Unpacking CSR in women-owned SMEs: Innovation and competitive advantage as pathways to performance

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Abstract

This research examines the impact of corporate social responsibility (CSR) on innovation (IN) and business performance (BP), emphasizing the mediating effects of innovation and competitive advantage (CA). Additionally, it investigates how innovation orientation (IO) directly influences IN and moderates the connection between CSR directed at employees and innovation. Data was gathered from 688 managers of women-owned small and medium-sized enterprises (SMEs) in Vietnam. The findings indicate that CSR initiatives aimed at employees, customers, suppliers, and the environment significantly boost IN within women-owned SMEs. Among these, CSR directed at customers shows the strongest impact, while environmental responsibility has the weakest. IN, in turn, significantly contributes to CA and BP. Both IN and CA mediate the link between CSR and BP. Additionally, IO not only promotes IN but also strengthens the effect of CSR toward employees on IN. These findings provide valuable insights into how CSR initiatives and IO drive performance and competitiveness in women-led SMEs in emerging markets.

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Keywords: Social responsibility, innovation, competitive advantage, business performance, small and medium enterprises

1. Introduction

Recent research has demonstrated that the implementation of social responsibility practices can lead to heightened levels of IN [1, 2]. Herrera [3] notes that engaging stakeholders in the product IN process can also promote internal process IN within organizations. In this framework, IN acts as a strategic response to the changing demands of stakeholders. Furthermore, as highlighted by Barney [4], the resource-based view (RBV) suggests that CA can be achieved through improved IN capabilities [5, 6]. When enterprises actively engage in CSR initiatives with their stakeholders, they tend to generate novel ideas and approaches. Such engagement not only strengthens a firm's public image and profitability but also improves efficiency and helps secure sustainable competitive positioning [7]. Notwithstanding these findings, a considerable gap persists in the literature concerning the cohesive implementation of the resource-based stakeholder theory [8, 9]. While prior research has explored the link between social responsibility and IN and further examined how IN affects CA



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and business performance (BP)-including CA's mediating role in the IN-performance relationship—more empirical studies are needed to bridge this theoretical and practical divide.

An emphasis on IN fosters a willingness to take risks and improves the ability to develop entirely new and creative products [10]. An IN-driven approach encompasses a mindset and leadership that promote sustainability and continuous IN within organizations [11]. Embracing IN offers significant advantages for businesses, including the ability to maintain or expand market share and outpace competitors [12, 13]. The lack of alignment between customer preferences and expectations greatly hinders a company's capacity to meet current products by simply making slight adjustments or enhancing IN [2, 14]. Encouraging social responsibility among employees will enhance their creativity and IN [15, 16]. The influence of IO on IN and its capacity to moderate the relationship between social responsibility towards employees and corporate IN remains limited. Therefore, exploring and advancing the connection between these factors is essential in validating the importance and advantages of IN focus in improving enterprise IN processes.

Our research helps address the existing gap in both theoretical and practical understanding of IN's causes and effects and provides guidance for businesses to enhance their social responsibility and IN capabilities. Initially, our research combines stakeholder theory on resources [17, 18] as a unified theoretical perspective to examine the origins and outcomes of IN and creativity in companies. This research framework provides an in-depth examination of how social responsibility affects IN, competitive advantage (CA), and overall business performance. Additionally, it deepens our understanding of the relationship between social responsibility and IN, the role of IN orientation (IO) in this dynamic, and how social responsibility influences employees and IN through IN orientation. This study also contributes to the existing literature by affirming the beneficial effects of IN on CA and BP. Specifically, it analyzes the mediating roles of IN and CA in the relationship between social responsibility and BP within women-owned SMEs in Vietnam.

