



THE EFFECT OF UNIVERSITY SOCIAL RESPONSIBILITY ON STUDENT SATISFACTION AND LOYALTY: A STUDY OF HIGHER EDUCATION INSTITUTIONS IN HO CHI MINH CITY

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ARTICLE INFO	ABSTRACT
DOI: 10.52932/jfmr.v17i1enes.1097 <i>Received:</i> September 12, 2025 <i>Accepted:</i> February 03, 2026 <i>Published:</i> August 08, 2026 Keywords: Higher education, Student satisfaction, Student loyalty, University social responsibility, Vietnam Article classification: Research paper JEL codes: I23, M14, M31	Purpose – This study investigates the effects of University Social Responsibility (USR) on student satisfaction and loyalty in higher education institutions in Ho Chi Minh City, Vietnam. While the relationship between USR and student outcomes has received increasing scholarly attention, empirical evidence from emerging economies remains limited. This study addresses this gap by examining the multidimensional effects of USR on student satisfaction and its subsequent influence on student loyalty. Design/methodology/approach – A quantitative research design was employed using survey data collected from 455 students enrolled at public and private universities in Ho Chi Minh City, Vietnam. USR was conceptualized as a multidimensional construct comprising legal, ethical, operational, philanthropic, and research and development responsibilities. The proposed research model and hypotheses were tested using Partial Least Squares Structural Equation Modeling (PLS-SEM). Findings – The results reveal that ethical, operational, philanthropic, and research and development responsibilities have significant positive effects on student satisfaction, whereas legal responsibility does not exert a significant influence. Among the USR dimensions, operational responsibility is identified as the strongest predictor of student satisfaction. Furthermore, student satisfaction significantly enhances student loyalty, confirming its mediating role in strengthening students' long-term commitment to their universities.

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Originality/value – This study extends the Corporate Social Responsibility literature by providing empirical evidence from Vietnam, an emerging higher education context that has received limited scholarly attention. By examining the differentiated effects of multiple USR dimensions on student satisfaction and loyalty, the study demonstrates that not all dimensions contribute equally to student outcomes. These findings provide a more nuanced understanding of how universities can strategically prioritize specific social responsibility initiatives to enhance student experiences and institutional competitiveness.

Practical implications – The findings suggest that university administrators should prioritize operational excellence, strengthen research and development activities, and promote ethical and philanthropic initiatives to improve student satisfaction and cultivate long-term student loyalty. Strategic investment in these dimensions of USR can contribute to sustainable institutional development and stronger competitive positioning.

Social implications – By encouraging universities to adopt socially responsible practices that better address students' expectations and well-being, this study supports the development of a more sustainable, accountable, and student-centered higher education system, thereby contributing to broader social and educational development.

1. Introduction

Corporate social responsibility (CSR) is not a new concept but continues to attract significant attention in both academia and practice. Originating in the United States in the 1950s, CSR was associated with activities such as charitable donations, community service, employee welfare enhancement, and the promotion of religiously inspired behaviors. The concept gained wider recognition in the 1970s when scholars, environmentalists, consumer rights advocates, human rights organizations, and the media began to question the social responsibilities of corporations, particularly in relation to natural resource exploitation and sustainability concerns (Carroll, 1979, 1991). Subsequent research has examined CSR from multiple perspectives, including consumers,

employees, investors, supply networks, and other stakeholders. Today, CSR is no longer confined to profit-oriented businesses but has expanded to other sectors; however, research on its application in education, especially higher education, remains limited (Muijen, 2004). In an increasingly competitive and diversified environment, universities must adopt strategies to overcome challenges, seize new opportunities (Burcea & Marinescu, 2011), and enhance service quality to improve student satisfaction (Vázquez et al., 2014; Suranta et al., 2024). One of the most popular definition of CSR (Carroll, 1979) claims that “*The social responsibility of business encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time*” (p.500). Ward (2004) acknowledges that the modern corporate social

responsibility (CSR) agenda is evidence that businesses are a part of society and contribute positively to societal goals and aspirations. The CSR concept covers different plentiful fields, with interest of social responsibility in higher education institutions increasing significantly (Carroll, 2015). Practicing social responsibility in universities is not only privileged to the obligation of education but also to satisfy the emerging needs of the society (Vázquez et al., 2014). A number of researches indicated that approaching CSR is critical to the survival of universities (Huempfner & Kopf, 2017).

El-Kassar et al. (2019) emphasized the need for further research on University Social Responsibility (USR) to deepen understanding of its influence on students' perceptions of university-related outcomes, such as service quality and student satisfaction. Such insights are critical, as they provide the foundation for practical applications of USR that can enhance the survival and long-term development of higher education institutions (Fauzi et al., 2024). However, much of the existing literature on CSR and USR has been concentrated in European countries and the United States, with relatively few studies conducted in developing contexts. However, up to date, literature review shows that only a few studies have examined effects of USR on student-related outcomes, like student satisfaction and loyalty (Sánchez-Hernández & Mainardes, 2016). Although a few studies have attempted to understand USR in developing nations (e.g. Gomez, 2014; Plungpongpan et al., 2016; Latif, 2018; Latif et al., 2022; Asrar-ul-Haq et al., 2017), there remains a pressing need to examine whether the consequences of social responsibility observed in Western and South Asian settings are equally applicable to other emerging markets.

