VOLUME 18 NUMBER 2 May 2026
ISSN 2076-9202 (Print)
ISSN 2218-046X (Online)

International Journal of Information, Business and Management

ELITE HALL PUBLISHING HOUSE

International Journal of Information, Business and Management

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ISSN 2076-9202

International Journal of Information, Business and Management

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ISSN 2076-9202

International Journal of Information, Business and Management

Publisher: Elite Hall Publishing House

Web:http://ijibm.elitehall.com
ISSN 2076-9202 (Print)
ISSN 2218-046X (Online)

THE COUNTRY GOVERNANCE AND BANK PROFITABILITY UNDER THE MODERATING EFFECT OF ECONOMIC UNCERTAINTY: EMPIRICAL EVIDENCE FROM VIETNAMESE LISTED COMMERCIAL BANKS

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ABSTRACT

This study examines how Vietnam's bank profitability is impacted by national governance and how this relationship is moderated by economic uncertainty. The World Uncertainty Index is used to evaluate economic uncertainty, while a composite index created from the principal component analysis of the six World Bank Governance Indicators is used to quantify country governance of Vietnam. The analysis measures bank profitability using ROA, ROE, and NIM and incorporates bank-specific controls (non-performing loans, liquidity, bank size, deposit growth, asset quality, efficiency, income diversity, and funding cost) and macroeconomic controls (GDP growth and inflation) to ensure robust estimation.The study employs a fixed effects regression model and data from 20 Vietnamese commercial banks listed on HOSE and HNX between 2010 and 2023. The findings reveal that stronger country governance enhances bank profitability in Vietnam, particularly through improvements in operational performance, while the effect does not extend to ROE due to capital structure constraints. Economic uncertainty weakens the positive influence of country governance, indicating that institutional advantages are less effective in turbulent environments. Economic uncertainty exerts mixed effects on bank profitability, reducing returns through cautious lending and boosting margins via higher lending rates. These findings highlight the critical need to strengthen country governance quality while stabilizing macroeconomic conditions. Improving national governance and minimizing uncertainty will enhance bank resilience and promote sustainable profitability within Vietnam’s financial system.

KEYWORDS: Country governance, bank profitability, economic uncertainty, Vietnamese commercial bank

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JEL Classifications: G21, G38, E44
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1. Introduction

The banking industry plays a vital role in promoting economic growth by channeling funds into productive investments and maintaining financial stability (Athari, 2021; Menicucci & Paolucci, 2016). Since the mid-1980s, Vietnam's financial sector, which is mostly run by commercial banks, has experienced substantial change as the government placed a high priority on efficiency and stability (Trinh & Tran, 2024).Vietnam's financial markets are still immature despite advancements;the bond market only makes up around 15% of GDPaccording to Saigon Ratings and the stock market is still in its infancy according to Nguyen & Nguyen (2019).As a result, banks continue to be the key means of distributing credit and communicating monetary policy. Given the limited development of alternative financial markets, the stability and soundness of Vietnam's banking sector are crucial for sustaining economic growth and financial resilience (Batten & Vo, 2019).

Vietnam's banking sector from 2020 to 2024 demonstrated resilience with total assets reaching VND 22 quadrillion, equivalent to 190 percent of GDP(Le et al., 2025), alongside debt restructuring, capital strengthening, digital transformation, and rising CASA ratios. However, persistent challenges include high credit-to-GDP ratio above 110 percent(Le et al., 2025),reflecting Vietnam's heavy reliance on bank lending amid underdeveloped alternative financing, non-performing loans at 2.05 percent, loan-to-deposit ratio exceeding 100 percent(Le et al., 2025), creating liquidity issues. CBBank, OceanBank, GPBank, DongABank, and SCB are five Vietnamese banks that are under special supervision because of problems related to cross-ownership and shareholder manipulation(CafeF, 2025), which resulted in hazardous lending and an increase in bad debts. According to experts, the restructuring process has been delayed by challenges in finding qualified transferee banks, reaching shareholder consensus, and dealing with limited regulatory capacity and cumbersome procedures(Tapchikinhtetaichinh, 2024).

According to Kaufmann et al. (2011), governance refers to the institutions and practices that govern a country. The majority of studies stress the need of sound national governance for both social and economic advancement. A stable and predictable corporate climate that encourages investment and growth is produced by effective governance, which is defined by accountability, transparency, fair regulation, and the rule of law. Strong governance improves business performance and long-term economic stability by lowering corruption, transaction costs, and uncertainty, according to research.

Increased volatility and uncertainty have plagued the global financial system, particularly since the 2008 crisis. The unpredictability of fiscal, monetary, and regulatory situations is reflected in economic uncertainty(Al-Thaqeb & Algharabali, 2019), which is frequently brought on by firm-specific shocks, policy changes, or geopolitical conflicts.It affects decision-making across all sectors as firms cut investment and spending, households increase savings, and banks tighten lending(Ashraf, 2021).Higher levels of uncertainty hence result in decreased credit availability, decreased bank profitability, and increased credit risk(Luo et al.,

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2024). Additionally, it may result in reduced interest margins, excessive risk-taking, or cautious wait-and-see behavior, all of which can negatively impact bank profitability.

This study investigates whether economic uncertainty moderates the relationship between country-level governance and bank profitability in Vietnam. Data from 20 Vietnamese commercial banks listed between 2010 and 2023 on the Ho Chi Minh Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX) are used in the analysis. To the best of our knowledge, this is the first study to assess how country-level governance influences Vietnamese banks' profitability amid economic uncertainty. Due to variations in governance frameworks, previous studies that look at this relationship in other nations might not be directly applicable to Vietnam. In the Vietnamese context, most research has focused on macroeconomic and bank-specific factors, with limited attention to governance factors. Given recent banking sector challenges, this study fills a key gap and offers valuable insights for policymakers, investors, and academics.

The remainder of this paper is structured as follows. Section 2 reviews the relevant literature and formulates the hypotheses. Section 3 describes the data and methodological approach. Section 4 presents and discusses the empirical findings. Section 5 concludes the study and provides policy recommendations.

2. Literature review and Hypothesis development

2.1. The microeconomic theories of banking

2.1.1. The credit creation theory until about 1930

The banking credit creation theory, emerging in the early 1900s, argues that banks create money through lending rather than merely intermediating existing funds.Wicksell (1907) highlighted that loans create new deposits, meaning credit generates deposits rather than the reverse, while Macleod (1894) referred to banks as “manufactories of credit.” Withers (1916) claimed that banks were able to create money “out of nothing” with little restriction. He pointed out that the huge sums of deposits kept by banks should not be confused with real savings accumulated by the general public.Such fictitious credit expansion could inflate asset bubbles and precipitate financial instability, as exemplified by the Panic of 1907, when a collapse in confidence sparked a severe liquidity crisis.