2. Development of the theory and hypotheses

2.1. Theory

Stakeholder theory gained prominence in the mid-1980s [19, 20], highlighting that corporations have responsibilities not just to their shareholders but also to a wider array of stakeholders, including customers, suppliers, and employees [21]. From this perspective, organizations are also expected to meet their social responsibilities toward external groups, including the community and the natural environment [22]. Scholars have noted that firms focusing on addressing stakeholder needs, commonly referred to as stakeholder orientation-tend to experience improvements in business performance [23]. Despite the growing attention to stakeholder-related responsibilities, academic discourse presents numerous definitions and theoretical approaches to CSR, which can create challenges for companies seeking practical application [24, 25]. Still, a common theme among these definitions is the recognition of CSR as a voluntary commitment by firms to take on a range of duties that surpass basic legal requirements [26, 27], particularly regarding their stakeholders.

Resource-based theory [4, 28] asserts that organizations achieve sustainable CA through the development of unique capabilities or resources that are valuable, rare, difficult to replicate, irreplaceable, and non-transferable [29-31]. Confronted with both external and internal demands to adopt and modify eco-friendly organizational practices, social responsibility is gaining significance [32]. The ability to innovate is a crucial element influencing business performance. IN acts as the key driver for organizations to create CA and improve their BP. It serves as an essential tool for managers to leverage competitive capabilities by developing new resources and utilizing new knowledge [33]. IN serves as a tactic that companies employ to gain a CA by developing unique products that are unavailable elsewhere, offering better services, and delivering them at faster, more affordable prices [34]. By innovating in products, processes, and business models, companies generate competition and secure lasting competitive edges. Business CA is attained when products or services exhibit distinct superiority over standard offerings in the relevant industry, or when they are priced lower than those of rival companies [35].

The study integrates the resource-based stakeholder perspective into a cohesive theoretical framework to analyze the determinants and impacts of IN within organizations. Due to the scarcity of research in this area [17, 18], we performed this research using the resource-based stakeholder theory to gain deeper insights into how the stakeholder approach to CSR influences IN, CA, and BP in SMEs.

2.2. Hypotheses development

2.2.1. CSR and IN

CSR is a continually evolving concept [36, 37], reflecting a company's voluntary commitment to address responsibilities beyond legal requirements [26, 27], considering the interests of stakeholders [38]. CSR initiatives help companies build new relationships with local communities and environmental groups-and strengthen existing ones [39]. By exhibiting benevolence and reliability [40], firms can increase stakeholder trust, satisfaction, and loyalty [41, 42].

Encouraging a company's innovative ability through stakeholder knowledge is crucial for IN [43]. By adopting CSR towards stakeholders, the firm will enhance the transfer of new external knowledge from stakeholders, thereby broadening its knowledge base. This type of external knowledge, driven by CSR, frequently conflicts with the company's internal knowledge, which can encourage "creative leaps" (i.e., connecting two or more unrelated ideas or concepts, leading to the development and implementation of novel product INs) [16, 44].

H1: CSR toward employees positively influences corporate IN (H1a). Likewise, fulfilling responsibilities to customers (H1b), suppliers (H1c), the community (H1d), and the environment (H1e) each contribute positively to a firm's IN capacity.

2.3. CSR to employees, IN and IO

Recent studies have increasingly concentrated on the creative and innovative behaviors of employees in the execution of CSR. The successful implementation of CSR initiatives by employees fosters a greater generation of novel ideas for both product and process IN ([16], and the focus on IN within companies is crucial for carrying out social responsibility to drive IN within the enterprise. IO influences an organization's IN efforts and guides strategy development and implementation to boost IN within the company [45, 46]. Businesses focused on IN have the potential to surpass their rivals by either updating current products or introducing new ones that meet the needs of customers [47, 48]. Hence, businesses that adopt social responsibility initiatives will enhance IN within their operations. However, IO has a direct impact on IN within enterprises and also serves as a moderating factor in the relationship between employee social responsibility and IN. Consequently, we propose the following hypotheses:

H2: IO has a positive impact on business IN.

H3: IO actively regulates social responsibility towards employees and corporate IN.