The Vietnamese higher education sector presents a valuable yet underexplored context for examining USR. Vietnam has undergone

rapid economic integration alongside significant expansion of its higher education system, leading to intensified competition among universities and a stronger emphasis on institutional reputation and student loyalty; however, limited research has investigated how Vietnamese students perceive USR or the extent to which these perceptions influence key outcomes such as satisfaction and loyalty (Phan Xuân Cường, 2022; Do & Sum, 2024). Addressing these issues within the Vietnamese context not only contributes to the broader USR literature but also offers important implications for higher education institutions in emerging markets seeking to strengthen student – institution relationships in an increasingly globalized environment. Ho Chi Minh City, the nation's largest economic, cultural, and educational hub, was selected as the research setting because it hosts a diverse concentration of public and private universities, attracts students from across the country, and most clearly reflects competitive and globalized higher education dynamics. To address the identified research gap, the present study aims to achieve three objectives: (1) examine students' perceptions of USR dimensions in higher education institutions in Ho Chi Minh City; (2) evaluate the effect of USR dimensions on student satisfaction; and (3) investigate how student satisfaction influences student loyalty within higher education institutions in Vietnam.

2. Literature review and hypotheses development

2.1. Stakeholder theory

Bowen(1953) argued that when organizations engage in social responsibility activities, they must take into account obligations and benefits in a balanced manner from the perspective of stakeholders. Rather than attempting to satisfy all parties equally, firms should focus on managing relationships and meeting the needs of their key stakeholders (Freeman, 2010).

Accordingly, previous researchers have agreed that stakeholder theory is one of the most important theoretical foundations, marking the development of the field of CSR studies (Pérez & Rodríguez del Bosque, 2015). In the context of higher education, learners including undergraduate and graduate students – are considered a critical stakeholder group, as they are directly affected by, and also influence, the strategic decisions of educational institutions (Latif, 2018). University students deserve particular attention because all academic activities are directed toward them; they are not only the recipients of educational services but also co-creators of value with universities during and after their studies. Therefore, this study investigates the impact of USR on brand equity from the perspective of students as key stakeholders in higher education institutions.

2.2. *Stimulus-Organism-Response (S-O-R) model*

The S-O-R model was originally proposed by Mehrabian and Russell (1974) to explain how environmental stimuli influence individuals' internal states and, in turn, shape their behavioral responses. In this framework, stimuli (S) refer to external cues or environmental factors that trigger cognitive or emotional reactions. The organism (O) represents the individual's internal processes, such as perceptions, attitudes, or emotions, that mediate the effect of stimuli. Finally, responses (R) are the observable outcomes, typically reflected in behavioral intentions or actions. The S-O-R model provides an explanatory perspective on behavior with regard to corporate social responsibility (Wu et al., 2022). In the higher education context, the S-O-R model provides a useful lens for understanding how students' perceptions of university social responsibility (stimulus) influence their internal evaluations, such as trust, satisfaction, and perceived service quality (organism), which ultimately drive

behavioral outcomes like loyalty (response). By applying this model, the present study explains not only the direct impact of USR on student loyalty but also the mediating roles of students' internal evaluations in this process.

2.2. *University Social Responsibility*

The concept of University Social Responsibility (USR) originates from Corporate Social Responsibility (CSR), which, according to Carroll (1979), comprises four dimensions: economic, legal, ethical, and philanthropic responsibilities. Within the higher education context, USR represents the adaptation of CSR principles to academic institutions, emphasizing universities' responsibility to integrate social and environmental concerns into their missions while promoting civic engagement and sustainability (Vasilescu et al., 2010). This responsibility is operationalized through four core processes, namely teaching, research, extension, and internal management, each of which generates social impact through educational service delivery and knowledge creation and transfer (Santos et al., 2020).

Scholars argue that USR extends beyond the traditional functions of teaching and research to encompass the ways universities interact with society, including collaboration with government, civil society, and the private sector. Latif (2018) defines USR as a university's commitment to recognizing societal interests and enhancing stakeholder well being through the provision of high quality educational services. Similarly, Esfijani et al. (2013) conceptualize USR as the alignment of all university functions and activities with societal needs, achieved through active, ethical, and transparent engagement with communities to meet stakeholder expectations. From an operational perspective, USR can be assessed based on the extent to which a university fulfills its ethical responsibilities, promotes

research and development, and demonstrates philanthropic commitment (Latif, 2018).

Empirical evidence further highlights the significance of USR in shaping stakeholders' perceptions. For example, Vázquez et al. (2014) found that students' evaluations of USR at the University of León significantly influenced their perceptions of service quality and satisfaction. Phan et al. (2024) support the view that overall perceptions of USR are shaped by four core dimensions, including educational responsibility, cognitive responsibility, social responsibility, and organizational responsibility. Their findings also indicate that USR not only contributes to institutional brand image but also plays a significant role in enhancing faculty satisfaction. In addition, Ouragini and Louzir (2024) emphasize the critical role of USR in promoting sustainable development by prioritizing stakeholder oriented practices within universities. Collectively, these findings suggest that USR remains a crucial research domain for advancing education aligned with sustainable development goals and underscore the need to further examine how perceptions of USR influence different stakeholder groups.