2.1.2. The fractional reserve theory until about 1970

From the 1930s until the late 1960s, the prevalent fractional reserve theory saw individual banks as merely middlemen that lent only from collected deposits, despite the banking system's unique ability to create money through the money multiplier (Werner, 2014). Advocates such as Phillips (1920) and Hayek (1929) contended that banks maintain reserve ratios and re-lend the majority of deposits, resulting in system-wide money expansion through repeated intermediation.However, Mints (1945) highlighted a core paradox, namely that individual banks cannot create credit independently. This model reduces bank autonomy, requires central bank support during stress, and introduces systemic fragility, where one bank’s failure can trigger cascading crises, ultimately constraining long-term profitability and investor confidence.

2.1.3. The financial intermediation theory since 1970

The financial intermediation theory of banking, which has been prevalent since the late 1960s,

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sees banks as regular financial intermediaries that take deposits and provide loans without producing money. The major way that banks vary from non-bank firms is because of regulations(Werner, 2014). Banks help with information intermediation by bridging asymmetric information between savers and entrepreneurs, risk intermediation by restructuring credit, interest rate, and exchange risks into securities, and liquidity intermediation by reallocating depositor funds to borrowers(Freimanis & Šenfelde, 2019).According to Dewatripont et al. (2010), banks generate liquidity by borrowing short-term deposits and lending long-term. This maturity mismatch frequently causes financial crises because of illiquid assets and the possibility of large-scale deposit withdrawals that result in bankruptcy(Werner, 2005).

2.2. The roles of country governance

Despite ongoing debates, no universal definition exists for governance. Kaufmann et al. (2011) offer a balanced view, defining governance as the traditions and institutions that govern a nation, including processes for selecting and monitoring governments, formulating and implementing effective policies, and the mutual respect between citizens and state for social and economic institutions.According to Kaufmann et al. (2011), country governance consists of six key dimensions. Voice and Accountability (VA) reflects citizens' capacity to voice opinions and engage in governance, fostering transparency, trust, and institutional effectiveness, which in turn promotes economic growth and banking sector development.Political Stability and Absence of Violence (PV) measures the degree to which governments ensure peace and avoid political unrest; stable environments stimulate investment and banking operations, whereas instability hinders economic growth.Government effectiveness (GE) measures how the credibility of political institutions is shaped by the actions and commitments of the government, which enhance national growth and bank performance.Regulatory Quality (RQ) captures the ability of governments to establish and enforce fair and efficient regulations that promote private sector development. Rule of Law (RL) underscores the significance of a robust legal framework and impartial judiciary that safeguard property rights, guarantee equitable enforcement, and minimize risks for businesses and banks. Control of Corruption (CC) involves curbing the misuse of public authority for private benefit through robust oversight, severe penalties, and transparency, thereby reinforcing institutional integrity and fostering sustainable economic advancement.

Strong governance is vital in developing and emerging economies to foster accountability, transparency, and market openness amid uncertainty and risk, thereby driving sustainable growth(Almaqtari et al., 2022). It curbs corruption and rent-seeking in resource-rich nations, supports effective resource management, education, and environmental protection (Khan et al., 2020), while weak governance fuels unethical practices, cronyism, and distorted credit allocation that undermine the financial system(Le et al., 2015).There has been considerable debate on how national governance influences corporate behavior. Some scholars argue that stronger governance reduces monopolistic advantages and increases competition, which may lower profits for politically connected firms but improves overall market efficiency and fairness (Wan, 2005). Although firms operating under weak institutions may gain temporary benefits by exploiting institutional gaps, poor governance eventually leads to higher transaction costs, greater uncertainty, and reduced investment(Delios & Henisz, 2003).

2.3. Country governance and bank profitability

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Strong institutions enhance lending conditions by lowering adverse selection and moral hazard through anti-corruption policies, political stability, and an efficient legal system (Bae & Goyal, 2009; Schiantarelli et al., 2016). These elements boost financial stability, increase lenders' confidence, and improve payback rates. Conversely, ineffective legal systems and ineffective judges raise loan spreads and default risks, making repayment more challenging. According toWeill(2011), corruption exacerbates these problems by reducing contract enforcement, impairing business performance, and raising borrower moral hazard. The majority of data indicates that corruption ultimately limits credit and jeopardizes financial stability (Acemoglu & Verdier, 2000; Detragiache et al., 2008), despite the claims of some that it can occasionally facilitate lending through bribes or quicker approvals (Weill, 2011).

Profitability is greatly influenced by strong institutional environments, and cross-national variations can be explained by institutional and legal considerations.Nguyen et al. (2020) investigated the effect of government capacity, as demonstrated by corruption control, on the profitability of Vietnamese banks by looking at panel data from 2014 to 2018. At the 10% level, their findings demonstrate a negative and statistically significant correlation between bank profitability and corruption control, which the authors characterize as an unexpected conclusion. Although Vietnam has intensified anti-corruption efforts since 2016, the WGI corruption index continued to decline because it is perception-based (Kaufmann et al., 2011)and reacts slowly to reforms. Thus, the findings still align with the view that positive governance enhances profitability. However, the study’s use of EPS as a performance measure may limit accuracy, as it can be influenced by external factors like dividend policy or share count.Furthermore, the conclusions' robustness is weakened by the short research time and modest statistical significance, making the total evidence inconclusive.

When Kamarudin et al. (2020)examine how different aspects of governance affect the productivity of Islamic banks, they discover a number of surprisingly negative correlations. According to their analysis, high levels of political stability, effective governance, the rule of law, and corruption control can all lower productivity. This suggests that environments that are too stable or restricted could impede the expansion of banks or lead to inefficiencies.However, these results differ from much of the previous literature.According to several research (Beltratti & Stulz, 2009; Chortareas et al., 2013; Kamarudin et al., 2016), bank profitability and efficiency are increased by effective governance, which lowers transaction costs and risks. Research consistently demonstrates that by fostering transparency, stability, and sound regulation, strong governance dimensions like voice and accountability, regulatory quality, rule of law, and control of corruption improve bank performance. Overall, despite some exceptions, the predominant evidence supports the hypothesis that country governance positively affects bank profitability.

Hypothesis 1: Country governance positively affects bank profitability.

2.4. Economic uncertainty and the effect of country governance on bank profitability

Uncertainty is the term used to characterize the economic hazards resulting from ambiguous legislative plans and regulatory frameworks (Ali et al., 2023).Uncertainty is more important than ever due to the rapid global transition driven by globalization and technology, which also intensifies political and economic instability.Uncertainty in the market and policies causes businesses and individuals to put off

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investments and spending (Al-Thaqeb & Algharabali, 2019), endangering both economic growth and financial stability (Boungou & Mawusi, 2022). At the macro level, rising uncertainty is linked to recessions because it slows GDP, investment, consumption, and trade. At the micro level, it raises financing costs, reduces productivity, and prompts firms to delay decisions or cut debt and dividends (Zhang & Wang, 2023). Banks are also impacted; they frequently lower lending and raise loan rates when policy uncertainty rises (Ashraf, 2020)and modify their lending and risk-taking as a result of erratic government measures (Danisman et al., 2020).

