.

Another line of enquiry would be to examine the relationship between the implementation of sustainable practices; and first, the positioning of BS in major international rankings such as the Financial Times; second, attaining prestigious accreditations specific to BS such as AMBA. As noted already, sustainability has increasingly become more important for accreditation and ranking bodies, signaling that this occurrence alone is likely to be a driving factor for BS to implement sustainability practices.

# **Declaration of Conflicting Interests**

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#### References

- Abdullah, F. (2006). Measuring service quality in higher education: Three instruments compared. *International Journal of Research & Method in Education*, 29(1), 71-89. https://doi.org/10.1080/01406720500537445
- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management*, 18(5), 571-588. https://doi.org/10.1080/14783360601074315
- Antunes, M.G., Mucharreira, P.R., Texeira Fernandes Justino, M.D.R., & Texeira Quirós, J. (2018). The Role of TQM, innovation and internationalization strategies on the financial sustainability of higher education institutions (HEIS). In 11th International Conference of Education, Research and Innovation (9778-9787). IATED Academy.
- Avolio, B., & Benzaquen, J. (2020). Strategic drivers to approach business school's accreditations. *Journal of Education for Business*, 95(8), 519-526. https://doi.org/10.1080/08832323.2019.1707751
- Bagur-Femenías, L., Buil, M., & Llach, J. (2020). Systematic Literature Review on Service Quality in Business Schools. *European Accounting and Management Review*, 6(2), 23-40. https://doi.org/10.26595/eamr.2014.6.2.2
- Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to causal modeling: Personal computer adoption and use as an illustration. *Technology Studies*, 2(2), 285-309.
- Barrett, P., Gaskins, J., & Haug, J. (2019). Higher education under fire: implementing and assessing a culture change for sustainment. *Journal of Organizational Change Management*, Vol. 32(1), 164-180. https://doi.org/10.1108/JOCM-04-2018-0098
- Barth, M., & Rieckmann, M. (2012). Academic staff development as a catalyst for curriculum change towards education for sustainable development: an output perspective. *Journal of Cleaner Production*, 26, 28-36. https://doi.org/10.1016/j.jclepro.2011.12.011
- Brammer, S., & Clark, T. (2020). COVID-19 and management education: Reflections on challenges, opportunities, and potential futures. *British journal of Management*, 31(3), 453. https://doi.org/10.1111/1467-8551.12425
- Borden, V.M.H. (1995). Segmenting student markets with a student satisfaction and priorities survey. Research in Higher Education, 36(1), 73-88. https://doi.org/10.1007/BF02207767
- Borden, V., Coates, H., & Bringle, R. (2018). Emerging perspectives on measuring and classifying institutional performance. In *Research handbook on quality, performance and accountability in higher education* (pp. 189-205). https://doi.org/10.4337/9781785369759.00024
- Byrne, B.M. (1994). Structural equation modeling with EQS and EQS/Windows: Basic concepts, applications, and programming. Sage.
- Cantwell, B., & Maldonado-Maldonado, A. (2009). Four stories: Confronting contemporary ideas about globalisation and internationalisation in higher education. *Globalisation, Societies and Education*, 7(3), 289-306. https://doi.org/10.1080/14767720903166103