2.4. Hypotheses development

Ethical responsibilities and student satisfaction

Ethical responsibilities represent a university's adherence to fairness, honesty, and transparency in its operations, including academic integrity, fair treatment of students, and accountability in decision-making. Prior studies emphasize that ethical conduct plays a critical role in shaping stakeholder perceptions of organizational legitimacy and trust. Carroll (1991) highlighted ethical responsibilities as a key dimension of corporate social responsibility, beyond mere legal compliance. Extending this to the higher education context, ethical practices ensure that students feel respected and fairly treated, thereby improving their

satisfaction. Empirical research supports this relationship. Several studies confirm that ethical responsibility positively influences stakeholder satisfaction in both business and education contexts. Latif et al. (2021) demonstrated that students' perceptions of ethical and fair practices significantly improve their satisfaction with the institution. Based on these findings, the following hypothesis is proposed:

Hypothesis H1: Ethical responsibilities of universities positively affect student satisfaction.

Research and development responsibilities and student satisfaction

Research and development (R&D) responsibilities in higher education refer to a university's commitment to generating new knowledge, promoting innovation, and integrating research outcomes into teaching and community engagement (Latif, 2018). This responsibility goes beyond academic instruction by ensuring that students are exposed to cutting-edge knowledge, modern technologies, and innovative learning opportunities. From the perspective of stakeholder theory, students - being primary stakeholders, expect universities to create value not only through teaching but also by advancing research and innovation. When universities actively engage in R&D, students benefit from high-quality curricula enriched by current knowledge, which enhances their satisfaction with the educational experience (Benneworth & Jongbloed, 2010). Empirical studies have confirmed that research excellence and innovation are strongly associated with positive student perceptions and satisfaction. Similarly, Sánchez-Hernández & Mainardes (2016) showed that universities with strong R&D commitments improve institutional image and perceived value among students, thereby increasing satisfaction. More recently, in the higher education context, Latif et al. (2021) demonstrated that students' perceptions

of research and development responsibilities significantly improve their satisfaction with the institution. Based on this evidence, the following hypothesis is proposed:

Hypothesis H2: Research and development responsibilities of universities positively affect student satisfaction.

Philanthropic responsibilities and student satisfaction

Philanthropic responsibilities represent a university's voluntary initiatives that go beyond its core economic, legal, and operational obligations. These include scholarships, community service programs, social contributions, sustainability campaigns, and support for disadvantaged groups. In higher education, philanthropic actions reflect the institution's willingness to invest in the well-being of society and future generations, which enhances its image and strengthens the emotional connection with students.

According to stakeholder theory (Freeman, 2010), organizations create value not only for shareholders but also for broader communities. When universities engage in philanthropic activities, they demonstrate a commitment to societal well-being, which students perceive as an indicator of institutional responsibility and moral integrity. This perception contributes positively to students' attitudes and satisfaction because they feel proud to be associated with a socially responsible institution. Empirical research confirms this relationship. Similarly, Latif et al. (2021) reported that philanthropic responsibility, such as community engagement and social initiatives, fosters students' satisfaction, thereby enhancing their loyalty. Based on these insights, the following hypothesis is proposed:

Hypothesis H3: Philanthropic responsibilities of universities positively affect student satisfaction.

Operational responsibilities and student satisfaction

Operational responsibilities in the university context refer to the institution's commitment to ensuring effective administration, transparent governance, and high-quality delivery of academic and non-academic services. This dimension includes the management of teaching quality, curriculum design, infrastructure, student services, and the overall efficiency of institutional operations. Well-managed operations signal accountability and reliability, which directly shape students' experiences. Zeithaml et al. (1996) emphasized that service quality is a major determinant of satisfaction, and this logic can be extended to higher education. Alves and Raposo (2007) demonstrated that students' satisfaction with higher education institutions is largely influenced by perceptions of operational quality, including teaching delivery and support services. More recent work by Sultan and Wong (2019) highlighted that service operations in higher education, such as academic resources, scheduling, and responsiveness are crucial determinants of satisfaction and loyalty. Based on these insights, the following hypothesis is proposed:

Hypothesis H4: Operational responsibilities of universities positively affect student satisfaction.