Theoretical research demonstrates how uncertainty significantly influences businesses' choices about expenses, demand, and profitability.Ozili & Arun (2022) find that banks' ROE in Asia and the Americas increases when economic uncertainty rises.However, because it is region-specific and might not apply globally, this result is constrained. Furthermore, higher ROE during uncertain times may simply be the result of increased debt rather than actual performance, which raises the danger of financial loss. Therefore, rather than relying solely on ROE, the impact of economic uncertainty on bank profitability should be analyzed carefully and assessed using more complete metrics.Research shows that economic uncertainty can affect bank profitability through credit risk.According to Ozili & Arun (2022), non-performing loans are linked to lower ROE when uncertainty increases since more defaults impair bank performance. This is consistent with the findings of Caglayan & Xu (2019), who demonstrate that policy-related uncertainty raises loan loss provisions, bankruptcies, and non-performing loans. Nevertheless, regional differences exist in the results. According to Ozili (2022), uncertainty is associated with fewer non-performing loans (NPLs) in EU nations but not in other countries. This could be due to the EU's more stringent regulations and oversight, which reduce credit risk.

Overall, economic uncertainty can push non-performing loans upward in some regions and downward in others, and it can thus have either a negative or positive effect on bank profitability through NPLs.In both cases, however, banks tend to reduce lending because rising NPLs make them more cautious, while falling NPLs under stringent supervision also reflect tighter lending standards and a cautious wait-and-see approach (Nguyen, 2015). Thus, although the NPL-uncertainty relationship exhibits varying directions, high uncertainty generally reduces lending and negatively affects bank profitability, a finding consistently supported by numerous prior studies.Uncertainty leads banks to tighten credit supply, reprice loans, and face greater maturity and liquidity risks, making refinancing more difficult. In general, uncertainty has a significant role in the decreased availability of loans during times of crisis (Valencia, 2013).Rising loan defaults, increasing operational expenses, higher interest rates, and a reduction in the supply of credit are some of the underlying channels that have a negative impact on the profitability of the banking industry (Caglayan & Xu, 2019; Ozili, 2022). Further empirical data demonstrates that uncertainty as measured by the GEPU index has a negative impact on bank profitability because businesses postpone investments, hoard more cash, and banks retain highly liquid but low-yield assets, which reduces returns (Athari, 2021).

Ozili (2022) shows that in EU countries, economic uncertainty makes the moderating effect on the relationship between country governance and bank profitability more apparent. When uncertainty increases,

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governments tend to tighten regulations to reduce non-performing loans, but this unintentionally restricts banks' lending capacity, raises intermediation costs, and reduces operational flexibility, consistent with the arguments of Kamarudin et al. (2020) and Chen (2009).In order to control growing risks, banks also become more cautious by retaining more cash, postponing investments, and restricting lending availability. Therefore, although bank profitability is normally increased by effective national governance, this beneficial effect may diminish during times of economic uncertainty.

Hypothesis 2: Economic uncertainty weakens the positive effect of country governance on bank profitability.

3. Data and Methodology

3.1. Data collection

This study uses secondary data of 20 Vietnamese commercial banks publiclylisted on the Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX)from 2010 to 2023, resulting in 168 valid bank-year observations after removing missing and erroneous data. Bank-level financial information is sourced from Thomson Reuters EIKON and verified with audited reports. Economic uncertainty is measured using the World Uncertainty Index, while country governance is captured by the World Bank's Worldwide Governance Indicators. Macroeconomic data, including GDP growth and inflation, are obtained from the World Bank.

3.2. Research methodology

3.2.1. The construction of the Country Governance Index

The Worldwide Governance Indicators (WGI) are used in this study because they offer thorough coverage across six dimensions: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. The indicators range from -2.5 to 2.5, with higher values indicating better governance quality, and are constructed from evaluations provided by thousands of respondents and experts worldwide(Kaufmann et al., 2011).Kaufmann et al. (2011) group these six dimensions into three categories: government selection and accountability, government capacity to formulate and implement policies, and respect for institutions that regulate social and economic interactions.

Since the six WGI governance indicators are highly correlated, including them together in a regression can cause multicollinearity(Dutta & Saha, 2021).The study uses principal component analysis (PCA) to create a composite Country Governance Index (CGI) in order to solve this issue and quantify overall governance quality(Saha & Dutta, 2021).PCA condenses the six governance dimensions into a single, more accurate metric while preserving the majority of the original data(Khan et al., 2020).A higher CGI score is a sign of better country governance.

CGI = combining the six governance indices to create a single composite index that reflects the nation's overall level of governance (using PCA).

3.2.2. The construction of the Economic Uncertainty Index

The World Uncertainty Index (WUI), created by Ahir et al.(2022)and based on the frequency of uncertainty-related phrases in Economist Intelligence Unit nation reports, is used in this study to quantify

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economic uncertainty. In addition to capturing political, economic, and financial sources of uncertainty, the WUI has a number of advantages over the newspaper-based EPU index, such as improved nation-specific representation, less ideological bias, and wider geographical coverage(Ashraf, 2021).The study uses the average of the four quarterly WUI values to obtain an annual measure, which is already standardized and requires no further transformation.

WUI = average of four quarterly uncertainty indices

3.2.3. The measurement of bank profitability

The dependent variable, bank profitability, is measured by three proxies - Return on Equity (ROE), Return on Assets (ROA), and Net Interest Margin (NIM) - to capture various dimensions of bank profitability and produce more precise and comprehensive findings.

Return on Equity (ROE) is a metric used to assess how well a bank generates profits from shareholders' equity.It reflects the bank's ability to convert equity capital into earnings and is widely used in banking research as a profitability indicator(e.g. Bucevska & Misheva, 2017; Menicucci & Paolucci, 2016; Nguyen, 2019).Net profit divided by total shareholders' equity yields ROE.

$$ROE = \frac{Net\ income}{Shareholders'equity}$$

Return on Assets (ROA) is a crucial indicator of bank profitability since it assesses how well a bank generates profits from its assets. In contrast to ROE, ROA represents the total income-producing capacity of a bank's assets and is not impacted by leverage.It is computed by dividing net profit by total assets and is frequently utilized in banking research to evaluate operational success(e.g., Athari & Bahreini, 2023; Kohlscheen et al., 2018; Olson & Zoubi, 2011).

$$ROA = \frac{Net\ income}{Total\ assets}$$

Net Interest Margin (NIM) measures the difference between the interest income banks earn and the interest they pay, relative to their interest-bearing assets. It reflects operational efficiency and the effectiveness of banks' investment and lending decisions. NIM is widely used in empirical banking research as an indicator of profitability(e.g., Batten & Vo, 2019; Menicucci & Paolucci, 2016; Nguyen, 2019).

$$NIM = \frac{Interest\ income - Interest\ expenses}{Average\ interest\ earning\ assets}$$

