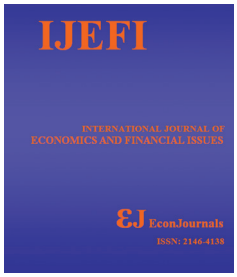

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The Effect of Environmental, Social, and Governance Factors on Banks' Financial Performance: The Mediating Role of Organizational Innovation and Competitive Advantage

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ABSTRACT

This study analyses the impact of ESG practice on the financial performance of banks in Ho Chi Minh City (HCMC) by highlighting the mediating roles of competitive advantage and innovation. Since the upsurge in the level of competition in the banking sector in HCMC, proper information on how these factors affect financial outcomes should be known to ensure long-term success. Data used in this study were obtained from 347 employees working in different banks in HCMC collected through convenient sampling methodology. The SmartPLS software was used to check the research model and hypotheses. The results indicate that the elements of ESG, environmental, social, and governance positively influence the financial performance of banks in mediation through competitive advantage and innovation. Specific results indicate that other than building the brand of the bank, a strong ESG framework enhances the competitive advantage and innovation of the bank all culminating in enhanced financial outcomes. This gives much of what is needed to know-how veritable sustainable business practice may increment profitability within the banking trade, importantly within emergent markets as in HCMC. The learnings of this study shall be thought precious by both academic minds and professionals. This shows that including ESG practice within business strategy shall improve efficiency in operations, increase customer satisfaction, and draw ethical investors. Therefore, banks in HCMC would use ESG practice to better their market position amidst an increasing competitive setting by promoting sustainability.

Keywords: ESG, Environmental, Social, Governance, Innovation, Competitive Advantage, Financial Performance
JEL Classifications: M1, M10

1. INTRODUCTION

The ESG factors have been considered as key elements of company management in the whole world. The ESG includes the social and environmental sustainability of the company and non-financial elements which an enterprise should consider while making its investment based on the financial factors (Koh et al., 2022). Investment in the ESG grew rapidly over the last few decades as many nations introduced programs for "carbon neutrality" (Chen et al., 2023). A new generation of modern finance is now being formed under a bold synthesis of the innovation and financial technology that marks the Fourth Industrial Revolution (Almasria et al., 2024). The banking sector is not enjoying a good time as it faces significant pressure over the proper and sustainable governance practice in the core operations of the bank. This change is mostly because people involved more and more want banks to give them not just good money back but also to help the environment, society, and be ethical leaders. This is often called Environmental, Social, and Governance (ESG) standards. Long ago they were seen as extra parts, but now they play a big role in making strategic choices and they help change how investors and customers think, along with what regulators expect.

Modern technologies are reconfiguring the scene of entrepreneurial growth, especially in the money area, by nurturing strong settings for both banks and startups through the joining of fintech solutions

(Belanche et al., 2019). Fintech, a tech-driven invention, joins financial services with development goals to push for a more open, effective, and environmentally friendly economic system (Almasria et al., 2024). Academically and practically, ESG should gain greater importance from here on in. In addition, it falls under the domain of the widespread global uncertainty (Chen et al., 2023). Integrating technology into management supports the success of enterprises by improving efficiency, decision-making, and competitiveness (Egbulem et al., 2024). In addition, leading the business cycle through the channel of critical financial intermediation, the inclusion of ESG factors in the strategies of banks provides an opportunity to enhance their image regarding sustainable economic growth, while simultaneously reducing operational risks and preserving long-term stability. The above is hard to establish between ESG practice and finance performance since it differs with different institutions and their contexts. While many studies believe that strong ESG engagement leads to better financial performance, other equally valid studies show rather weak or even no positive results, thus calling for an exploration into the underlying mechanisms through which ESG adds value.

Innovation within organizations is therefore assumed to be a critical aspect of survival and attainment success in markets that are not only competitive but also complex (Cooper, 2019). Long-term success of firms in markets which are considered to be highly competitive can be assured by innovation as an essential element (YuSheng and Ibrahim, 2020). The study of the concept of innovation can greatly affect the success of the firm and is more prevalent within the banking sector (Nawaz et al., 2024). For the banking industry, innovation is the primary factor for sustainability and growth. It enables the bank to adjust to its highly dynamic market, meet the many needs of its diverse clientele, and enhance its operational efficiency (Mohamed and Hussein, 2025). An alternative that could explain such varying findings is the role of internal organizational capabilities, specifically, organizational innovation and competitive advantage. Innovation gives the power to banks to come up with new offers, improve processes, and stay flexible to changes in the market while competitive advantage helps them to keep a good position in the market. These abilities may help ESG efforts influence financial performance by serving as conduits.

Fintech, and environmental sustainability, in the presence of active promotion by governments to enhance overall sustainability, are increasingly important in the banking and asset management sectors. This is because government actively promotes green finance and sustainable banking practices (Yan et al., 2022; Zheng et al., 2021). Previous studies have also provided inconsistent results in the impact of innovation orientation on the financial performance of the firms (Boateng Dankwah et al., 2023). With the mainstreaming of the practice of sustainable business operations, now, the Environmental, Social, and Governance (ESG) becomes one of the critical assessment frameworks for companies (Putra and Budastra, 2024). This study, therefore, responds to the influence of the dimensions of the Environmental, Social, and Governance factors on the financial performance of banks in Ho Chi Minh City. The effect of Environmental, Social, and Governance factors on the key financial dimensions, such as profitability, risk management, and market value will be analyzed. This study also directs its analysis on the intermediary roles between organizational innovation and competitive advantage, asserting that in strong-ESG-practice banks, innovation is more probably driven, which in turn increases their competitive edge and financial performance. This calls for the strategic decisions of the long-term run to be critical once the results set forth from this current study. The findings of this research have uncovered the degree to which the strategically leveraged sustainability-oriented practices can drive financial success in the banking sector and, thus, stand to enhance the existing literature.