Legal responsibilities and student satisfaction

Legal responsibilities refer to a university's obligation to comply with educational laws, regulations, and accreditation standards established by governmental and professional bodies. These responsibilities include ensuring transparency in admission processes, protecting students' rights, maintaining academic integrity, and adhering to safety and labor laws. Empirical research supports this relationship. Carroll (1991) emphasized that

legal responsibility is a foundational dimension of corporate social responsibility, which is essential to gain stakeholder approval. Legal responsibilities in higher education play a critical role in shaping students' perceptions of fairness and their overall satisfaction with the university experience. When universities clearly fulfill their legal obligations, such as ensuring transparency in academic requirements, providing a safe campus environment, and protecting students' rights, students tend to feel more secure and valued, which enhances their satisfaction levels. For instance, Middlemiss (2010) emphasized that universities may be held legally accountable for breaching contractual obligations with students, highlighting the importance of aligning institutional practices with students' expectations. Similarly, the Higher Education Policy Institute (2022) argued that introducing a statutory duty of care would strengthen student trust and satisfaction by ensuring their wellbeing is systematically protected. Based on these insights, the following hypothesis is proposed:

Hypothesis H5: Legal responsibilities of universities positively affect student satisfaction.

Student satisfaction and loyalty

Student satisfaction reflects the overall evaluation of their educational experience, including academic quality, administrative services, campus environment, and the university's social responsibility. Satisfaction is often considered a critical predictor of loyalty, as it reflects how well an institution meets or exceeds students' expectations. When students

are satisfied with their university experience, they are more likely to remain committed, continue their studies, recommend the institution to others, and even support the university after graduation as loyal alumni. Oliver (1999) explains this relationship by suggesting that when students perceive that their expectations are met or exceeded, satisfaction occurs, which in turn drives loyalty. In the context of higher education, loyalty is commonly reflected in behaviors such as positive word of mouth, intentions to pursue further studies at the same institution, and the willingness to recommend the university to others. A substantial body of empirical evidence supports the relationship between satisfaction and loyalty. Specifically, Helgesen and Nasset (2007) demonstrated that student satisfaction exerts a significant influence on loyalty within Norwegian universities. Similarly, in the Asian higher education context, Sultan and Wong (2019) found that satisfaction functions as a mediating mechanism between perceived service quality and student loyalty, underscoring its pivotal role in fostering enduring student–university relationships. Latif et al. (2021, 2022) confirmed positive effect of student satisfaction on student loyalty. Based on these insights, the following hypothesis is proposed:

Hypothesis H6: Student satisfaction positively affects student loyalty.

Figure 1 illustrates the proposed hypotheses for the study, showing the relationships among the constructs.

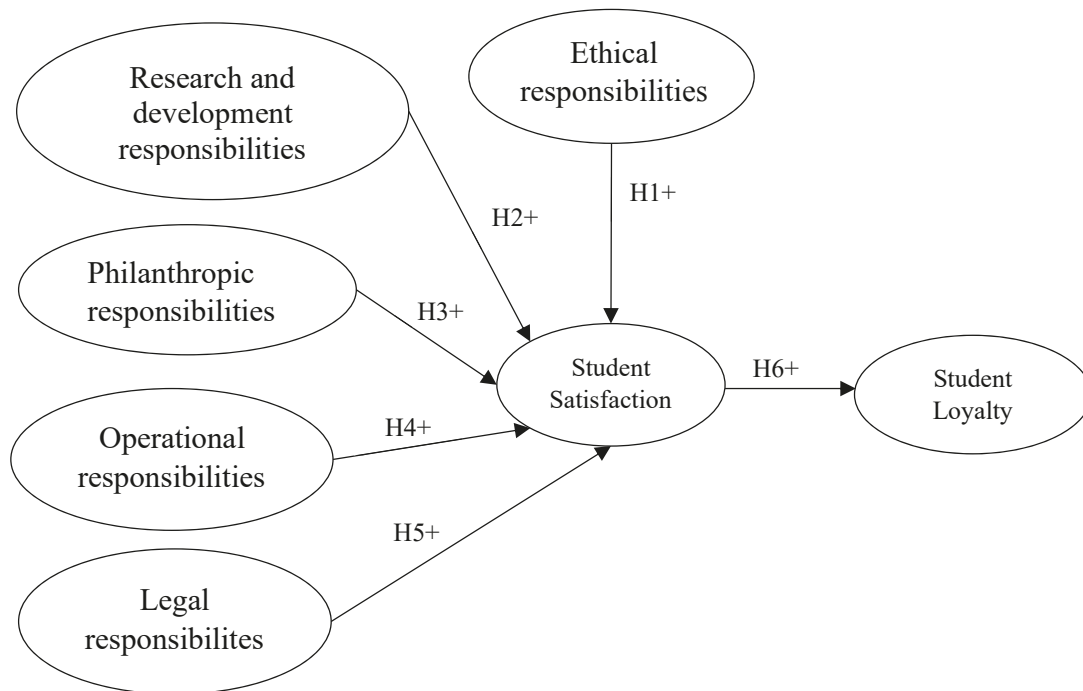


Figure 1. Proposed research model

3. Methodology

This study employed a quantitative methodology. The final dataset comprised responses from 445 students enrolled in two types of universities (public and private sector) in Ho Chi Minh City, collected through paper-based survey questionnaires. The study employed a convenience sampling method due to the ease of access to student respondents and the practical constraints associated with surveying multiple higher education institutions in Ho Chi Minh City. Convenience sampling is widely used in higher education research, particularly when the target population is large and geographically dispersed, and when institutional permissions or administrative barriers limit the feasibility of random sampling approaches. Although, this method may reduce the representativeness of the sample, it facilitates efficient data collection from students who are actively engaged in university activities, thereby providing relevant insights into their perceptions of USR. Participation was entirely

voluntary, and respondents were informed in advance about the purpose of the study.