3.2.4. Research models

The first model examines the direct effect of country governance on bank profitability, testing Hypothesis 1. It is specified as follows:

$$\boldsymbol{PROF_{it}} = \boldsymbol{\beta_0 + \beta_1 CGI_t + \beta_2 NPLR_{it} + \beta_3 LIQ_{it} + \beta_4 Size_{it} + \beta_5 Depo_{it} + \beta_6 AQ_{it} + \beta_7 Eff_{it} + \beta_8 IDI_{it} + \beta_9 FC_{it} + \beta_{10} GDP_t + \beta_{11} INF_t + \varepsilon_{it}} \quad \textbf{(1)}$$

The dependent variable is $\boldsymbol{PROF_{it}}$, the profitability of bank ***i***in year ***t***, as measured by ROA,

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ROE, and NIM in Section 3.2.3 above. The key independent variable is the Country Governance Index (CGI), constructed using PCA from the six World Bank governance indicators. The control variables include Non-performing loan (NPLR), Liquidity (LIQ), Bank size (Size), Deposit growth (Depo), Asset quality (AQ), Efficiency (Eff), Income diversity (IDI), Funding cost (FC), GDP growth rate (GDP), and Inflation rate (INF).The subscripts *i*, *t,* and *ε* denote, respectively, the bank, year, and error term.

The second model adds an interaction term between economic uncertainty (WUI) and country governance (CGI) to examine whether rising uncertainty weakens the positive effect of governance on bank profitability, testing Hypothesis 2.

$$\boldsymbol{PROF_{it}} = \boldsymbol{\beta_0 + \beta_1 CGI_t + \beta_2 (CGI_t * WUI_t) + \beta_3 WUI_t + \beta_4 NPLR_{it} + \beta_5 LIQ_{it} + \beta_6 Size_{it} + \beta_7 Depo_{it} + \beta_8 AQ_{it} + \beta_9 Eff_{it} + \beta_{10} IDI_{it} + \beta_{11} FC_{it} + \beta_{12} GDP_t + \beta_{13} INF_t + \varepsilon_{it}} \quad (2)$$

The interaction term $\boldsymbol{CGI_t * WUI_t}$ examines whether economic uncertainty moderates the influence of country governance on bank profitability. A statistically significant $\boldsymbol{\beta_2}$ indicates a moderating effect. In Model 2, a positive $\boldsymbol{\beta_2}$ would indicate that heightened economic uncertainty amplifies the positive impact of governance, whereas a negative $\boldsymbol{\beta_2}$ would imply that uncertainty diminishes this effect.

Table 1. Summary of variables

Variable code	Variable name	Variable description
Bank Profitability (PROF)		
ROE	Return on equity	Net income / Shareholders'equity (Almaqtari et al., 2022; Athari, 2021)
ROA	Return on assets	Net income / Total assets (Almaqtari et al., 2022; Athari, 2021)
NIM	Net interest margin	(Interest income – Interest expenses) / Average interest earning assets (Almaqtari et al., 2022; Ozili & Arun, 2022)
Country Governance Index		
CGI	Country governance index	Merge the six governance indices into a unified composite index representing the quality of governance of Vietnam (using PCA) (Ali et al., 2023; Dutta & Saha, 2021)
Economic Uncertainty		
WUI	World uncertainty index	Calculated as an average of four quarterly uncertainty indices (Luo et al., 2024)
Control Variables		
NPLR	Non-performing loans (credit risk)	Non-performing loans / Gross loans (Ali et al., 2023; Ozili & Arun, 2022)

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Size	Bank size	Ln(total assets) (Athari, 2021; Zhang & Wang, 2023)
LIQ	Liquidity	Liquid assets / Total assets (Athari, 2021)
Depo	Deposit growth	(Total deposits current period - Total deposits previous period) / Total deposits previous period (Legass et al., 2021; Menicucci & Paolucci, 2016)
AQ	Asset quality	Total loans / Total assets (Athari, 2021)
Eff	Efficiency	Operating expenses / Operating income (Athari, 2021)
IDI	Income diversity	Non-interest income / Total income (Zhang & Wang, 2023)
FC	Funding cost	Total interest expenses / Total deposits (Dietrich & Wanzenried, 2014)
GDP	GDP growth rate	Vietnam's annual percentage change in GDP (Ozili & Arun, 2022)
INF	Inflation rate	Vietnam's annual inflation rate (Athari, 2021)

To investigate the strengths and directions of the effects, this study uses three panel-data regression techniques: Pooled OLS, the Fixed Effects Model (FEM), and the Random Effects Model (REM). The tests done to choose the best model are shown in Table 2. To ascertain whether FEM is preferable to Pooled OLS, the F-test is utilized. Pooled OLS and REM are compared using the Breusch–Pagan Lagrange Multiplier test. After that, the Hausman test is used to determine which modelbetween FEM and REM better matches the data.

Table 2. Summary of tests and models

F-test	LM test	Hausman test	The chosen model
H_0 is not rejected	H_0 is not rejected		Pooled OLS
H_0 is not rejected	H_0 is rejected		REM
H_0 is rejected	H_0 is not rejected		FEM
H_0 is rejected	H_0 is rejected	H_0 is rejected	FEM
H_0 is rejected	H_0 is rejected	H_0 is not rejected	REM

Source: Le & Phan (2017)

4. Empirical results

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4.1.Principal component analysis of Country Governance

Using Principal Component Analysis (PCA), six governance-related indicators are integrated to create the Country Governance Index (CGI). Each principal component's Eigenvalues and percentage of variation explained are shown in Table 3. The PCA findings produce six components with Component 1 (Comp1) having the greatest Eigenvalue of 4.045 and greater than 1, indicating that it captures the most information and is more dependable than the others. As a result, Component 1 is selected as the composite CGI. Furthermore, the fact that the total KMO value is greater than 0.5 indicates that the dataset is suitable for PCA, as shown in Table 4.

Table 3. Principal component analysis results

Principal components/correlation Number of obs. = 14
Number of comp. = 6
Trace = 6
Rotation: (unrotated = principal) Rho = 1.0000

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp 1	4.045	2.922	0.674	0.674
Comp 2	1.122	0.584	0.187	0.861
Comp 3	0.539	0.403	0.090	0.951
Comp 4	0.136	0.016	0.023	0.974
Comp 5	0.120	0.082	0.020	0.994
Comp 6	0.038	.	0.006	1.000

Table 4. Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	**KMO**
CGI1	0.749
CGI2	0.786
CGI3	0.714
CGI4	0.758
CGI5	0.682
CGI6	0.775
Overall	**0.744**

The correlation matrix between the WGI sub-indices and the composite CGI, which shows how each dimension is related to the total CGI score, is presented in Table 5. All correlation coefficients between the composite CGI and its six governance indicators (CGI1 to CGI6) are found to be statistically significant at the 1% level. The composite CGI successfully captures the common variance shared among the sub-indices, according to the comparatively strong absolute correlations (above 0.662). This result demonstrates that the PCA method effectively combines several aspects of governance into a single representative index.CGI is

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positively correlated with CGI1, CGI3, CGI4, CGI5, and CGI6, suggesting that improvements in these elements - voice and accountability, government efficacy, regulatory quality, rule of law, and corruption control - are linked to better CGI scores overall. On the other hand, the negative association between CGI and CGI2 (political stability and absence of violence) indicates that a lower CGI score is associated with greater values in CGI2. This is due to the fact that greater CGI2 levels signal political instability, while lower CGI is a result of weaker governance quality.