2. LITERATURE REVIEW

2.1. Theorical Background

2.1.1. Resource-based view (RBV)

The RBV theory (Barney, 1991) posits that sustainable competitive advantage results from the ability of a firm to acquire and manage resources that are valuable, rare, inimitable, and non-substitutable along a dynamic trajectory. ESG activities can be considered strategic intangible activities fostering reputation, brand equity, and stakeholder relationships of a bank. Further, ESG knowledge may initiate both learning and cultural changes within an organization, pushing it to finally produce organizational innovation that is, another VRIN resource leading to superior performance. ESG factors provide an integrated framework for the analysis of the bank's corporate social responsibility (CSR)-performance regarding the strategic goal of broader sustainability. The nexus between ESG and financial performance is an investment in which these dimensions are efficiently implemented to influence the direct level of risk and return on investment by the bank, among other initiatives, in a sustainable competitive manner. In short, the ESG-finance performance nexus is an investment where strategic intent is met with firm capabilities.

2.1.2. Environmental, social, and governance (ESG) dimensions in the banking sector

Financial performance and profits were the sole criteria for investment decisions. ESG assesses the important elements of a company's value and sustainability, leading long-term investors to take into consideration these factors, which, therefore, extended the relevance of financial analytics through the birth of ESG analytics. ESG management is thus increasingly considered an important approach for the effective integration of sustainability principles within the firm, from business stakeholders, across all dimensions of the firm for the realization of sustainable development pertaining to the environmental, social, as well as governance aspects (Koh et al., 2022). Today's business landscape has ESG framed as a tool to evaluate organizations' sustainability, integrity, and long-term value considerations. It represents three components that require strategic commitment among different stakeholders but can also operate to differing degrees of independence: environmental, social, and governance. ESG factors apply to all industries, but the need for compliance is more pronounced in the banking sector as the governance issue in the allocation of capital and economic activity.

Fulfillment of ESG criteria delivers a very convenient proxy rated on firm commitment to the environment and society (Chen

et al., 2023). Environmental, social, and governance (ESG) factors embody new and increasing strategic priorities and risks for companies and have, in the last years, increasingly focused management and decision-making on business. In recent years, pressure on banks has grown from various stakeholders, including investors, regulators, customers, and lobby groups. Stakeholders are interested not only in the profits of financial institutions but also in their active contribution to environmental protection, social equity, and transparent governance. Concurrently, regulatory authorities at national and international levels are increasing their ESG requirements toward banks not only in terms of assessment and disclosure of ESG risks but also in the integration of sustainability in credit and investment operations and reporting on non-financial performance. Embedding ESG principles into banking strategies ceased to be a voluntary or philanthropic endeavor and has become a strategic imperative. ESG integration is currently articulated with the risk of managing both financial and non-financial aspects, including attracting socially responsible investors while also ensuring long-term organizational resilience. For instance, environmental risk assessments may ensure the prevention of losses that could emanate from climatic changes; good governance and inclusive social policies build trust and reduce regulatory breaches.

ESG matters have gained attention in the whole world, starting from developed nations to developing ones. Where most of the developing markets used to focus primarily on economic growth and financial measures, environmentalist and social activities are more focused compared to the developed ones (Huang and Ji, 2017). Also, ESG is not considered a compliance issue anymore; it is seen as more of a source for strategic difference and competitive advantage. Investors take ESG ratings very positively in their decision of fund allocation. Their morally sensitive clients will encourage this move and tend to support the bank. These entailed-EASG actions may bring about process efficiencies, lead to the fostering of innovation, and position opportunities in the market of sustainable finance.

2.1.3. The role of the environmental dimension on organizational innovation and competitive advantage towards bank's financial performance

The environmental, social, and governance (ESG) factors have attained a key place in impeding the value generation of a firm. The non-financial factors of the environmental and social and corporate governance, ESG values are the priorities of the businesses and the decisions of companies right now (Yu et al., 2018). Companies need innovation in all its forms as a primary endeavor to attain the basic objectives of growth, profitability, continuity, and sustainability to stand against competitors in international markets. For this, they should continually evolve regarding their products, processes, and technologies (Sakalsız and Koç, 2024). The relevance of the environmental dimension is such that it more directly drives organizational innovation and competitive advantages, which in turn enhance banks' financial performance. This, therefore, implies that banks, through their lending decisions, investments, and climate risk strategies, are not major direct polluters but have a significant influence on environmental outcomes. Socially responsible banking requires reduced negative environmental impacts and proactive green financing, including renewable energy, sustainable agriculture, and ecological infrastructure. To improve such environmental and social banking, the bank will have to organize and implement new product innovations. A number of financial institutions have recently introduced innovative "green" financial products, including green bonds, sustainability-linked loans, and carbon credits. Artificial intelligence, big data, and blockchain applications, among others, will further enhance environmental risk checks and financial transparency checks. All these innovations will place the banks that implement them successfully not only a step ahead in revenue management and risk management but also in sustainability in finance.