Among the eight major academic fields in Ho Chi Minh City, the economics-related field was selected for this study. Out of the 455 respondents, 85 (18.7%) were male and 370 (81.3%) were female, indicating a strong predominance of female participants, which aligns with the fact that economics programs traditionally have higher female enrollment. Regarding the institutional sector, 148 respondents (32.5%) were enrolled in private universities, while the majority, 307 respondents (67.5%), were from public universities. According to the report of the People's Committee of Ho Chi Minh City, as of June 2024, the city hosts a total of 58 higher education institutions, comprising 46 public institutions (approximately 79.3%) and 12 private universities (approximately 20.7%). Overall, the dataset is largely representative of female students and students from public sector institutions in Ho Chi Minh City.

All constructs and items were developed based on previous studies to design questionnaire (see *Appendix 1 online*). Five dimensions with 21 items of USR scale were extracted from Latif et al. (2018); student satisfaction (3 items) was adapted from Annamdevula and Bellamkonda (2016); student loyalty (3 items) from El-Kassar et al. (2019). The questionnaire was design and divided into two sections: The first section measured the demographic characteristics of the participants, and section two measured the respondents' perception of the constructs in the model. Respondents were asked to rate each item according to a 5-point Likert scale, with anchors ranging from 1 (strongly disagree) to 5 (strongly agree). To evaluate the potential influence of common method variance (CMV) on the study's findings, Harman's single-factor test was performed (Podsakoff et al., 2003). All measurement items were subjected to an exploratory factor analysis without rotation to determine whether a single factor would account for the majority of the variance. The analysis revealed that the first factor explained only 30.9% of the total variance, well below the 50% threshold, indicating that CMV is unlikely to threaten the validity of the study's results.

In this study, partial least squares structural equation modeling (PLS-SEM) was employed to analyze both the measurement and structural models. PLS-SEM was chosen because it is well suited for research models with multiple latent variables and complex relationships, and it is particularly appropriate for exploratory studies and predictive research (Hair et al., 2017; Henseler et al., 2009). Unlike covariance-based SEM, PLS-SEM does not require strict assumptions of data normality and can handle small to medium sample sizes effectively (Hair et al., 2017). Moreover, PLS-SEM enables the simultaneous estimation of measurement models, assessing reliability and validity, and structural models, testing hypothesized relationships, making it suitable

for examining multidimensional constructs such as University Social Responsibility (USR), student satisfaction, and student loyalty. To assess the significance of path coefficients and model estimates, the bootstrapping resampling method with 5000 re-samples was applied (Hair et al., 2017).

4. Results and discussion

4.1. Measurement model analysis

Composite reliability: Cronbach's alpha and composite reliability scores were used to examine the internal consistency and reliability. The construct is considered reliable when the Cronbach's alpha score and composite reliability score are above the recommended cut-off of 0.7 (Hair et al., 2017). As shown in Appendix 2 (see *Appendix 2 online*), composite reliability scores and Cronbach's alpha values of all latent constructs were found to meet the threshold criterion. Hence, the reliability of the measurement model was satisfactory.

Convergent validity: Convergent validity is supported if average variance extracted (AVE) estimates for each underlying construct exceed 0.50 (Hair et al., 2017). As displayed in table 2, convergent validity was supported by the AVE scores of all the latent constructs, which were ranging from 0.715 to 0.824 and well above the required minimum level of 0.50. The outer loadings (table 3) were examined to evaluate the correlations between the latent variables and the reflective indicators in the outer model. As shown in Appendix 2 (see *Appendix 2 online*), all the outer loading scores were above 0.78, demonstrating convergent validity of latent constructs was confirmed (Hair et al., 2017).

Discriminant validity: The Fornell-Larcker criterion is used to assess discriminant validity by comparing the square roots of the Average Variance Extracted (AVE) with the correlations between constructs (Fornell & Larcker, 1981). In this study, the square roots

of AVEs (displayed on the diagonal in bold) are consistently higher than the corresponding inter-construct correlations. For example, the square root of AVE for ethical responsibilities is 0.845, which is greater than its correlations with other constructs such as research and development responsibilities (0.524) or student loyalty (0.502). Similarly, student satisfaction shows a square root of AVE of 0.885, higher than its correlations with research and development responsibilities (0.381), operational responsibilities (0.402), and student loyalty (0.398). These results confirm that all constructs in the model meet the Fornell-Larcker criterion, thereby establishing satisfactory discriminant validity. This implies that each construct is empirically distinct and captures phenomena not represented by other constructs in the model (*see Appendix 3 online*).

4.2. Structural model results

The structural model was analyzed to assess the hypothesized relationships among the constructs. The findings provide empirical support for several hypotheses and highlight how different dimensions of university social responsibility (USR) shape student satisfaction and loyalty. Interpreted through the Stimulus–Organism–Response (S–O–R) framework, USR dimensions function as external stimuli that influence students' internal evaluations, which in turn generate satisfaction and loyalty as behavioral responses.