- Carter, R.E. (2009). The Impact of perceived service quality on MBA student satisfaction and recommendations: Do expectations matter?. *Services Marketing Quarterly*, 30(3), 234-248. https://doi.org/10.1080/15332960902993494
- Chandra, T., Hafni, L., Chandra, S., Purwati, A.A., & Chandra, J. (2019). The influence of service quality, university image on student satisfaction and student loyalty. *Benchmarking: An International Journal*, 40, 16-23. https://doi.org/10.1108/BIJ-07-2018-0212
- Chandra, T., Martha-Martha, Ng., Chandra, S., & Priyono, P. (2018). The Effect of Service Quality on Student Satisfaction and Student Loyalty: An Empirical Study. *Journal of Social Studies Education Research*, 9(3), 109-131.
- Chaudhary, S., & Dey, A.K. (2020). Influence of student-perceived service quality on sustainability practices of university and student satisfaction. *Quality Assurance in Education: An International Perspective*, 29(1), 29-40. https://doi.org/10.1108/QAE-10-2019-0107
- Chen, I.S., Chen, J.K., & Padro, F.F. (2017). Critical quality indicators of higher education. *Total Quality Management & Business Excellence*, 28(1-2), 130-146. https://doi.org/10.1080/14783363.2015.1050178
- Churchill, G.A. Jr. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64-73. https://doi.org/10.1177/002224377901600110
- Delaney, A.M. (2001). Assessing undergraduate education from graduating seniors' perspective: Peer institutions provide the context. *Tertiary Education and Management*, 7(3), 255-276. https://doi.org/10.1080/13583883.2001.9967057
- Dill, D.D. (2009). Convergence and diversity: The role and influence of university rankings. In *University rankings*, diversity, and the new landscape of higher education (pp. 97-116). https://doi.org/10.1163/9789087908164\_008
- Drahein, A.D., De Lima, E.P., & Da Costa, S.E.G. (2019). Sustainability assessment of the service operations at seven higher education institutions in Brazil. *Journal of Cleaner Production*, 212, 527-536. https://doi.org/10.1016/j.jclepro.2018.11.293
- Dyllick, T. (2015). Responsible management education for a sustainable world: The challenges for business schools. *Journal of Management Development*, 34(1), 16-33. https://doi.org/10.1108/JMD-02-2013-0022
- Elliot, K.M. (2002–2003). Key determinants of student satisfaction. *Journal of College Student Retention*, 4(3), 271-279. https://doi.org/10.2190/B2V7-R91M-6WXR-KCCR
- Elliot, K.M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197-209. https://doi.org/10.1080/1360080022000013518
- Ezeokoli, R.N., & Ayodele, K.O. (2014). Dimensions of service quality encountered by students on sustainability of higher education in Nigeria. *Dimensions*, 4(6), 147-156.
- Fabregá, M.B., Masferrer, N., Patau, J., & Pérez, A.P.M. (2020). Self-counciousness competence as driver of innovation and environmental commitment in higher education students. *International Journal of Sustainability in Higher Education*, 21(7), 1507-1523. https://doi.org/10.1108/IJSHE-03-2020-0083
- Freitas, M.E.D., Bertero, C.O., Fleury, M.T.L., Mariotto, F.L., & Silva, A.L. (2016). Process of internationalization of business schools in Latin America: The case of EAESP/FGV, Brazil. *Tertiary Education and Management*, 22(4), 267-286. https://doi.org/10.1080/13583883.2016.1222630
- Garavan, T.N., & McGuire, D. (2010). Human resource development and society: Human resource development's role in embedding corporate social responsibility, sustainability, and ethics in organizations. *Advances in Developing Human Resources*, 12(5), 487-507. https://doi.org/10.1177/1523422310394757
- García-Feijoo, M., Eizaguirre, A., & Rica-Aspiunza, A. (2020). Systematic review of sustainable-development-goal deployment in business schools. *Sustainability*, 12(1), 440. https://doi.org/10.3390/su12010440
- Geli, A.M., Junyent, M. & Sánchez, S. (2004). Acciones de Intervención y Balance Final del Proyecto de Ambientalización Curricular de los Estudios Superiores. Girona: Universidad de Girona-Red ACES