Firms in different industries gain innovation outputs from positive environmental and social initiatives. In a study by Lee et al. (2024), it is assumed that such innovations occur. Therefore, it can be inferred that positive environmental and social initiatives boost innovation outputs. The more organic inference drawn is that innovation outputs for the bank are strengthened by environmental responsibility. This is why the leading banks in sustainability are good attractors of such investors, customers, and employees. The stakeholders support the green strategy of the bank because it reflects transparency, ethics, and a long term in business. In addition, this moves by the banks places them ahead in the compliance race thereby building their brand equity as well as trust from stakeholders; eventually, this is a contribution to long term profitability. There is empirical evidence suggesting that the stronger the focus of banks on the environment, the better their financial performance. Green lending portfolios normally register a lower rate of default. On the other hand, sustainability leading to the support service and the enhancement of the image also forms a loyalty front with the customer. Also, it helps increase reputation. Banks that integrate environmental factors into their risk management frameworks can effectively manage risks associated with climate among other financial risks concerning them such as stranded assets and even the regulatory penalties. Environmental, not just corporate social responsibility, but it is a transformational driver that brings innovation and competitive advantages in the banking sector. Thus, through sustainability aligned to core business strategies, banks can unblock the pathway to long-term financial gain, while enhancing stakeholder relationships on a triple bottom line for a more sustainable future. The hypothesis has been developed as follow:

H_{1a}: There is a positive relationship between the environmental dimension and innovation in relation to the bank's financial performance.

H_{1b}: There is a positive relationship between the environmental dimension and Competitiveness in relation to the bank's financial performance.

2.1.4. The role of social dimension on organizational innovation and competitive advantage towards bank's financial performance

Innovation is what presents one of the key strategies in the business context (Doni and Fiameni, (2024).' The social aspects depict the angle through which banks relate to and influence their stakeholders, comprising employees, customers, communities, and business partners. It spanned a wide range factor from, labor

practices, diversity and inclusion, data protection, and community engagement. This is why the implementation of corporate social responsibility could improve the legitimacy of a bank as well as its reputation, thus improving its strength in the market to build stronger connections will all types of stakeholders. The equitable practice of labor forms one major dimension of the social dimension. Encouraging wage equality and employee well-being and investing in the professional development of the employees translates to general higher satisfaction and retention among the employees. Also, showing differences and togetherness in the staff not just makes good organizational culture but also leads to better choices by using different views. These inside factors are important in keeping an effective, interested staff, which directly affects output and operation.

Through trust and loyalty from social aspects, organizations provide huge opportunities for effective communications and collaborations that add substantial value to the firm (Rahaman et al., 2024). The social element is customer trust and satisfaction. A bank that observes data security and ethical customer treatment will use these factors to place them better in establishing long-term relationships with their clients. Client information is the most sensitive during this digital era. In its efforts to ensure that there establishes strong, robust cybersecurity measures among the banks and clear communication on how the data is handled, trust is built and losses that could lead to a bad reputation and financial instability due to breaches are avoided. Another major driver of social performance in the banking sector is financial inclusion. The provision of banking services to the unbanked or underbanked populations does not only provide access to new markets but also fosters the general economic development of the localities. Financial inclusion initiatives, such as microfinance, affordable loans, or low-fee banking services will not only increase the loyal customer base but also increase the social credibility of the bank. This will ensure the wellness of the society and empowerment of the community, which in return will enhance the reputation and loyalty of the customers to the bank.

Intense competition exists between firms in the market nowadays; thus, sustainability should be their primary concern (Van Thuong and Singh, 2023). High social performance also translates to the bank's operational efficiency and financial benefits. Happy employees and customers are more engaged which leads to increased productivity and lower turnover rates. Good social practices also enhance the competitive advantage of a bank through market delineation and enhanced brand attraction and loyalty from socially responsible investors. The social dimension assumes an essential role in driving organizational innovation and competitive advantage within the banking industry. Good positive relations with employees, customers, and the community can improve the operation efficiency and the image of the bank and thereby lead to improved financial performance. The hypothesis has been developed as follow:

H_{2a}: There is a positive relationship between the social dimension and innovation in relation to the bank's financial performance.

H_{2b}: There is a positive relationship between the social dimension and Competitiveness in relation to the bank's financial performance.

2.1.5. The role of governance dimension on organizational innovation and competitive advantage towards bank's financial performance

The company gains a competitive edge from people who have expertise in finance, HRM, marketing, and other areas of management function (Rahman et al., 2021). The dimension of governance is very active in promoting ethical leadership, accountability, and transparency in the banks. It fosters internal structures and practices of good decision-making, such as having an independent board and implementing anti-corruption measures in line with regulatory standards. Good governance reduces conflicts of interest and positively affects investor trust in the bank to ensure that ESG is integrated into strategic decisions of the bank. An independent board of directors in decision-making brings objectivity in decisions, reduces conflicts of interest, and enhances better long-term decisions. In this sense, this structure enhances investor confidence and builds a very positive public image for the bank. It would also save the bank from legal and monetary actions by strictly adhering to anti-corruption policies and regulatory rules and therefore enhancing trust with the stakeholders.