First, ethical responsibilities exert a significant positive influence on student satisfaction ($\beta = 0.123$, $p = 0.023$), thereby supporting H1. This result suggests that ethical and fair practices function as salient institutional stimuli that shape students' internal evaluations of their educational experiences, leading to higher satisfaction. From a stakeholder perspective, ethical responsibility reflects universities' commitment to meeting students' expectations as key stakeholders, while within

the Stimulus–Organism–Response framework, such practices influence students' trust and perceived fairness, which subsequently translate into more favorable attitudinal responses. This finding is consistent with Carroll's (1979, 2015) conceptualization of ethics as a core CSR dimension and aligns with prior studies demonstrating that ethical conduct fosters trust and positive student attitudes (Latif et al., 2021).

Second, research and development responsibilities exert a significant positive effect on student satisfaction ($\beta = 0.205$, $p = 0.000$), thereby supporting H2. This finding suggests that universities' commitment to research excellence and innovation serves as an important institutional stimulus that enhances students' perceptions of academic quality and learning value. From a stakeholder perspective, R&D activities signal responsiveness to students' expectations regarding knowledge creation and future employability, while within the Stimulus–Organism–Response framework, such commitments influence students' internal evaluations of academic enrichment, leading to higher satisfaction. This result is consistent with prior studies demonstrating that research performance strengthens institutional reputation and educational quality, which in turn fosters student satisfaction (Vázquez et al., 2016; Benneworth & Jongbloed, 2010; Sánchez-Hernández & Mainardes, 2016; Latif et al., 2021).

Third, philanthropic responsibilities have a significant positive effect on student satisfaction ($\beta = 0.099$, $p = 0.028$), thereby supporting H3. Although this effect is weaker than that of other USR dimensions, it underscores the role of universities' philanthropic engagement in shaping students' affective evaluations. Philanthropic initiatives signal an institution's commitment to societal well being beyond its academic functions and, in emerging higher education contexts, can foster students' pride and emotional attachment to their universities.

This finding is consistent with Latif et al. (2021), who emphasize that philanthropic practices enhance students' institutional identification. Moreover, the result aligns with Carroll's (2015) CSR framework, which positions philanthropic responsibility as a complementary dimension that strengthens stakeholder goodwill. From a Stimulus–Organism–Response perspective, philanthropic responsibility serves as an external stimulus that influences students' internal psychological states, thereby contributing indirectly to higher levels of satisfaction.

Fourth, the finding that operational responsibilities exert the strongest positive influence on student satisfaction ($\beta = 0.268$, $p = 0.000$), thereby supporting H4, underscores the central role of universities' day to day operational performance in shaping students' overall evaluations. Operational responsibilities, which encompass the effectiveness of academic delivery, adequacy of physical and digital infrastructure, administrative efficiency, and the quality of student support services, directly affect students' routine interactions with the institution. As a result, students are more likely to form satisfaction judgments based on these tangible and experiential aspects rather than on less observable dimensions of responsibility. This result is particularly salient in the context of higher education institutions in emerging economies, where expectations regarding service reliability and operational consistency are increasingly aligned with those of service oriented organizations. Consistent with prior studies (Alves & Raposo, 2007; Sultan & Wong, 2019), operational effectiveness emerges as the most immediate and salient determinant of students' daily experiences, reinforcing its dominant role in shaping satisfaction. These findings suggest that universities seeking to enhance student satisfaction should prioritize

improvements in operational excellence as a foundational component of their broader USR strategies.

In contrast, legal responsibilities did not have a significant effect on student satisfaction ($\beta = 0.008$, $p = 0.873$), leading to the rejection of H5. The finding that legal responsibilities did not significantly influence student satisfaction can be explained by the fact that compliance with laws and regulations is generally perceived by students as a basic and non-negotiable obligation of universities rather than an additional value-creating practice. In higher education, legal conformity in areas such as accreditation, safety standards, or regulatory adherence is taken for granted, as students expect institutions to meet these requirements automatically. Consequently, the fulfillment of legal responsibilities does not positively differentiate a university or enhance satisfaction levels, but any failure to comply could seriously damage its reputation and trustworthiness. This aligns with prior evidence by Vázquez et al. (2016), who emphasized that students are more likely to evaluate their educational experiences based on ethical conduct, operational efficiency, and social engagement, which are perceived as more directly impactful on their well-being and academic success than legal compliance.