2.3.1. IN and CA

IN encompasses the development of new products, business processes, and modifications that yield increased value [49]. Firms exhibiting elevated IN will create and maintain a competitive edge [50-52]. Gaining a CA entails that a company has resources and skills that are better than its rivals, which allows the company to provide greater value to its customers [53]. More adaptable, innovative firms will be capable of adjusting to larger shifts. These traits safeguard them during uncertain times, enabling a swift response to changes, the recognition of emerging opportunities, and the enhancement of current opportunities more effectively than their rivals. Thus, CA may arise from an organization's adaptability and its ability to efficiently adapt to alterations [51].

Innovative pricing strategies for products serve an essential function in establishing a competitive edge. Innovating pricing focuses more on selecting the right pricing model rather than the number of options, allowing the organization to achieve profitable growth and ensure customer satisfaction [54]. Conversely, the green

process IN serves as a foundation for sustainable CA for companies. As environmental regulations tighten and public awareness rises, the presence of eco-friendly products and practices significantly influences the creation of CAs [55].

H4: IN positively influences the CA of companies.

2.3.2. IN, CA, and BP

Research has focused on the link between IN and BP, emphasizing the direct correlation between these two elements [56, 57]. It is expected that the implementation of innovative strategies will lead to increases in sales, profits, and employment levels. Profitability has been evaluated using metrics such as profit margin, total profit, and profit per employee, while sales per employee have been utilized as a measure of productivity, reflecting a company's performance [58, 59]. Anticipations for growth, especially in sales, are often linked to the progress of product INs [60]. Nevertheless, current research has yielded inconsistent findings regarding this connection.

Certain researchers indicate that growth requires a more precise categorization, such as classifying firms as declining, stable, growing, or hyper-growing. It is discovered that in the rapidly expanding group, innovators achieved greater sales growth than non-innovators. Huergo and Jaumandreu [61] discovered a positive correlation between process enhancement and business performance. They discovered that in smaller companies, implementing process improvements led to productivity gains and BP that lasted approximately a year, whereas in larger companies, the life cycle was extended, and this performance stemmed from CAs. This presents a chance to capitalize on the market and counteract competitive dangers in the sector [62]. However, previous studies have not clarified the mediating function of corporate accountability (CA) in the connection between social responsibility and business performance.

- H5: CA has a positive impact on business performance
- H6: IN has a positive impact on business performance.
- H7: IN has a positive impact on BP with the mediating role of CA.

2.3.3. CSR, IN, CA, and BP

CSR and CA are facilitated through the process of learning and IN, by highlighting the values of managers along with strategies and actions that require ongoing updates [63]. Figure 1 shows proposed framework.

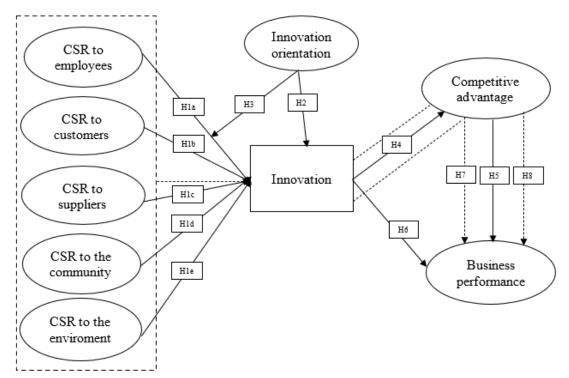


Figure 1. Proposal framework

Moreover, IN within a company enables businesses to enhance production and refine management methods, resulting in higher profitability [64]. Social responsibility is viewed as a genuine avenue or origin of IN [65-67]. Firms that embrace enhanced CSR are more prone to enhance and innovate their products, processes, marketing, and various activities for the benefit of their stakeholders. Consequently, IN usually enhances business performance. Corporate IN greatly boosts the financial success of the organization [64]. Likewise, other earlier research, such as Przychodzen and Przychodzen [68], Kankam-Kwarteng, et al. [69], Zanjirchi, et al. [70], and Bigliardi and Galati [71] indicated that IN can enable a company to attain exceptional performance; therefore, it could significantly impact a company's overall BP. Thus, IN and corporate accountability may serve as mediators in the relationship between CSR and BP. However, this aspect has not been thoroughly explored in previous studies. As a result, the research proposes the following hypotheses:

H8: Social responsibility toward employees, customers, suppliers, the community, and the environment positively influences BP through the mediating roles of IN and CA (H8a-H8e).