- Gibbs, G. (2010) Dimensions of Quality. The Higher Education Academy. www.heacademy.ac.uk
- Gibson, A. (2010). Measuring business student satisfaction: A review and summary of the major predictors. *Journal of Higher Education Policy and Management*, 32(3), 251-259. https://doi.org/10.1080/13600801003743349
- Godeman, J., Herzig, C., Moon, J., & Powell, A. (2011). *Integrating sustainability into business schools—analysis of 100 UN PRME sharing information on progress (SIP) reports* (pp. 58-2011). Nottingham: International Centre for Corporate Social Responsibility.
- Htang, L.K. (2021). A look at university student service quality and satisfaction. *Quality Assurance in Education*, 29(2/3), 101-115. https://doi.org/10.1108/QAE-09-2020-0108
- Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55. https://doi.org/10.1080/10705519909540118
- Humphrey, O., & Lowe, T. (2017). Exploring how a 'Sense of Belonging'is facilitated at different stages of the student journey in Higher Education. *The Journal of Educational Innovation, Partnership and Change*, 3(1), 172-188. https://doi.org/10.21100/jeipc.v3i1.583
- Hwang, Y.S., & Choi, Y.K. (2019). Higher education service quality and student satisfaction, institutional image, and behavioral intention. *Social Behaviorand Personality: An International Journal*, 47(2), 1-12. https://doi.org/10.2224/sbp.7622
- Jang, J.Y. (2009). Analysis of the relationship between internationalization and the quality of higher education. Doctoral Dissertation, University of Minessota, USA.
- Jewett, J. (2012). A survey of students' percepcions of business accreditation and their rationale in selecting a MBA program. Doctoral dissertation. Sant Louis University, USA.
- Jiewanto, A., Laurens, C., & Nelloh, L. (2012). Influence of service quality, university image, and student satisfaction toward WOM intention: A case study on Universitas Pelita Harapan Surabaya. *Procedia-Social and Behavioral Sciences*, 40, 16-23. https://doi.org/10.1016/j.sbspro.2012.03.155
- Lagrosen, S.O. (2017). Quality through accreditation. *International Journal of Quality and Service Sciences*, 9 (3/4), 469-483. https://doi.org/10.1108/IJQSS-02-2017-0010
- Leal Filho, W., Raath, S., Lazzarini, B., Vargas, V.R., De Souza, L., Anholon, R., et al. (2018). The role of transformation in learning and education for sustainability. *Journal of Cleaner Production*, 199, 286-295. https://doi.org/10.1016/j.jclepro.2018.07.017
- Leblanc, G., & Nguyen, N. (1997). Searching for excellence in business education: an exploratory study of customer impressions of service quality. *International Journal of Educational Management*, 11(2), 72-79. https://doi.org/10.1108/09513549710163961
- Leblanc, G., & Nguyen, N. (1999). Listening to the customer's voice: examining perceived service value among business college students. *International Journal of Educational Management*, 13(4), 187-198. https://doi.org/10.1108/09513549910278106
- Li, W., & Yi, P. (2020). Assessment of city sustainability—Coupling coordinated development among economy, society and environment. *Journal of Cleaner Production*, 256, 120453. https://doi.org/10.1016/j.jclepro.2020.120453
- MacCallum, R.C., Browne, M.W., & Sugawara, H.M. (1996). Power Analysis and Determination of Sample Size for Covariance Structure Modeling. *Psychological Methods*, 1, 130-149. https://doi.org/10.1037/1082-989X.1.2.130
- Mai, L. (2005). A comparative study between UK and US: The student satisfaction in higher education and its influential factors. *Journal of Marketing Management*, 21, 859-878. https://doi.org/10.1362/026725705774538471
- Manzoor, S.R., Ho, J.S.Y., & Al Mahmud, A. (2021). Revisiting the 'university image model' for higher education institutions' sustainability. *Journal of Marketing for Higher Education*, 31(2), 220-239. https://doi.org/10.1080/08841241.2020.1781736