The long-term success of a business depends on how effectively and quickly it can launch new products compared to its competitors (Zailani et al., 2007). According to the literature review, basic organizational capabilities such as productivity, quality, and delivery time, in addition to a focus on customer satisfaction and human resource competencies, represent the core aspects of resources for firms' competitive advantage (Zailani et al., 2015). Good governance in the bank thus integrates practices of ESG to improve its competitive position in attracting socially responsible investors and clients while helping to avert crises and changes in regulations to ensure the firm's financial resilience and stability in the long run. Innovation within the bank also requires good governance. It can be achieved by setting up structures that show transparency, integrity, and effective risk management so that the bank can improve its financial performance and attain sustainable success. The hypothesis has been developed as follow:

H_{3a}: There is a positive relationship between the governance dimension and innovation in relation to the bank's financial performance.

H_{3b}: There is a positive relationship between the governance dimension and Competitiveness in relation to the bank's financial performance.

2.1.6. The role of organizational innovation and competitive advantage towards bank's financial performance

Innovation at such a setting highly competitive markets is innovation long-term success viewed as an important element for businesses in the highly competitive markets of today (YuSheng and Ibrahim, 2020). What is meant by the term innovation? It refers to the implantation of new ideas or concepts in products, processes, services, marketing strategies, and organizational frameworks (Nawaz et al., 2024). Innovations in the organization are very important for improving a bank's ability to adjust to market shifts, increase operational efficiency, and offer new products and services. By so doing, the banks streamline their operations, adopt the emerging technologies, and create unique financial products relevant to the changing demands of the

customers. Innovation within the culture of an organization gives the institution an opportunity to tackle new challenges and take advantage of growth opportunities that would strengthen its competitive position. A strong competitive edge places a bank at a better position to outdo its rivals in a competitive market. This advantage can result from factors like technology development, customer care, unique money products, or better work processes. Banks that mix company change with a competitive edge and do so well will have a better chance to bring in and keep customers, build long-term relationships, and increase their market share.

The concept of innovation is becoming increasingly important and plays a key role in the highly competitive and ever-evolving banking sector YuSheng and Ibrahim, 2020). In a competitive environment, the pressure to survive may compel companies to either strategically embrace sustainability efforts to gain a market edge or overlook sustainable investments in pursuit of short-term profits. Empirical evidence supports both strategic and altruistic approaches (Kamarudin et al., 2022). Therefore, companies must strike a balance between conflicting economic, social, and environmental goals (Maside□Sanfiz et al., 2024). Organizational innovation, in association with financial performance, assumes a very relevant place. Underlying proposed innovations are the adoptions of such modern technologies as digital banking, risk management with AI, or blockchain in the banks for their transactions. Efficiently executing prescribed innovations further shortens the learning curves for new regulations, prevailing economic conditions, and changes in the long run such as the immediate, short-term future, or distant future wherein a steady value of the optimization process is achieved. Based on the strategic level of innovation, the commercial banks that belong to them might enhance their operational efficiency, increase revenue, mitigate risks, and boost customer satisfaction at the aggregate level of the financial performance. The hypothesis has been developed as follow:

H_4: There is a positive relationship between the innovation in relation and the bank's financial performance.

H_5: There is a positive relationship between the Competitiveness in relation and the bank's financial performance.

Based on the Resource-Based View (RBV) and ESG, the conceptual framework for examining the effect of Environmental, Social, and Governance dimensions on banks' financial performance, with the mediating role of organizational innovation and competitive advantage, has been developed as follows in Figure 1.

3. METHODOLOGY AND DATA

This study will seek to investigate the influence of Environmental, Social, and Governance (ESG) factors on the financial performance of banks with much more emphasis on the mediating roles of organizational innovation and competitive advantage. It will further be discussed how employees in banks can serve as the sample for the study in HCMC, Vietnam, which will be selected through a convenience sampling approach.

3.1. Sampling and Data Collection

A convenience sampling approach was applied to select participants from several banks in HCMC; having been determined as the most appropriate approach because of easy access to participants and their willingness to take part in the study. These are employees at different levels and from different departments to ensure diversity outside generalization of the findings to the banking sector. The information was assembled through a structured questionnaire on the dimensions of ESG, organizational innovation, competitive advantage, and financial performance. The questionnaire was pre-tested on a small group of employees to determine its clarity and relevance. After taking the feedback into account, the final version of the questionnaire was administered to a larger sample of the respondents. Each of the variables is measured through a set of indicators based on which respondents registered their level of agreement on a five-point Likert scale, running from "Strongly Agree" to "Strongly Disagree."

3.2. Sample Size and Data Cleaning

The sample size was fixed according to the directives of structural equation modeling (SEM) to reach at least 200 respondents so that there is enough statistical power to analyze. After gathering data, responses were read properly and checked to clean out any incomplete, inconsistent, or outlying data; only complete and valid responses were kept for analysis. This included checking for missing data, multivariate outliers, and normality to make sure that the dataset was apt for further analysis.

3.3. Measurement of Variables

Environmental, Social, and Governance (ESG) Dimensions: ESG factors were measured using established scales from previous research that assess the banks' environmental sustainability, social responsibility, and governance practices. In details, The Environment (ENV) dimension, including ENV1, ENV2, ENV3, and ENV4, was adapted from Chow et al. (2024). Similarly, the Society (SOC) dimension, including SOC1, SOC2, SOC3, and SOC4, and the Governance (GOV) dimension, including GOV1, GOV2, GOV3, and GOV4, was also adapted from Chow et al. (2024). Organizational Innovation: The level of organizational innovation was measured by evaluating the extent to which banks have incorporated innovative practices in the operations. The scale for this measure was adapted from previous studies on banking innovation. Organizational innovation (ORI) including ORI1, ORI2, ORI3, ORI4, ORI5, were also adapted from Atalay et al. (2013). Competitive Advantage: Competitive advantage was assessed through a scale that measures how banks position themselves relative to competitors. Competitive Advantage (COA) including COA1, COA2, COA3, COA4, was also adapted from Tan et al. (2023). Financial Performance: It including: FIP1, FIP2, and FIP3, FIT4, was also adapted from Tan et al. (2023).