3. Methodology

3.1. Measurement

The measurement scales utilized in the research model are adapted from previous studies. The research team conducted interviews with experts, specifically 3 company directors from a garment manufacturing and trading firm, a furniture and construction business, and a plastic glass manufacturing enterprise, regarding the scale's content. The findings from the expert interviews indicated that the scale content derived from earlier studies is entirely appropriate for the research setting in Vietnam.

To ensure consistent interpretation of the survey items, the study conducted pilot interviews with 20 managers from women-owned SMEs in Vietnam. These individuals possessed substantial expertise in CSR, IN, CA, and BP, particularly within enterprises operating in sectors such as textiles, cosmetics, food processing, tourism, and health and beauty services. Each interview, arranged in advance, lasted between 60 and 90 minutes and addressed core themes related to CSR, IN, CA, and BP in the context of women-led SMEs. Insights from these interviews were used to refine and tailor the questionnaire to the specific characteristics of the target enterprises. The final survey instrument comprised five sections: CSR (including responsibility to employees – 5 items, customers - 4 items, society - 4 items, community - 4 items, and the environment - 4 items); IO with 4 items; IN with 6 items; CA with 7 items; and BP with 5 items.

The authors created a survey made up of 2 sections. The initial section includes 43 questions that target 9 variables of the research framework. The evaluated variables are analyzed using a 7-point Likert scale, ranging from 1: completely disagree to 7: completely agree. The second section includes inquiries about personal and business information.

3.2. Sample and data collection

The survey participants consist of female managers from SMEs in Vietnam. The choice of managers as the subjects for data collection stems from the desire to gain a thorough understanding of contemporary business and to participate in the decision-making process. Managers of women-owned SMEs should consider diverse response groups differentiated by factors such as age, education, work experience, duration of business operation, industry, and employee count.

To ensure data reliability, the study aimed to collect between 200 and 250 valid responses, following the recommendation by Hoyle [72]. The survey was administered using a convenience sampling approach, leveraging the research team's professional network through both online platforms (Google Forms distributed via email, Zalo, and Messenger) and direct in-person distribution. Over a two-month period (October to December 2024), a total of 751 responses were collected from women-owned small and medium-sized enterprises (SMEs) across Vietnam. These included 11 manufacturing firms (e.g., textiles, food processing, dairy production), 8 trading enterprises (e.g., cosmetics, furniture, fashion, pharmaceuticals), and 5 service

businesses (e.g., tourism, education, healthcare, and beauty services). The sample represents a broad spectrum of sectors-manufacturing, commerce, and services-led by women entrepreneurs in the northern, central, and southern regions of Vietnam. After excluding 63 incomplete responses, the study retained 688 valid questionnaires, achieving a response rate of 91.61%. This sample size significantly exceeds the minimum threshold proposed by [72], ensuring the robustness and reliability of the analytical results.

All 688 respondents were female SME managers in Vietnam. Descriptive statistics indicate that 50.1% were over the age of 35, reflecting a common demographic trend in Vietnamese enterprises. Managers in this age group are typically more experienced, having navigated multiple business cycles and accumulated a deep understanding of markets, corporate social responsibility (CSR), and innovation (IN) within their organizations. Most participants held college or university degrees (73.1%), underscoring the importance of higher education in attaining managerial positions. This also reflects the increasing professionalization of the female managerial workforce in Vietnam. Regarding work experience, the majority of respondents (40.3%) had between 5 and 10 years of professional experience. In terms of firm age, most businesses had been operating for 6–10 years (57.3%), with fashion being the most represented industry (19%). These firms typically have established products, customer bases, and operational processes, providing a solid foundation for scaling up, strengthening branding, and enhancing competitiveness. Enterprises employing between 51 and 100 staff members formed the largest group (43.2%), which aligns with the common size of SMEs in Vietnam. Such firms often have streamlined organizational structures, allowing for quicker decision-making and more agile strategy implementation.