- Maringe, F., & Foskett, N. (Eds.). (2012). Globalization and internationalization in higher education: Theoretical, strategic and management perspectives. London: A&C Black.
- Martínez-Carmona, M.J., Gil del Pino, C., & Álvarez-Castillo, J.L. (2022). The Basic Cycles of Vocational Training: Student Satisfaction and Perceived Benefit. *European Journal of Investigation in Health, Psychology and Education*, 12(4), 417-430. https://doi.org/10.3390/ejihpe12040030
- Martini, M.C., & Fabbris, L. (2017). Beyond Employment Rate: A Multidimensional Indicator of Higher Education Effectiveness. *Social Indicators Research*, 130, 351-370. https://doi.org/10.1007/s11205-015-1179-z
- Miyan, M.A. (2008). Ensuring quality in higher education. The New Nation, Sunday, December 21.
- Nóbrega, L.B.D. (2017). Promotion of sustainability in higher education institutions: ISCTE-IUL. Doctoral dissertation.
- Osman, A.R., & Saputra, R.S. (2019). A pragmatic model of student satisfaction: A viewpoint of private higher education. *Quality Assurance in Education*, 27(2), 142-165. https://doi.org/10.1108/QAE-05-2017-0019
- Prøitz, T.S., Stensaker, B., & Harvey, L. (2004). Accreditation, standards and diversity: An analysis of EQUIS accreditation reports. *Assessment & Evaluation in Higher Education*, 29(6), 735-750. https://doi.org/10.1080/0260293042000227263
- Purnomo, S.H., & Qomariah, N. (2020). The Impact of Service Quality and Institutional Image on the Satisfaction and Loyalty of Master of Management Students. *1st Borobudur International Symposium on Humanities, Economics and Social Sciences (BIS-HESS 2019)*, 436, 156-161. https://doi.org/10.2991/assehr.k.200529.033
- Qazi, Z., Qazi, W., Raza, S.A., & Yousufi, S.Q. (2021). The antecedents affecting university reputation and student satisfaction: A study in higher education context. *Corporate Reputation Review*, 25(4), 253-271. https://doi.org/10.1057/s41299-021-00126-4
- Ramísio, P.J., Pinto, L.M.C., Gouveia, N., Costa, H., & Arezes, D. (2019). Sustainability Strategy in Higher Education Institutions: Lessons learned from a nine-year case study. *Journal of Cleaner Production*, 222, 300-309. https://doi.org/10.1016/j.jclepro.2019.02.257
- Robinson, P. (2021). AISHE reports and certificates.
- Roorda, N. (2002). Assessment and policy development of sustainability in higher education with AISHE. Teaching sustainability at universities: towards curriculum greening, environmental education, communication and sustainability. Frankfurt: Peter Lang.
- Roos, J. (2017). Practical wisdom: making and teaching the governance case for sustainability. *Journal of Cleaner Production*, 140, 117-124. https://doi.org/10.1016/j.jclepro.2015.10.135
- Sadia, B.U.T.T. (2020). Service quality assessment and student satisfaction in business schools: Mediating role of perceived value. MOJEM: Malaysian Online Journal of Educational Management, 9(1), 58-76.
- Saiful Islam, Md. (2020). Human capital formation and economic growth in South Asia: Heterogeneous dynamic panel cointegration. *International Journal of Education Economics and Development*, 11 (4), 335-350. https://doi.org/10.1504/IJEED.2020.110593
- Santos, G., Marques, C.S., Justino, E., & Mendes, L. (2020). Understanding social responsibility's influence on service quality and student satisfaction in higher education. *Journal of cleaner production*, 256, 120597. https://doi.org/10.1016/j.jclepro.2020.120597
- Schermelleh-Enge, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Psychological Research*, 8(2), 23-74.
- Shriberg, M. (2002). Institutional assessment tools for sustainability in higher education: Strengths, weaknesses, and implications for practice and theory. *Higher Education Policy*, 15(2), 153-167. https://doi.org/10.1016/S0952-8733(02)00006-5