3.4. Demographic Information of Respondents

A total of 347 individuals, comprising 53.0% males, 42.7% females, and 4.3% others, formed part of the survey. They were primarily composed of middle managers (40.1%), with executives constituting 33.4% and directors 15.9%. Other designations accounted for the remaining 10.7%. The educational qualifications of the participants reveal a relative balance within the mid-level stratum of the organizational hierarchy and at the undergraduate level. Specifically, 45.0% held a bachelor's degree, 34.3%

indicated attainment of a diploma, and 15.0% had a certificate; only 5.8% held a master's degree (Table 1).

3.5. Data Analysis

Analysis data was carried out deploying the partial least squares structural equation modeling (PLS-SEM) as supported by SmartPLS software. Chosen for the capability to study complex relations between latent variables, as well as its adequacy for samples that are small to medium-sized, PLS-SEM is the acronym for it. Two steps, then, were how the assessment got performed: First, the measurement model for construct reliability and validity; second, the structural model for testing the suppositions to be true and checking for the mediating roles of organizational innovation and competitive advantage between ESG dimensions and financial performance.

3.6. Ethical Considerations

An institutional review board granted ethical approval prior to the onset of the study and data collection. They were informed and gave verbal consent with assurances of confidentiality followed by anonymization of responses to preserve their privacy.

4. FINDINGS

Table 2 reliability and validity indicators. All variables have Cronbach's alpha values between 0.778 (ENV) and 0.905 (ORI) >0.7, the benchmark level commonly accepted. The composite reliability (rho_c) between 0.857 and 0.930 supports high construct reliability. Average variance extracted (AVE) from 0.599 (ENV) to 0.765 (FIP) is >0.50, minimum standard, so convergent validity is more than adequate. The above results have thus confirmed that the constructs are reliable and appropriate for further statistical analysis.

Table 3 shows the heterotrait-monotrait ratio (HTMT) values. These values check for the evaluation of discriminant validity among the study constructs. It falls below a very conservative cut-off of 0.85. Therefore, the constructs can be considered to be well distinguished from each other. The highest HTMT value is 0.812 between FIP and COA, whereas the lowest is 0.271 between GOV and ENV. From these findings, it is confirmed that each construct holds an isolated element of the model, thus in support of the presence of discriminant validity.

Table 4 and Figure 2 summarize the results of the structural model, including the mean values, standard deviations, T-statistics, and P-values for each path. All path coefficients are statistically significant at the 0.001 level, as indicated by P = 0.000 and T-values well above the critical value of 1.96. The strongest relationship is observed between COA and FIP (β = 0.518, T = 10.706), suggesting a substantial positive effect. ENV also shows a strong influence on both COA (β = 0.330, T = 7.654) and ORI (β = 0.453, T = 10.410). Similarly, GOV significantly impacts both COA (β = 0.298, T = 7.017) and ORI (β = 0.194, T = 4.698). ORI, in turn, has a meaningful effect on FIP (β = 0.300, T = 5.598). Lastly, SOC significantly influences both COA (β = 0.241, T = 4.633) and ORI (β = 0.243, T = 4.823). These results confirm that all proposed relationships in the model are statistically supported.

Table 1: Demographic information of respondents (Data analysed by the Author)

Demographic information	Frequency	Percent	Valid percent	Cumulative percent
Male	184	53.0	53.0	53.0
Female	148	42.7	42.7	95.7
Other	15	4.3	4.3	100.0
Total	347	100.0	100.0	
Position	**Frequency**	**Percent**	**Valid percent**	**Cumulative percent**
Executive level	116	33.4	33.4	33.4
Middle manager	139	40.1	40.1	73.5
Director level	55	15.9	15.9	89.3
Others	37	10.7	10.7	100.0
Total	347	100.0	100.0	
Qualification	**Frequency**	**Percent**	**Valid percent**	**Cumulative percent**
Certificate	52	15.0	15.0	15.0
Diploma	119	34.3	34.3	49.3
Bachelor	156	45.0	45.0	94.2
Master	20	5.8	5.8	100.0
Total	347	100.0	100.0	

Table 2: Cronbach's alpha, composite reliability and average variance extracted

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
COA	0.878	0.878	0.916	0.732
ENV	0.778	0.783	0.857	0.599
FIP	0.897	0.900	0.929	0.765
GOV	0.814	0.817	0.877	0.642
ORI	0.905	0.907	0.930	0.725
SOC	0.802	0.805	0.870	0.627

Table 3: Heterotrait-monotrait ratio (HTMT)

Variables	COA	ENV	FIP	GOV	ORI
COA					
ENV	0.586				
FIP	0.812	0.559			
GOV	0.536	0.271	0.483		
ORI	0.765	0.693	0.724	0.437	
SOC	0.562	0.491	0.54	0.435	0.569