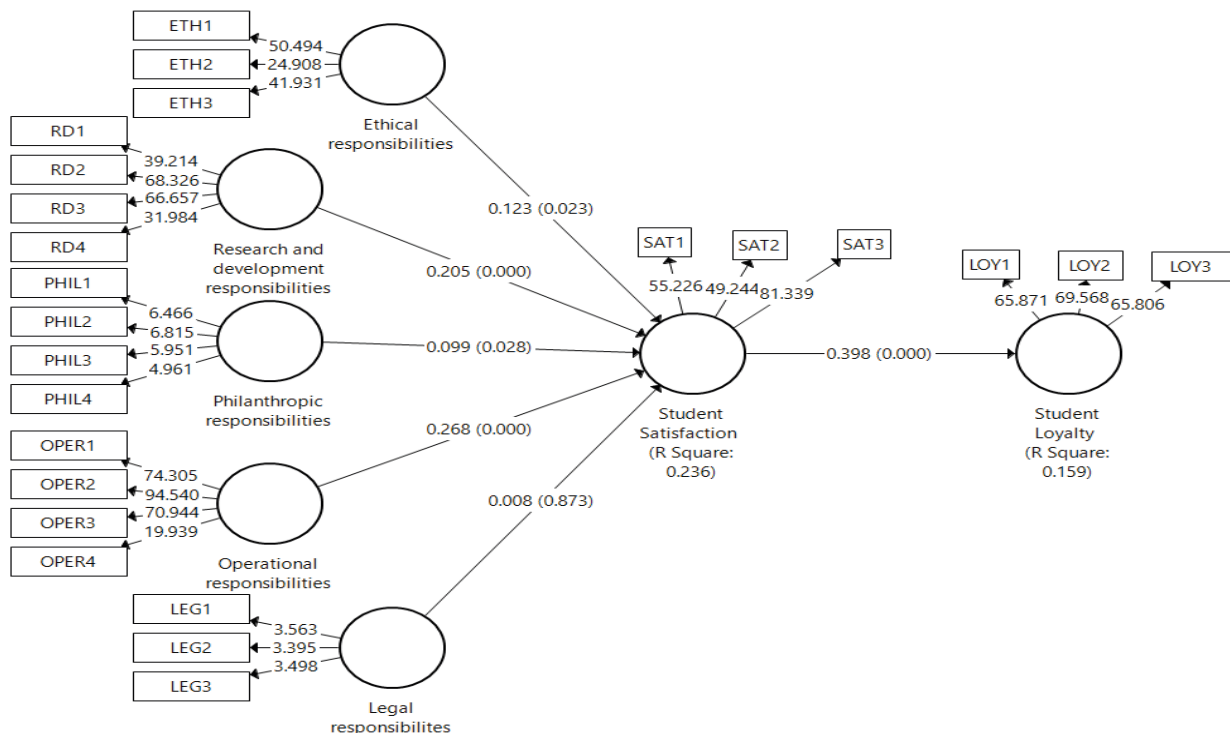
Finally, student satisfaction is found to significantly predict student loyalty ($\beta = 0.398$, $p = 0.000$), supporting H6. This reinforces the well-established relationship between satisfaction and loyalty in higher education. Consistent with Oliver's (1999) loyalty model and subsequent studies (Alves & Raposo, 2007; Helgesen & Nasset, 2007; Sultan & Wong, 2019; Latif et al., 2021, 2022), the findings confirm that satisfied students are more likely to remain committed to their institutions and to engage positively as alumni.

Table 1. Testing hypotheses results

Hypotheses	Effect coefficients	P values	Supported
H1: Ethical responsibilities -> Student Satisfaction	0.123	0.023	Yes
H2: Research and development responsibilities -> Student Satisfaction	0.205	0.000	Yes
H3: Philanthropic responsibilities -> Student Satisfaction	0.099	0.028	Yes
H4: Operational responsibilities -> Student Satisfaction	0.268	0.000	Yes
H5: Legal responsibilites -> Student satisfaction	0.008	0.873	No
H6: Student satisfaction -> Student loyalty	0.398	0.000	Yes

The model explains 23.6% of the variance in student satisfaction ($R^2 = 0.236$) and 15.9% of the variance in student loyalty ($R^2 = 0.159$). The R^2 value of 0.236 for student satisfaction indicates that ethical, research and development, philanthropic, operational, and legal responsibilities together explain nearly one-quarter of the variance in satisfaction. Although this is not a high proportion, it still demonstrates that university social

responsibility (USR) dimensions play a meaningful role in shaping student satisfaction. This aligns with findings by Vázquez et al. (2014), Latif et al (2021, 2022), who also reported modest explanatory power of USR constructs in predicting satisfaction, suggesting that student satisfaction is influenced not only by social responsibility but also by other institutional and personal factors (e.g., teaching quality, personal values, peer influence).

**Figure 2.** Path model result

Similarly, the R^2 value of 0.159 for student loyalty shows that satisfaction explains about 16% of the variance in loyalty. While this figure is relatively low, it supports the well-established notion that satisfaction is an important but not the sole determinant of loyalty. Prior studies in higher education (Helgesen & Nettet, 2007; Alves & Raposo, 2007) have also found that loyalty is a complex construct shaped by multiple drivers, including brand image, perceived value, and emotional attachment, in addition to satisfaction. Taken together, the results suggest that while USR dimensions significantly contribute to satisfaction, and satisfaction in turn drives loyalty, additional factors beyond the scope of USR may be necessary to achieve stronger explanatory power. Future research could integrate variables such as institutional reputation, student engagement, and perceived value of education to enhance the model's predictive ability.