Table 5.Country governance index correlations

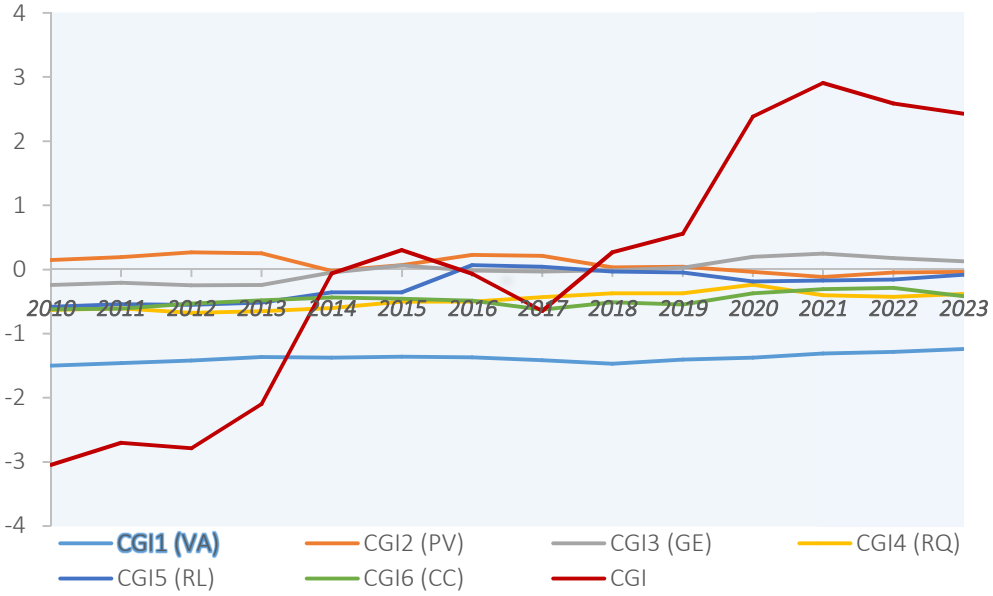
Variables	CGI	CGI1	CGI2	CGI3	CGI4	CGI5	CGI6
CGI	1.000						
CGI1 (VA)	0.747***	1.000					
CGI2 (PV)	-0.852***	-0.528***	1.000				
CGI3 (GE)	0.982***	0.674***	-0.841***	1.000			
CGI4 (RQ)	0.827***	0.348***	-0.659***	0.845***	1.000		
CGI5 (RL)	0.662***	0.339***	-0.338***	0.659***	0.762***	1.000	
CGI6 (CC)	0.822***	0.791***	-0.738***	0.771***	0.442***	0.240***	1.000

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

4.2. Overview of Country governance index and Uncertainty index

Figure 1 depicts the annual trends of the six Governance Indicators - Voice and Accountability (VA), Political Stability And Absence Of Violence (PV), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), and Control of Corruption (CC) - together with the composite country governance index CGI derived through Principal Component Analysis (PCA).

Figure 1. Trends of the six governance indicators for Vietnam, 2010 - 2023



The composite governance index (CGI) for Vietnam exhibits an increasing trend between 2010 and 2021, followed by a minor fall. This increase is a result of steady advancements in a number of governance-related areas, most notably government effectiveness (GE) and corruption control (CC). The

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overall increase in CGI indicates that common positive moves across dimensions have been enhanced by the PCA approach, even while individual components like voice and accountability (VA) and rule of law (RL) remain weak and mostly stable. The rising CGI during this period indicates better overall governance quality in Vietnam, driven by enhanced institutional effectiveness and anti-corruption efforts, in line with the Vietnamese government's intensified anti-corruption measures and regulatory restrictions introduced in 2013, despite persistent weaknesses in legal integrity and civic participation.

Figure 2. Country governance index (CGI) and the World uncertainty index (WUI) for Vietnam, 2010 - 2023

Figure 2 shows how Vietnam's World Uncertainty Index (WUI) and Country Governance Index (CGI) changed between 2010 and 2023. Overall, the CGI exhibits a steady increasing trend, especially after 2013, which reflects advancements in anti-corruption initiatives, institutional efficacy, and regulatory quality as a result of the Vietnamese government's stepped-up governance reforms. Stronger policy coordination and increased public sector transparency were observed during this time, despite ongoing issues with citizen engagement and legal integrity. Conversely, the WUI remained relatively stable at low levels throughout the period, with modest fluctuations around global crises such as the COVID-19 pandemic. The contrast between the stable yet gradually improving governance environment and mild uncertainty fluctuations provides a contextual foundation for examining how governance quality and economic uncertainty jointly shape the profitability of Vietnamese commercial banks.

4.3.Descriptive statistics

Table 6 presents the descriptive statistics of all variables employed in the analysis. Regarding bank profitability, first, the ROA (Return on Assets) variable shows a mean of 1.1%, ranging from 0% to 2.9%, suggesting that Vietnamese listed banks achieve modest yet stable profitability relative to total assets. The mean of 1.1% reflects conservative earnings efficiency. Second, the ROE (Return on Equity) variable has an average of 13.3%, a larger range of 0% to 23.9%, and greater variability (SD = 6.3%), implying differences in equity-based profitability among banks, possibly due to variations in leverage or cost efficiency. Third, the average NIM (Net Interest Margin) of 3.6% indicates steady and robust interest margins.

Table 6. Summary statistics

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	N	Mean	Median	Min	Max	SD
ROA	168	0.011	0.009	0	0.029	0.007
ROE	168	0.133	0.133	0	0.239	0.063
NIM	168	0.036	0.034	0.018	0.097	0.014
CGI	168	0.991	0.557	-3.050	2.907	1.503
WUI	168	0.069	0.056	0	0.236	0.064
NPLR	168	0.036	0.024	0.002	0.217	0.038
LIQ	168	0.148	0.138	0.051	0.325	0.054
Size	168	33.372	33.309	31.238	35.290	0.894
Depo	168	0.174	0.146	-0.174	0.725	0.129
AQ	168	0.617	0.632	0.347	0.755	0.090
Eff	168	0.478	0.450	0.237	0.986	0.148
IDI	168	0.439	0.413	0.108	0.973	0.202
FC	168	0.051	0.050	0.024	0.085	0.013
GDP	168	0.060	0.067	0.026	0.085	0.019
INF	168	0.031	0.032	0.006	0.092	0.013

The Country Governance Index (CGI) ranges from –3.05 to +2.907, with a mean of 0.991 and significant variation (SD = 1.503). This large dispersion is consistent with Vietnam's cycles of institutional restructuring and policy reform, reflecting notable variations in governance quality during the study period. Figure 2 clearly illustrates these changes.The large degree of variation in CGI suggests that governance quality changed significantly throughout the course of the study and may have a significant impact on banking performance. By contrast, during the examined period, economic uncertainty (WUI) was low and consistent, averaging 0.069 (median 0.056) with slight fluctuations (min 0, max 0.236, SD = 0.064). This suggests that economic uncertainty was typically low but occasionally elevated.