3.3. Analyses

Data were gathered, processed, and analyzed through SPSS 26 software employing descriptive statistical analysis and Smart PLS4 software for scale validation. Furthermore, we utilized Smart PLS4 software to analyze the model and test the research hypotheses through structural equation modeling (SEM) and bootstrap analysis techniques.

4. Results

4.1. Measurement model

Following the preliminary analysis, the items RE5, RTE1, and CA6 were removed due to their factor loadings falling below the 0.7 threshold. Specifically, RE5 ("Ensuring employee benefits in the workplace"), RTE1 ("Voluntarily exceeding environmental regulations"), and CA6 ("Competitors find it difficult to replicate the company's competitive advantage") were excluded because SMEs often face significant challenges in complying with labor and environmental regulations. These challenges stem from limited resources, insufficient knowledge, and financial constraints. Moreover, there is a lack of adequate government support and regulatory enforcement to ensure the protection of employee rights and promote environmental practices [73, 74]. As illustrated in Table 1, the variables that remained exhibited Cronbach's alpha ranging from 0.709 to 0.906, with composite reliability (CR) > 0.7 and average variance extracted (AVE) > 0.5. This indicates that each latent variable accounts for more than 50% of the variance. Therefore, the model's reliability and consistency are confirmed [78].

Outer loading Cronbach' Composite reliability Composite reliability Average variance Code factor alpha extract (AVE) (rho a) (rho c) RE1 0.804 RE2 0.835 0.861 0.902 0.696 0.855 RE3 0.846 RE4 0.854 RC1 0.777 0.746 0.773 0.578 0.832

Table 1. Measurement model

Code	Outer loading factor	Cronbach' alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extract (AVE)	
RC2	0.862					
RC3	0.851	_				
RC4	0.846	_				
RS1	0.736					
RS2	0.806	0.004	0.000	0.072	0.620	
RS3	0.840	- 0.804	0.808	0.872	0.630	
RS4	0.789	_				
RTC1	0.711					
RTC2	0.903	0.065	0.072	0.000	0.766	
RTC3	0.791	0.865	0.872	0.889	0.766	
RTC4	0.709	_				
RTE2	0.750					
RTE3	0.905	0.847	0.868	0.871	0.738	
RTE4	0.890	_				
IO1	0.857					
IO2	0.906	-	0.00#	0.000	0.770	
IO3	0.902	- 0.903	0.905	0.933	0.778	
IO4	0.840	_				
IN1	0.819					
IN2	0.840	_				
IN3	0.806	- 0.000	0.000	0.017	0.642	
IN4	0.804	- 0.888	0.890	0.915	0.642	
IN5	0.812	_				
IN6	0.829	_				
CA1	0.725					
CA2	0.783	_				
CA3	0.779	- 0.067	0.077	0.001	0.607	
CA4	0.754	- 0.867	0.877	0.901	0.605	
CA5	0.791	_				
CA7	0.810	_				
BP1	0.740					
BP2	0.785	_				
BP3	0.806	0.855	0.860	0.896	0.634	
BP4	0.792	_	0.855 0.860 0.896			
BP5	0.855	_				

The HTMT values were all below the recommended threshold of 0.85, confirming discriminant validity among the constructs [75, 76]. Lower HTMT values indicate a stronger distinction between latent variables, satisfying the requirement for discriminant validity.