Table 4: Mean, standard deviation, T-values and *P* values

Paths	Beta	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P-values
COA -> FIP	0.518	0.519	0.048	10.706	0.000
ENV -> COA	0.330	0.332	0.043	7.654	0.000
ENV -> ORI	0.453	0.454	0.044	10.41	0.000
GOV -> COA	0.298	0.298	0.042	7.017	0.000
GOV -> ORI	0.194	0.195	0.041	4.698	0.000
ORI -> FIP	0.300	0.300	0.054	5.598	0.000
SOC -> COA	0.241	0.243	0.052	4.633	0.000
SOC -> ORI	0.243	0.245	0.05	4.823	0.000

The VIF is 5: A high likelihood of multicollinearity within the model (Hair et al., 2019). Table 5 gives the values of the variance inflation factor (VIF) for assessing multicollinearity between the independent variables, all below 5, the common threshold, which

indicates no significant multicollinearity within the model. The highest VIF, 1.872, is for COA and ORI, modeling moderate but acceptable levels of correlation. All other constructs ENV (1.187), GOV (1.152), and SOC (1.293) also show low VIF values. There is no problem of multicollinearity, and the estimates of the regression are reliable.

Table 6 displays the f-square values, which measure the effect size of each predictor variable on the endogenous constructs. The f-square values indicate the strength of the relationships between the variables. The highest f-square value is observed for COA with ENV ($f^2 = 0.333$), suggesting a large effect. ENV has a moderate effect on both COA ($f^2 = 0.155$) and GOV ($f^2 = 0.32$). FIP and GOV show relatively smaller effect sizes, with f-square values of 0.13 and 0.06, respectively. The effect of SOC on COA ($f^2 = 0.076$) and GOV ($f^2 = 0.084$) is also modest, highlighting that while all relationships are statistically significant, their practical significance varies across constructs.

Table 7 shows the Blindfold test results, with the cross-validated redundancy measure for each variable, Q^2. The value of Q^2 considers the model's predictive relevance, where values above 0 are considered acceptable. With a value of 0.431, the highest Q^2 is found for FIP. This is followed by COA and ORI with values of 0.293 and 0.328, providing the first and second order of magnitude values between the 0 and 431 value range for ENV, GOV, and SOC, all at 0. Their desultory values do not spice up the flavor of the prediction; that is, where some elements of the variables show reasonable content of predictive validity, but more would be better to improve the net aggregate predictive relevance.

Figure 1: The conceptual framework of this study (The author developed and proposed the conceptual framework)

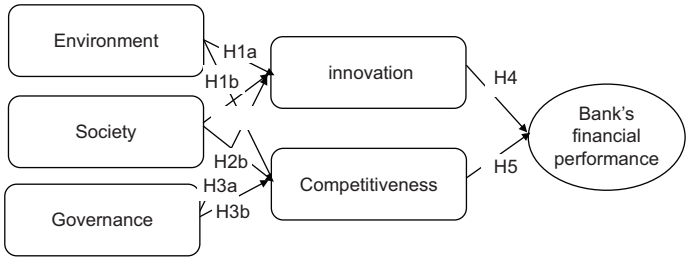


Table 5: Collinearity statistics (VIF)

Variables	COA	ENV	FIP	GOV	ORI	SOC
COA			1.872			
ENV	1.187				1.187	
FIP						
GOV	1.152				1.152	
ORI			1.872			
SOC	1.293				1.293	

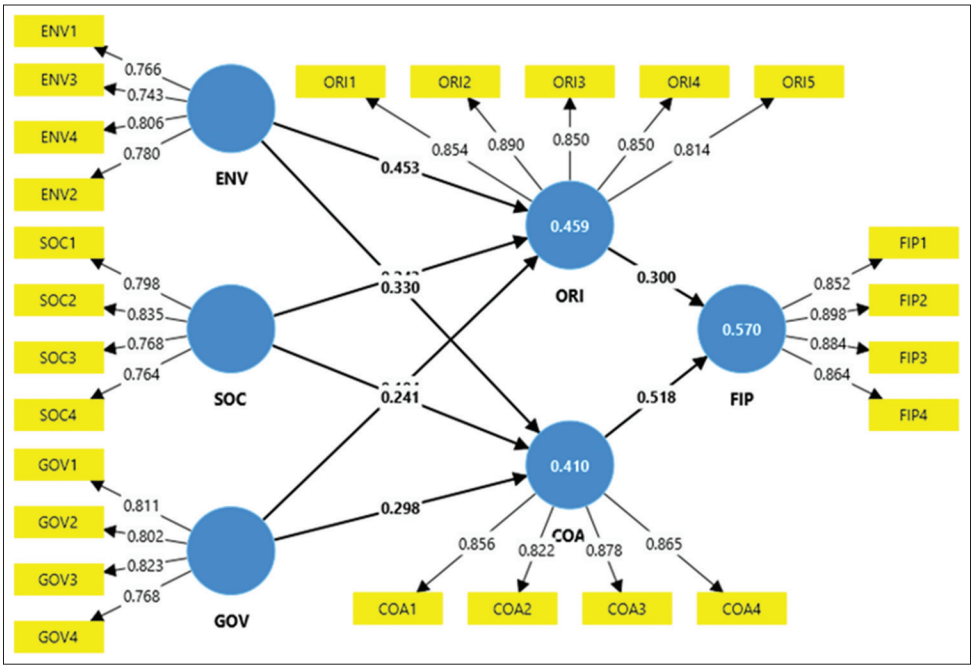
Table 6: f-square

Variables	COA	ENV	FIP	GOV	ORI	SOC
COA			0.333			
ENV	0.155				0.32	
FIP						
GOV	0.13				0.06	
ORI			0.112			
SOC	0.076				0.084	