4.4.Correlation coefficients

Table 7 presents the correlation matrix among all variables, illustrating both the strength and direction of their relationships. The results indicate that the country governance index (CGI) and bank size (Size) exhibit strong positive correlations with all three profitability measures, statistically significant at the 1% level. This finding supports the expectation that stronger governance enhances bank performance, while larger banks benefit from economies of scale, enabling them to become more profitable. In contrast, efficiency (Eff) has strong, negative correlations with profitability, which is in line with the predicted effect that higher operating expenses reduce earnings. Meanwhile, there are no statistically significant relationships between GDP growth (GDP), Inflation (INF), or Deposit growth (Depo) and any profitability metric, indicating that their impacts on bank performance in the Vietnamese banking industry may be indirect, delayed, or context-dependent.

For ROA, WUI displays a weak negative correlation (-0.140, $p < 0.1$), indicating that higher economic uncertainty slightly reduces asset returns, as expected. Funding cost (FC) demonstrates a more robust negative correlation(-0.205, $p < 0.01$), indicating that higher interest expenses considerably reduce

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profitability. However, there is no statistically significant correlation between NPLR, LIQ, AQ, or IDI and ROA in this sample.

For ROE, significant correlations at the 1% level are observed with WUI (-0.217), AQ (0.277), IDI (-0.229), and FC (-0.269); while significant correlations at the 10% level are noted with NPLR (-0.147) and LIQ (0.130). All are in line with expectations except for IDI. Income diversification (IDI) is expected to have a positive association with bank profitability, as it allows banks to stabilize earnings and reduce dependence on traditional lending activities. However, the negative correlation between IDI and ROE in this study may reflect the specific context of Vietnamese commercial banks. According to Nguyen (2019), Vietnam's banking system still shows weaknesses and a lack of experience in developing a reasonable profit transformation model. Although banks are under pressure to implement Basel II and shift towards non-interest income sources, the expansion of service-based activities has been relatively passive and slow. Consequently, income diversification might not yet enhance profitability; instead, it may increase operational complexity and costs, leading to a short-term reduction in returns. Diversification into non-traditional activities often requires substantial investment in human and technological resources, thereby increasing operational costs and earnings volatility.

For NIM, significant correlations at the 10% level are observed with NPLR (0.124) and LIQ (-0.144); while insignificant correlations are noted with WUI, AQ, IDI, and FC. Notably, the correlations between NIM and both NPLR and LIQ are contrary to expectations. The positive association between NPLR and NIM may indicate that banks with higher credit risks tend to charge higher lending rates to compensate for potential loan losses. In order to mitigate default risk, banks that hold riskier assets may specifically demand higher returns. This finding is particularly pertinent in emerging markets like Vietnam since more macroeconomic volatility frequently results in larger interest spreads as a penalty of elevated credit risks. On the other hand, the negative correlation between NIM and LIQ indicates that keeping a larger percentage of liquid assets, which are usually low-yielding, lowers interest income and, consequently, leading to lower margins.

In addition, the correlation matrix indicates that there is no significant multicollinearity between the explanatory factors. AQ and SIZE have the strongest association, 0.546, which is still much below the widely recognized multicollinearity criterion of 0.7. This indicates that all variables can be jointly included in the regression models without substantial collinearity bias, providing a robust empirical foundation for the subsequent regression analyses.

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Table 7. Pairwise correlations among variables

Variable	ROA	ROE	NIM	CGI	WUI	NPLR	LIQ	Size	Depo	AQ	Eff	IDI	FC	GDP	INF
ROA	1.000														
ROE	0.826***	1.000													
NIM	0.728***	0.559***	1.000												
CGI	0.429***	0.376***	0.259***	1.000											
WUI	-0.140*	-0.217***	-0.051	-0.184**	1.000										
NPLR	-0.114	-0.147*	0.124*	-0.303***	0.325***	1.000									
LIQ	0.085	0.130*	-0.144*	-0.040	0.122	-0.072	1.000								
Size	0.298***	0.471***	0.220***	0.290***	-0.059	-0.006	-0.016	1.000							
Depo	0.010	0.022	0.123	-0.071	0.132*	0.158**	0.282***	-0.104	1.000						
AQ	0.077	0.277***	0.084	0.201***	-0.025	0.071	-0.473***	0.546***	-0.254***	1.000					
Eff	-0.677***	-0.725***	-0.523***	-0.489***	0.157**	0.086	-0.136*	-0.543***	0.102	-0.297***	1.000				
IDI	0.003	-0.229***	-0.068	0.015	0.032	-0.054	0.129*	0.002	-0.179**	-0.362***	0.115	1.000			
FC	-0.205***	-0.269***	0.037	-0.209***	-0.043	0.353***	-0.278***	-0.372***	-0.054	0.107	0.175**	-0.186**	1.000		
GDP	-0.081	-0.063	-0.045	-0.445***	0.012	0.022	0.044	-0.091	-0.042	-0.062	0.186**	0.001	0.014	1.000	
INF	-0.039	-0.030	-0.078	-0.486***	0.272***	0.409***	0.119	-0.012	0.006	0.059	0.157**	-0.067	0.411***	0.097	1.000

****p<0.01, **p<0.05, *p<0.1*

4.5. Regression results

4.5.1. The effect of country governance on bank profitability

The F test, LM test, and Hausman test are used to determine the best regression model for analyzing how national governance affects bank profitability.As shown in Table 8, for all three profitability metrics (ROA, ROE, and NIM), these diagnostic tests indicate that the Fixed-Effects Model is the most suitable specification, effectively accounting for unobservable heterogeneity among banks and ensuring the robustness of the estimated relationships, according to Table 2 in Section 3.2.4.