4.2. Evaluation of the structural model

To examine the research hypotheses, a variety of indicators were employed, including path coefficients (β), T-values, P-values, effect size (f^2), and adjusted R². According to the data presented in Table 2 and Figure 2, nine out of the ten hypotheses were validated, as they satisfied the criteria of P-value < 0.05 and T-value > 1.65. Hypothesis H1d was not validated, given that its P-value (0.628) surpassed the acceptable limit. The constructs related to responsibility towards employees, customers, suppliers, the community, and the environment all exhibited significant positive impacts on IN within women-owned SMEs in Vietnam (H1a, H1b, H1c, H1e). Among these, customer responsibility had the most substantial effect (β = 0.326), followed by supplier responsibility (β = 0.283), employee responsibility (β = 0.221), and environmental responsibility (β = 0.143),

which had the least influence. Additionally, institutional orientation (IO) positively affected IN (β = 0.177, H2) and served as a moderator in the relationship between employee responsibility and IN (β = 0.107, H3). Moreover, IN significantly enhanced CA with β = 0.567 (H4), which in turn positively impacted BP with β = 0.399 (H5). IN also directly influenced BP (β = 0.374, H2).

Table 2. Hypothesis testing (direct impact)	Table 2.	. Hypothe	sis testing	direct	impact)
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Hypothesis	Path coefficient (β)	Standard deviation	T-value	P-Value	VIF	f^2	Result
H1a: RE -> IN	0.221	0.054	4.091	0.000	1.429	0.068	Supported
H1b: RC -> IN	0.326	0.073	4.474	0.000	1.556	0.385	Supported
H1c: RS -> IN	0.283	0.067	4.246	0.000	1.220	0.061	Supported
H1d: RTC -> IN	0.033	0.067	0.484	0.628	1.029	0.002	Not supported
H1e: RTE -> IN	0.143	0.042	3.370	0.001	1.557	0.028	Supported
H2: IO -> IN	0.177	0.072	2.474	0.013	1.606	0.086	Supported
H3: IO \times RE -> IN	0.107	0.040	2.701	0.007	1.273	0.052	Supported
H4: IN -> CA	0.567	0.050	11.268	0.000	1.452	0.186	Supported
H5: CA -> BP	0.399	0.058	6.901	0.000	1.186	0.396	Supported
H6: IN -> BP	0.374	0.059	6.390	0.000	1.000	0.058	Supported

Regarding the effect size (f²) of exogenous on endogenous variables, Cohen [77] classifies values of 0.02, 0.15, and 0.35 as small, medium, and large effects, respectively. As shown in Table 2, IN has a strong effect on CA; RE and RC have moderate effects on IN; IN also moderately affects BP. Meanwhile, RTC and RTE show weak effects on IN, and both CA and IN have weak effects on BP.

Table 3. Confidence intervals of indirect effects (indirect impact)

Hypothesis	β - indirect	Overall	Standard	T-Vaule	P-	Result
	effect	impact	deviation		Value	
H7: IN -> CA -> BP	0.226	0.605	0.034	6.566	0.000	Accept
H8a: RE -> IN -> CA -> BP	0.050	0.271	3.752	2.826	0.013	Accept
H8b: RC -> IN -> CA -> BP	0.074	0.400	0.021	3.464	0.001	Accept
H8c: RS -> IN -> CA -> BP	0.064	0.347	0.017	3.729	0.000	Accept
H8d: RTC -> IN -> CA -> BP	0.007	0.040	0.015	0.490	0.624	Reject
H8e: RTE -> IN -> CA -> BP	0.032	0.175	2.826	2.005	0.011	Accept

Table 3 indicates that five out of six hypotheses were validated, as indicated by a P-value of < 0.05 and a T-value > 1.65. Hypothesis H8d, however, was not accepted as its P-value was 0.624 > 0.05. The IN factor positively influences BP via the mediating role of CA, with a coefficient $\beta = 0.396$ (hypothesis H7); the RC also positively affects BP through the mediating roles of CA and IN (coefficient $\beta = 0.074$). This is the factor that has the greatest influence; the RE positively affects BP through the mediation of CA and IN (coefficient $\beta = 0.050$); RS positively influences BP via the mediation of CA and IN (coefficient $\beta = 0.064$) and, the environmental effect on BP with a mediating role of CA and IN (coefficient $\beta = 0.032$) are both statistically significant p<0.05, falling within the confidence interval, thus hypotheses H8a, H8b, H8c, H8e are accepted.