Table 7: Blindfold test

Variables	SSO	SSE	Q^2 (=1-SSE/SSO)
COA	1388	981.85	0.293
ENV	1388	1388	0
FIP	1388	790.027	0.431
GOV	1388	1388	0
ORI	1735	1166.772	0.328
SOC	1388	1388	0

Figure 2: Structural equation modeling diagram



5. DISCUSSION AND CONCLUSION

The results of the structural model, including mean values, standard deviations, T-statistics, and P-values for each path, show that all path coefficients are statistically significant at the 0.001 level, with P = 0.000 and T-values exceeding the critical value of 1.96. The strongest relationship is observed between COA and FIP (β = 0.518, T = 10.706), indicating a substantial positive effect. ENV has a strong influence on both COA (β = 0.330, T = 7.654) and ORI (β = 0.453, T = 10.410). Similarly, GOV significantly impacts both COA (β = 0.298, T = 7.017) and ORI (β = 0.194, T = 4.698). ORI also has a significant effect on FIP (β = 0.300, T = 5.598). Lastly, SOC significantly influences both COA (β = 0.241, T = 4.633) and ORI (β = 0.243, T = 4.823). These results confirm that all the proposed hypothesized relationships in the model are statistically supported.

ESG factors are very important and have been found to positively influence the banking sector (Azmi et al., 2021; Alamsyah and Muljo, 2023; Perdana et al., 2023; Menicucci and Paolucci, 2023; Xu and Zhu, 2024; Chen et al., 2025). There are also received increased attention over the years as fundamental factors that enhance the performance and future sustainability of the banking sector. Major requirements by regulators as well as investors and society will place banks under an increased level of pressure to ensure that their activities are carried out in a responsible and sustainable manner. More imperative requirements need to be placed on the endowments and banking operations. For example, banks need to be more actively involved in green finance and reduce their environmental impacts. Fair access to financial services, inclusive and diverse concepts of consumer rights should be undertaken by the bank. For example, good leadership, ethical behavior, and good transparency are important for keeping confidence in the bank and its stability.

The ESG practice has a positive and significant mediating effect on the financial performance of banks (Ali and Chouaibi, 2023). Research into the effects of different strategies for the allocation of innovation activities and their financial outcomes in the financial services industry shows that while process innovation positively affects firm performance, and there is R&D spending organization innovation, the former may come with a negative short-term performance in the beginning, although over the long run it can have positive effects (Wang et al., 2024). This, in turn, helps them improve risk management and attract the conscientious type of investors while also improving their public image. Ultimately, such investment portfolios will help the banks identify the long-term sustainable investment opportunities that are on behalf of the rest of the stakeholders and hence add to the financial returns and resilience of the banks. In addition, more regulators link financial health to results on ESG and require banks to think about these factors in their core strategies. In developing areas, ESG projects can help more people be included financially and push for economic progress. In the end, ESG integration is not just a choice but a strategic need that builds trust, helps growth, and boosts competition in today's fast-changing financial world. The talk below looks at ESG, innovation, and firm competitiveness in enhancing performance in the banking sector:

Firstly, the place of the (Environmental) in ESG and its contribution to enhanced financial performance becomes very material for banks especially in cities that are growing apace with all the attendant supplementary aspects in Ho Chi Minh City. As the risks of climate change become more material, the banks themselves have an imperative reason to be green and also comply with various environmental regulations. Banking institutions that allow for environmental considerations in their long-term planning have a competitive edge in the management of risks and the exploitation of opportunities in an environment characterized by rapid urbanization and environmental constraints in Ho Chi Minh City. Such green finance initiatives under its operation through, for instance, investment to renewable energy, support to the green projects, and low carbon emission amongst others, help to publicize the positive image of the brand and hence work as good marketing strategies in bringing in more clients or investors as corporate social responsibility is an integral function to most businesses. Some regulatory authorities such as Vietnam are working closely to establish frameworks under which banks can be given incentives for supporting environmental sustainability. Financial institutions that take the lead in environmental responsibility not only reduce exposure to ecological risks but also gain a strategic edge by aligning with global movements toward sustainability.

Secondly, the social dimension of ESG greatly influences financial performance in a bank, especially in a rapidly developing urban area like Ho Chi Minh City. In banks, the social dimension of ESG is rapidly emerging as an essential element in improving financial performance in highly dynamic urban development areas such as Ho Chi Minh City. In this dimension, it emphasizes how the financial institutions relate to the workforce, clients, and the society at large diversity in the workplace, ethical labor standards and equal access to financial services help inside management and add to confidence of stakeholders. In a city like HCMC, this is an area characterized by income inequalities and where access to financial resources has always been a problem; this provides a leeway for banks to create a point of differentiation in the market through the implementation of socially responsible strategies. Such actions boost not only the corporate image but also the social responsibility perception of the bank by the shareholder or customer in that they stand for the social responsibility of the bank. Also, good social rule leads to higher employee spirit and stay which in turn makes work better. In all, putting care first lets banks make lasting ties with people and drive long-term money success.