For ROA, the coefficient of the Country Governance Index (CGI) under the FEM specification is positive and statistically significant at the 10% level, indicating that higher governance quality is associated with improved bank profitability as measured by ROA, supporting Hypothesis 1. This result is consistent with the conclusions of Ali et al. (2023) and Athari & Bahreini (2023), improvements in national governance, namely in the areas of political stability, rule of law compliance, and corruption control, lessen moral hazard for lenders and improve banking operations. Kamarudin et al. (2016) found that voice and accountability enhance the banking system's revenue efficiency by promoting democracy and reducing poverty; at the same time, government effectiveness reflects the capacity to create and carry out policies that assist the private sector, improving bank performance. A professional bureaucracy, increased public official responsibility, decreased expenses, and less information asymmetry are all results of high regulatory quality, which helps banks mobilize deposits and provide loans more effectively. Kamarudin et al. (2016) also argued that political stability (PV) and rule of law (RL) in Gulf Cooperation Council (GCC) nations lower costs, uncertainty, and information asymmetry, draw in private investment, improve lending and deposit mobilization, and foster stability, risk mitigation, and long-term profitability. According to Osei-Tutu (2022), banks of all sizes and economic development levels are less efficient due to corruption. Furthermore, inefficient legal processes raise borrower moral hazard by postponing collateral repossession and decreasing recovery rates; opportunistic borrowers may default when courts are inefficient and delayed because high recovery costs discourage lenders from pursuing claims, according to Bermpei et al. (2018).

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Among the control variables in the FEM model for ROA, asset quality (AQ) shows a positive and highly significant effect, while efficiency (Eff) and funding cost (FC) have significant negative effects. GDP growth (GDP) exhibits a weakly positive association and inflation (INF) displays a strong positive impact.

The significant positive link between asset quality (AQ) and bank profitability is supported by studies from Lucky & Nwosi (2015), who noted that asset quality captures robust asset management and credit risk mitigation that bolster financial stability and returns through disciplined lending and regulatory adherence. Conversely, the negative relationship between efficiency (Eff) and profitability supports the efficient-structure hypothesis proposed by Berger (1995), which argues that highly efficient banks reduce operating costs via better management or technological advancements. This cost edge enables them to price services competitively, gain market share, and ultimately boost profits (Le, 2017). Regarding funding cost (FC), the negative and significant impact of funding cost (FC) indicates that elevated funding expenses diminish bank profitability. Increased sovereign risk may trigger credit rating downgrades, raising borrowing costs and limiting growth prospects(Kohlscheen et al., 2018b). GDP growth (GDP) exhibits a positive yet modest impact, aligning with the notion that economic expansion bolsters bank profitability. In growing economies, credit quality improves, default rates decline, and balance sheets strengthen (Akbaş et al., 2012). Additionally, increased loan demand and reduced loan loss provisions enhance earnings (Athanasoglou et al., 2014). Finally, inflation (INF), though displaying an opposite sign from the initial expectation, can still be justified by other studies. Supporting evidence is found in the studies by Kosmidou (2008), when inflation is anticipated, banks can swiftly adjust interest rates on loans and deposits, allowing revenues to rise faster than costs and thereby enhancing profitability. This positive correlation between inflation and bank profitability is also consistent with the findings of Pham et al. (2022), who discovered that inflation has a beneficial impact on Vietnamese commercial banks' ROA and ROE.

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Table 8: Results of regression for Model 1

Variables	Pooled OLS			FEM			REM		
	ROA	ROE	NIM	ROA	ROE	NIM	ROA	ROE	NIM
Constant	0.086***	0.318*	0.077	-0.034	-0.561	0.109*	0.027	0.146	0.074
	(0.022)	(0.186)	(0.051)	(0.042)	(0.431)	(0.063)	(0.025)	(0.207)	(0.053)
CGI	0.002***	0.007**	0.001	0.001*	-0.001	0.002**	0.001***	0.006**	0.001*
	(0.0004)	(0.003)	(0.0008)	(0.001)	(0.005)	(0.001)	(0.0003)	(0.003)	(0.001)
NPLR	-0.008	-0.163*	0.046*	0.004	-0.102	-0.017	0.001	-0.137	-0.006
	(0.011)	(0.094)	(0.026)	(0.011)	(0.114)	(0.017)	(0.011)	(0.099)	(0.017)
LIQ	-0.034***	-0.083	-0.117***	0.016	0.191*	-0.005	-0.002	-0.0004	-0.02
	(0.009)	(0.076)	(0.021)	(0.01)	(0.107)	(0.016)	(0.01)	(0.085)	(0.016)
Size	-0.002**	-0.001	0.0006	0.001	0.017	-0.003	-0.0004	0.002	-0.001
	(0.0007)	(0.006)	(0.002)	(0.001)	(0.013)	(0.002)	(0.0008)	(0.006)	(0.002)
Depo	0.007**	0.049**	0.027***	0.001	0.015	0.01***	0.004	0.042	0.012***
	(0.003)	(0.027)	(0.007)	(0.003)	(0.026)	(0.004)	(0.003)	(0.026)	(0.004)
AQ	-0.013*	0.01	-0.05***	0.025***	0.297***	0.037***	0.004	0.070	0.025*
	(0.007)	(0.057)	(0.016)	(0.008)	(0.087)	(0.013)	(0.007)	(0.063)	(0.013)
Eff	-0.036***	-0.281***	-0.065***	-0.016***	-0.170***	-0.025***	-0.024***	-0.252***	-0.031***
	(0.003)	(0.029)	(0.008)	(0.004)	(0.038)	(0.006)	(0.004)	(0.031)	(0.006)
IDI	0.002	-0.048***	0.001	-0.001	0.013	-0.014***	0.0001	-0.034*	-0.012***
	(0.002)	(0.018)	(0.005)	(0.003)	(0.028)	(0.004)	(0.002)	(0.02)	(0.004)
FC	-0.137***	-1.188***	0.048	-0.093**	-0.828*	0.028	-0.081**	-0.873**	0.021
	(0.038)	(0.324)	(0.089)	(0.042)	(0.432)	(0.063)	(0.037)	(0.340)	(0.063)
GDP	0.061***	0.390**	0.103**	0.028*	0.168	0.045*	0.044***	0.340**	0.047*
	(0.020)	(0.179)	(0.049)	(0.016)	(0.166)	(0.024)	(0.017)	(0.166)	(0.025)
INF	0.209***	1.332***	0.084	0.147***	0.882***	0.141***	0.167***	1.139***	0.133***
	(0.037)	(0.318)	(0.087)	(0.03)	(0.318)	(0.046)	(0.032)	(0.308)	(0.05)
Adj R-squared	0.575	0.610	0.429						
F-statistic	21.52	24.74	12.42						
p-value	0.0000	0.0000	0.0000						
LM test									
Chi-squared				64.42	15.04	192.66			
p-value				0.0000	0.0001	0.0000			
Hausman test									
Chi-squared							33.76	29.45	29.38
p-value							0.0004	0.0019	0.002
Number of obs.	168	168	168	168	168	168	168	168	168

*** $p<0.01$, ** $p<0.05$, * $p<0.$

NPLR, LIQ, Size, Depo, and IDI are among the other control factors that do not statistically significantly affect ROA in the FEM model. This suggests that during the study period, these variables have no direct impact on bank profitability as measured by ROA. Such insignificance is in line with conflicting findings from earlier research, where the effects of these factors frequently differ depending on macroeconomic circumstances, regulatory environments, and bank-specific traits.