The adjusted R² coefficient indicates the extent to which independent variables account for the variance in dependent variables [78, 79]. Cohen [80] suggests that an R² value exceeding 0.4 signifies a strong effect, a value between 0.25 and 0.4 denotes a moderate effect, and a value below 0.1 represents a weak effect. As shown in Figure 2, the adjusted R² for "IN" is 0.468, for "competitive advantage" is 0.321, and for "business

performance" is 0.607. Thus, "IN" and "business performance" demonstrate strong explanatory power, while "competitive advantage" reflects a moderate level.

The independent variables, which include responsibility towards employees, customers, suppliers, and the environment, together account for 46.8% of the variance in "IN." Furthermore, "IN" itself accounts for 32.1% of the variance in "competitive advantage." When combined, "IN" and the mediating variable "competitive advantage" explain 60.7% of the variance in "business performance" for women-owned SMEs in Vietnam.

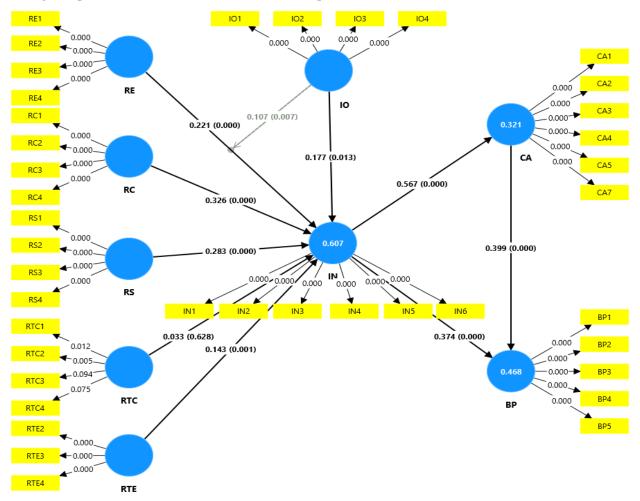


Figure 2. Structural Equation Modeling

5. Discussion

This research offers multiple contributions to the field and practical implications for management.

This study adopts stakeholder theory on resources [8, 9] as the core framework to explore the drivers and outcomes of IN in women-owned SMEs in Vietnam. The findings confirm that stronger stakeholder responsibility enhances innovation, in line with [2, 81]. Stakeholder theory emphasizes value creation for all parties involved-employees, suppliers, customers, communities, and the environment [82]. Effectively managing these interests fosters sustainability and vitality through product and process innovation [83]. Applying CSR through the lens of stakeholder theory not only yields economic and social benefits but also promotes sustainable innovation [84]. Among the various stakeholder responsibilities, customer responsibility exerts the strongest impact on IN. As primary stakeholders, customers drive firms to continuously improve products and production processes to meet their evolving needs. Consumers tend to respond positively to products with ecological and societal worth [85, 86]. Responsibility to employees also significantly fosters IN in these enterprises. Employees are central to business operations and influence organizational IN decisions [2, 87]. Additionally, supplier responsibility affects costs, delivery times, and sourcing risks, thereby enhancing

product IN and responsiveness to market demands; [88, 89]. Environmental responsibility, while less influential, still plays a vital role. Since pollution, emissions, and resource depletion primarily originate from manufacturing activities, firms are progressively implementing eco-innovative approaches to reduce their environmental impact [90]. Green IN is therefore considered a strategic solution to reduce pollution and simultaneously generate business advantages [91, 92].

The recent phase of the research focuses on exploring how IO not only directly influences IN but also serves as a moderator in the relationship between CSR and corporate IN. Emphasizing IN is essential for addressing challenges and enhancing the organization's ability to successfully apply new systems, products, and processes [14, 93]. Furthermore, the research findings indicate that IN positively impacts CA in women-owned SMEs in Vietnam. This conclusion is consistent with the studies conducted by Abd Aziz and Samad [34], Kamboj and Rahman [94], and Herman et al. [95]. In product IN, developing distinctive and unique products compared to rivals and enhancing product packaging appeal are essential components of the product development process [96]. Additionally, research findings indicate that CA positively influences business performance, as firms adopting a low-cost competitive strategy address various factors such as mass production and implement lean processes to minimize expenses and effectively manage advertising costs, thereby boosting BP in small and medium enterprises [97, 98]. IN also positively affects BP.