Thirdly, the governance part of the ESG practice greatly improves the financial performance of banks. Meanwhile, in such rapidly developing city layouts such as that of Ho Chi Minh City, having good governance in the practice of ESG increases the financial performance of banks. Effective governance ensures transparency and an application of strong management frameworks and codes of ethics by the banks; this in turn improves accountability, reduces the incidents of financial scandals, and in effect improves the stability of the financial institutions. For these and many other reasons, due to increased competition and demanding regulatory requirements in such a fast economic growth area as HCMC, the banks will attract more investors if governed properly. These banks meet regulatory requirements and appeal to investors

valuing corporate responsibility through the culture of ethics, openmindedness, and sound risk management. In addition to meeting the demands of regulators, the ultimate force that sustains long-term financial security is to let banks flourish in a competitive and rapidly evolving market like in HCMC.

In addition, the concept of innovation is gaining more weight and becoming significantly important in a fast-evolving and competitive banking sector. According to prior research by YuSheng and Ibrahim (2020), the banking industry is competitive on a global level. The small financial institutions face a lot of challenge to maintain competitiveness within the same landscape. This is further described by Mohamed and Hussein (2025). Innovation and competitive advantages play a very significant mediating role in enhancing the performance of banks in Ho Chi Minh City. As articulated, competition within the banking sector has greatly intensified while customer demands are escalating, imposing the need to adopt innovative strategies for meeting and even outdoing the expectations of customers. It is through technological advancement, including digital banking and automation, that banks are able to improve operational effectiveness, reduce costs, and improve on the level of customer service. Strong competitive advantages, including brand equity, unique offerings, and cost savings, also contribute to setting banks apart in the market. The place typically has a high demand for banking services because of rapid urban development and economic growth in Ho Chi Minh City; hence, innovation helps banks meet the varied needs of customers while establishing a strong market presence. Eventually, innovation and competitive advantages prove to be the critical factors which can bridge the gap between strategic initiatives and improved financial performance for the banking industry in Ho Chi Minh City.

This study proves right that ESG with factors of competitive advantage and innovation bears a positive impact on the financial performance of the banking sector in Ho Chi Minh City. Analysis of the model and hypotheses of this research was validated from the data of a survey of 347 bank employees in Ho Chi Minh City. The software used for this purpose was SmartPLS for statistical analysis and model testing. Findings indicate that adding environmental and social governance to items boost not just the success of a bank but also its competitive advantage and innovation capabilities, therefore enhancing its financial performance. This study has implications for that theoretical sensitivity between ESG practice and financial performances in the banking sector of an emerging market. This gives the banks an ability to practically implement the recommendations to develop strategic change programs of ESG strategies to sustain growth and increase performance in a highly competitive market.

5.1. Theoretical Implications

This study develops a conceptual understanding of the linkage between ESG practices, competitive advantage, innovation, and financial performance in the banking sector of HCMC. The imposition of competitive advantage and innovation as mediating variables introduces an evolution in the existing theories of corporate sustainability and performance. The findings support that environmental, social, and governance (ESG) factors are significant components that not only enhance the reputation of a bank but also support its financial success. Further, mediation effects regard competitive advantage and innovation as sustainable practices that improve operating efficiency and customer loyalty towards enhancing financial performance. Moreover, the model proposes that the banks in the emerging market, HCMC, can implement ESG strategies toward the enhancement of competitive advantages and creativity as new products demonstrate how ESG can be embedded in business strategies to ensure superior financial performance.

5.2. Practical Implications

This study will be very useful for banks in Ho Chi Minh City in incorporating ESG practices toward better financial performance. Results reflect that implementation of strong governance, environmental responsibility, and social inclusivity practices is not only an ethical imperative but also a supporting strategy to enhance the competitive edge of a bank as well as innovation driving through the process. In the effective embedding process of ESG principles, through their operations, that particular financial institution may ensure market demarcation in a competitive environment, enhanced customer satisfaction, and attraction of ethical investors. Also, adopting innovations will enable, fully including digitalization, technological improvements, and service differentiations, banks to sustain efficacy and meet customer demands to enhance profitability in the end. In practice, the bank managers should put the focus on the generation and implementation of the strategies center on ESG and also invest in innovation to remain competitive in a market that is changing fast. The study also brings out the critical need for aligning the structures of governance with the objectives of sustainability to ensure long-term financial stability and success of such a fast-growing city as HCMC.

5.3. Limitations and Future Studies

While offering valuable insights into the influence of ESG factors on the financial performance of banks in Ho Chi Minh City, this study also has a few limitations. First, the sample was confined to workers at banks in the city, which may not encapsulate the perceptions of other salient stakeholders, like clients or investors. Subsequent research may take a more extended sample of these groups for a holistic understanding of the impact of ESG on financial performance.

The study was done in a single city setting so the results may not apply to other areas with different economic, cultural, or regulatory contexts. Future studies could widen the geographic scope from several cities to different countries as a comparison for the ESG practices to give some insights into regional differences in the relationship between ESG and financial performance.

This study, however, viewed competitive advantage and innovation as factors that could mediate the relationship between ESG practices and financial performance. There are several other factors such as organizational culture, and customer loyalty, or digital transformation that can also effectively connect one to the other. An investigation into these additional mediators will provide an in-depth understanding of the influence of ESG on banking

outcomes. This, in turn, would remove the constraints for future research, thus offering a more specific insight into the role of ESG in the banking sector and more actionable recommendations for the banks that aim to implement successful ESG strategies.

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