- Siva, V., Gremyr, I., Bergquist, B., Garvare, R., Zobel, T., & Isaksson, R. (2016). The support of Quality Management to sustainable development: A literature review. *Journal of Cleaner Production*, 138, 148-157. https://doi.org/10.1016/j.jclepro.2016.01.020
- Snelson-Powell, A., Grosvold, J., & Millington, A. (2016). Business school legitimacy and the challenge of sustainability: A fuzzy set analysis of institutional decoupling. *Academy of Management Learning & Education*, 15(4), 703-723. https://doi.org/10.5465/amle.2015.0307
- Starkey, K., & Thomas, H. (2019). The future of business schools: shut them down or broaden our horizons?. *EFMD Global Focus\_Iss*, 13(2), 44-49.
- Tarabasz, A., Selaković, M., & Abraham, C. (2018). The classroom of the future: Disrupting the concept of contemporary business education. *Entrepreneurial Business and Economics Review*, 6(4), 231. https://doi.org/10.15678/EBER.2018.060413
- Tilbury, D., & Ross, K. (2006). Living Change: Documenting good practice in Education for Sustainability in NSW. Sydney, Macquarie University and Nature Conversation Council, NSW. Retrieved from; <a href="http://minerva.mq.edu.au:8080/vital/access/manager/Repository/mq:2756">http://minerva.mq.edu.au:8080/vital/access/manager/Repository/mq:2756</a>
- Tsinidou, M., Gerogiannis, V., & Fitsilis, P. (2010). Evaluation of the factors that determine quality in higher education: an empirical study. *Quality Assurance in Education*, 18(3), 227-244. https://doi.org/10.1108/09684881011058669
- UNESCO (2009). World Conference on Education for Sustainable Development. www.esd-word-confence-2009.org/
- UNESCO (2015). Replantear la educación: ¿Hacia un bien común mundial? París, UNESCO. <a href="https://unesdoc.unesco.org/ark:/48223/pf0000232697">https://unesdoc.unesco.org/ark:/48223/pf0000232697</a>
- Urbanovič, J., & Wilkins, S. (2013). Internationalisation as a strategy to improve the quality of higher education in small states: Stakeholder perspectives in Lithuania. *Higher Education Policy*, 26(3), 373-396. https://doi.org/10.1057/hep.2013.6
- Urgel, J. (2007). EQUIS accreditation: Value and benefits for international business schools. *Journal of Management Development*, 26(1), 73-83. https://doi.org/10.1108/02621710710721698
- Vieiria, V. (2019). Internationalisation and entrepreneurship in German Higher Educations Institutions. *E-revista* de Estudosinterculturais do CEI-ISCAP, 7, 1-31.
- Weaver, M. (2013). Student journey work: A review of academic library contributions to student transition and success. New Review of Academic Librarianship, 19(2), 101-124. https://doi.org/10.1080/13614533.2013.800754
- Wheaton, B., Muthen, B., Alwin, D.F., & Summers, G.F. (1977). Assessing Reliability and Stability in Panel Models. *Sociological Methodology*, 8, 84-136. https://doi.org/10.2307/270754
- Winanti, Meyliana, Hidayanto, A.N., Prabowo, H., & Gaol, F.L. (2018). Key Successful Factors of Executive Information System Implementation in Higher Education: A Systematic Literature Review (Conference paper). Proceedings of 2018 International Conference on Information Management and Technology, ICIMTech 2018. https://doi.org/10.1109/ICIMTech.2018.8528124
- Wu, Y.C.J., Huang, S., Kuo, L., & Wu, W.H. (2010). Management education for sustainability: A web-based content analysis. *Academy of Management Learning & Education*, 9(3), 520-531. https://doi.org/10.5465/amle.9.3.zqr520
- Zhao, J., & Ferran, C. (2016). Business school acreditation in the changing global Marketplace. *Journal of International Education in Business*, 9(1), 52-69. https://doi.org/10.1108/JIEB-02-2016-0001

# Appendix A

Final Dimension	Code	Descriptive	References		
Sustainability practices	SUST1	The centre is committed to gender equality policies	Borden (1995) Elliot and Shin (2002) Delaney (2001) Elliot (2002-03) Tsinidou et al. (2010)		
	SUST2	The centre has a clear accreditation/sustainability policy			
	SUST3	Environmental commitment of the centre	Urgel (2007) Dyllick (2015) Leblanc and Nguyen (1999)		
	SUST4	Contribution of the institution to society	Gibson (2010) Lagrosen (2017)		
Internationalization	INT1	Being part of an international network of business schools	Urgel (2007) Jewett (2012) Alves and Raposo (2007)		
	INT2	Availability of international accreditations			
	INT3	The agreements with other universities are of quality			
	INT4	The institution has agreements that allow students to pursue credits in other relevant business schools			
Notoriety	NOT1	Impact on the press	Urgel (2007)		
	NOT2	Impact on social networks			
	NOT3	Presence in national and international rankings	Jewett (2012)		
	NOT4	Increasing presence in the institution's market (increase in market share)	Alves and Raposo (2007)		

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