This discovery is consistent with the research outcomes of Sudrajat and Amin [99], as well as Herman et al. [95]. IN in products and manufacturing processes will reduce costs, enhance quality and product perception, boost employee relations, enhance customer satisfaction, increase market share, and boost profits [100]. Additionally, this research seeks to investigate the impact of social responsibility on BP, with a particular focus on the mediating influence of CA within women's SMEs in Vietnam. These companies execute innovative production methods, introduce novel product concepts, and their marketing will establish a distinct brand identity in comparison to rivals, thus enhancing market share, sales, and overall BP via the CA gained from their INs.

The research findings ultimately suggest that IN and CA act as mediators in the relationship between CSR and BP in women-owned SMEs in Vietnam. CSR has the potential to impact both a firm's competitiveness and its capacity for IN. [101]. Additionally, CSR can generate value for stakeholders facing certain challenges within specific industries and firms, as well as for particular management strategies like IN; further examination is necessary to understand how IN and investment affect the relationship between CSR and competitiveness [102]. McWilliams and Siegel [27] suggest that leveraging CSR resources, such as recycled materials or organic pest control, for differentiation may require commitment to IN. As a result, this investment in IN can lead to the development of both CSR initiatives and new products, which are appreciated by consumers and contribute to the overall performance of the company. When CSR aligns with the core business activities of the organization, it creates value and enhances the company's competitive advantage. Furthermore, CSR can strengthen the company's credibility and reputation among its stakeholders [103].

6. Conclusion

6.1. Theoretical considerations

Our findings contribute to the existing literature on the influence of CSR on IO, CA, and BP in multiple dimensions. This study notably enhances the integration of resource-based stakeholder theory. It clarifies the mediating roles of IN and CA in the relationship between CSR and BP. Furthermore, IO directly affects IN and plays a role in shaping the connection between employee-driven CSR initiatives and IN. Understanding the role of IO is essential for promoting IN and deepening the understanding of corporate IN.

6.2. Practical considerations

The findings provide essential insights for decision-makers and supervisors regarding the role of stakeholders in the IN process. It is vital for managers and leaders to integrate the perspectives and aspirations of stakeholders

into their IN strategies and offerings to effectively address their needs. Additionally, managers and leaders should invest considerable amounts of time and organizational resources in fostering an innovative mindset, as this significantly influences IN outcomes. Moreover, the research revealed that IN can assist managers and leaders in achieving a CA and enhancing BP. In rapidly changing markets, IN serves as a key competitive strategy to effectively address competition through products and services.

6.3. Limitations and future directions

The initial research sample was limited, and the survey was conducted using a convenience sampling method, which affected the representativeness of the sample and restricted the generalizability of the study's results. This highlights the necessity for further research to collect data from a wider and more representative population. Moreover, future studies could explore in greater detail the impact of IN on environmental performance, financial outcomes, sustainable development, and other areas. The current research has not yet examined how leadership responsibility may influence the relationship between social responsibility and IN. Nonetheless, despite these limitations, the findings offer valuable insights for theory, researchers, and organizations aiming to enhance social responsibility and IN within women-owned SMEs in Vietnam.

Declaration of competing interest

The authors declare that they have no known financial or non-financial competing interests in any material discussed in this paper.

Author contributions

Dinh Thi Huong contributed to the conceptualization of the study and was responsible for writing the original draft. Nguyen Thi Bich Loan was involved in data collection and validation of the data. Tran Van Trang contributed to the development of methodology and participated in data validation. Nguyen Thi Minh Nhan provided supervision throughout the research process. Nguyen Hong Nhung supported data collection and conducted formal analysis.

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Ethical approval statement

Our institution does not require research ethics approval for reporting individual cases or case series.

Informed consent

Informed consent for the publication of personal data in this article was not obtained because all information is anonymized.

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