5. Conclusion and policy implications

This study provides empirical evidence that different dimensions of university social responsibility exert varying degrees of influence on student satisfaction and loyalty. The structural relationship analysis confirmed that five of the six proposed hypotheses were statistically significant, providing support for the majority of the study's theoretical predictions. The strongest and most significant effect emerged from student satisfaction to student loyalty, highlighting satisfaction as a critical determinant of loyalty. Among the responsibility dimensions, operational responsibilities exerted the greatest influence on student satisfaction, followed by research and development responsibilities, ethical responsibilities and philanthropic responsibilities. In contrast, the hypothesis related to legal responsibilities was not supported, suggesting that legal compliance is perceived as a basic institutional requirement or hygiene factor, offering no additional contribution to enhanced student satisfaction.

Overall, the findings demonstrate that student satisfaction plays a pivotal role in shaping student loyalty, emphasizing its strategic value for the sustained development of higher education institutions. Universities that move beyond basic legal compliance and proactively invest in ethical practices, efficient operations, research advancement, and community-oriented initiatives are better positioned to nurture positive student experiences, ultimately enhancing long-term reputation and competitive advantage. The results further indicate that operational effectiveness and performance-driven outcomes constitute the strongest contributors to student satisfaction, which subsequently exerts a substantial influence on loyalty. This evidence reinforces the hierarchical logic of the S-O-R framework, in which university responsibilities (Stimuli) shape students' perceptions and evaluations (Organism), leading to behavioral outcomes such as loyalty (Response). Importantly, internal responsibilities that directly affect the academic and service environment are closely connected to students' rights, expectations, and the core educational mission of universities, underscoring their essential role in promoting satisfaction and sustained commitment.

The findings provide several important implications for higher education managers and policymakers. *First*, the significant effect of ethical responsibilities on student satisfaction highlights the need for universities to foster a culture of fairness, transparency, and integrity in all academic and administrative practices. Managers should ensure that ethical guidelines are consistently applied in student-faculty interactions, assessment processes, and institutional communication to build trust and reinforce credibility.

Second, the strong influence of research and development responsibilities suggests that universities should continue to invest in research capacity, innovation, and knowledge

creation. Strengthening R&D not only improves academic reputation but also enhances students' perceptions of learning quality. Therefore, allocating resources to research infrastructure, supporting faculty research projects, and integrating research outcomes into teaching are essential strategies to raise satisfaction.

Third, the positive impact of philanthropic responsibilities implies that universities should expand their engagement with community service, social initiatives, and sustainability projects. Such activities demonstrate institutional commitment beyond academics, instilling pride and emotional attachment among students. Managers can encourage student participation in these initiatives to further strengthen their connection with the institution.

Fourth, the results show that operational responsibilities have the strongest effect on satisfaction, underlining the importance of efficient operations, quality teaching, and responsive services. This suggests that university leaders should prioritize improvements in teaching quality, digital learning tools, campus facilities, and administrative processes. Enhancing day-to-day academic and service experiences is critical to shaping positive student perceptions.

In contrast, legal responsibilities did not significantly affect satisfaction, suggesting that compliance with regulations is seen as a minimum requirement rather than a differentiating factor. While universities must continue to meet legal standards, management should recognize that exceeding these basic requirements through ethical, operational, and community-oriented practices will generate greater satisfaction and loyalty. Finally, as student satisfaction strongly predicts loyalty, universities should view satisfaction as a strategic outcome that drives long-term institutional success. By continuously monitoring and

improving the dimensions of responsibility that most influence satisfaction, universities can cultivate loyal students who remain engaged as alumni and contribute positively to the institution's reputation and sustainability.

Limitations and future research direction

Despite its contributions, this study is subject to several limitations that open avenues for future research. *First*, due to resource constraints, data were collected from universities within a single geographical context using convenience sampling, which may limit the generalizability of the findings to other higher education systems. To address the limitation of convenience sampling, future research could employ more diverse and efficient sampling methods, such as quota or stratified sampling across various academic fields, to enhance sample representativeness. Moreover, multi-group analyses could be conducted to examine potential differences between student groups.

Second, the study employed a cross-sectional design, which restricts the ability to draw causal inferences. Longitudinal research would provide deeper insights into how student perceptions of responsibility evolve over time and how these perceptions translate into sustained loyalty after graduation. Third, although this study examined five dimensions of USR, other potentially relevant factors, such as environmental sustainability practices, digital transformation initiatives, and international partnerships, were not included. Future research could extend the model by incorporating these emerging responsibilities to provide a more comprehensive understanding of student perceptions. Finally, the study relied on self-reported data, which may be subject to common method bias and social desirability effects. Employing mixed-method approaches, including qualitative interviews or secondary data analysis, could enrich future findings and provide a more nuanced understanding of

how responsibility practices influence student outcomes.

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Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

AI Usage Statement

During the preparation of this manuscript, the authors used ChatGPT (OpenAI) and Grammarly to assist with academic language editing, improving clarity, grammar, and manuscript structure. The authors carefully reviewed, revised, and verified all generated content and take full responsibility for the accuracy, originality, and integrity of the final manuscript.

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