In the FEM model for ROE, the Country Governance Index (CGI) has a negative but statistically insignificant coefficient, indicating that the evidence does not support the first hypothesis and that the direction of the effect contradicts the expected positive relationship. Nevertheless, the negative sign is not entirely inconsistent with prior empirical findings. Several studies have documented that certain aspects of governance may, under specific institutional conditions, exert a detrimental effect on bank performance.Weill (2011) argued that bank corruption can limit credit by increasing borrowing costs, much like a tax, but it can also make lending easier when borrowers pay bribes, serving as a "lubricant" for the expansion of credit. According to Kamarudin et al. (2020), stronger rule of law (RL) reduces efficiency through excessive regulatory burdens and risk-taking incentives, political stability (PV) hinders productivity for Islamic banks by allowing self-interested political interference, and tighter corruption control (CC) lowers performance because regulators may use power for personal gain rather than market correction.

In the FEM estimation for ROE, liquidity (LIQ) shows a weakly positive association, whereas asset quality (AQ) remains positive and highly significant. Efficiency (Eff) and funding cost (FC) retain their negative and significant effects. Inflation (INF) also exerts a strong positive influence. The effects of AQ, Eff, FC, and INF are in line with those observed in the ROA model, and their interpretations follow the same

ISSN 2076-9202

logic previously discussed. Regarding liquidity (LIQ), the results fully align with the anticipated positive correlation between bank profitability and liquidity. This result is consistent with the logic of the "expected bankruptcy cost hypothesis," which was first presented by Berger (1995)in relation to capital and may also be applied to liquidity. Funding markets essentially see banks with larger liquidity levels as less risky and more reliable, which reduces their financing costs and boosts profitability.The remaining variables (NPLR, Size, Depo, and IDI) remain insignificant, similar to the ROA model, and thus are interpreted accordingly. GDP also shows no significant effect, implying that overall economic growth does not directly enhance bank profitability during the sample period.

For NIM, the coefficient of the Country Governance Index (CGI) under the FEM specification is positive and statistically significant at the 5% level ($\beta = 0.002$, $p < 0.05$), indicating that better governance quality enhances bank profitability as measured by NIM. This result supports the Hypothesis 1, consistent with the ROA model and at a stronger significance level (5% compared to 10%). According to Wang et al. (2022), strong legal frameworks that protect banks and enforce financial contracts foster lending confidence by reducing credit risk. When borrowers default, banks operating under effective legal systems can enforce repayment or recover assets, thereby maintaining more stable and higher interest margins.

Among the control variables in the FEM model for NIM, deposits growth (Depo) exhibit a positive and highly significant coefficient, while asset quality (AQ) shows a stronger positive effect. Efficiency (Eff) has a negative and significant impact, and income diversity (IDI) also displays a negative and significant coefficient. Macroeconomic factors include GDP growth with a weakly positive influence and inflation (INF) with a strong positive effect. Notably, AQ, Eff, INF, and GDP are statistically significant and display consistent directional effects with the ROA and ROE model, whereas Depo and IDI are significant only in the NIM regression.The positive impact of deposits growth (Depo) on NIM is consistent with previous research and theoretical predictions as annual deposit growth allows banks to scale operations and convert growing liabilities into assets that provide revenue for all income levels (Dietrich & Wanzenried, 2014). In contrast, income diversity (IDI) exerts a significant but negative effect, contrary to the anticipated positive direction; however, this finding is corroborated by studies arguing that non-traditional activities demand substantial investment in human capital and technology, elevating operating leverage and profit volatility. Specifically, many fee-based services require minimal regulatory capital yet rely heavily on financial leverage, thereby amplifying income instability (DeYoung & Rice, 2004).The remaining control variables (NPLR, LIQ, Size, and FC)are all statistically insignificant in the NIM regression.

4.5.2. The moderating effect of economic uncertainty on the relationship between country governance and bank profitability

ISSN 2076-9202

Table 9: Results of regression for Model 2

Variables	Pooled OLS			FEM			REM		
	ROA	ROE	NIM	ROA	ROE	NIM	ROA	ROE	NIM
Constant	0.106***	0.509***	0.080	-0.025	0.199	-0.026	0.063**	0.414**	0.008
	(0.022)	(0.182)	(0.053)	(0.054)	(0.556)	(0.080)	(0.025)	(0.203)	(0.061)
CGI	0.004***	0.025***	0.003	0.002***	0.015	0.001	0.004***	0.022***	0.001
	(0.001)	(0.007)	(0.002)	(0.001)	(0.009)	(0.001)	(0.001)	(0.007)	(0.001)
CGI*WUI	-0.027***	-0.171***	-0.016	-0.016**	-0.089	-0.003	-0.021***	-0.144**	-0.004
	(0.008)	(0.064)	(0.019)	(0.006)	(0.063)	(0.009)	(0.007)	(0.061)	(0.01)
WUI	-0.011*	-0.185***	0.009	0.001	-0.123**	0.025***	-0.008	-0.173***	0.021**
	(0.006)	(0.051)	(0.015)	(0.006)	(0.062)	(0.009)	(0.005)	(0.049)	(0.009)
NPLR	-0.002	-0.056	0.041	0.001	-0.077	-0.026	0.004	-0.039	-0.017
	(0.011)	(0.093)	(0.027)	(0.011)	(0.115)	(0.017)	(0.011)	(0.099)	(0.017)
LIQ	-0.039***	-0.098	-0.122***	0.011	0.182*	-0.01	-0.015	-0.035	-0.023
	(0.009)	(0.074)	(0.021)	(0.01)	(0.109)	(0.016)	(0.01)	(0.082)	(0.016)
Size	-0.002***	-0.007	0.001	0.001	-0.005	0.001	-0.001	-0.006	0.001
	(0.001)	(0.006)	(0.002)	(0.002)	(0.017)	(0.002)	(0.001)	(0.006)	(0.002)
Depo	0.006*	0.043	0.025***	-0.0001	0.016	0.008**	0.003	0.039	0.011**
	(0.003)	(0.026)	(0.008)	(0.003)	(0.027)	(0.004)	(0.003)	(0.025)	(0.004)
AQ	-0.013**	0.026	-0.053***	0.021**	0.236**	0.043***	-0.004	0.064	0.027**
	(0.007)	(0.055)	(0.016)	(0.009)	(0.090)	(0.013)	(0.007)	(0.06)	(0.013)
Eff	-0.036***	-0.276***	-0.066***	-0.016***	-0.173***	-0.025***	-0.027***	-0.255***	-0.030***
	(0.003)	(0.027)	(0.008)	(0.004)	(0.038)	(0.005)	(0.003)	(0.03)	(0.006)
IDI	0.001	-0.051***	0.0001	-0.002	0.006	-0.013***	-0.0004	-0.040**	-0.012***
	(0.002)	(0.017)	(0.005)	(0.003)	(0.028)	(0.004)	(0.002)	(0.019)	(0.004)
FC	-0.205***	-1.817***	0.034	-0.144***	-1.146**	0.022	-0.156***	-1.568***	0.032
	(0.041)	(0.342)	(0.099)	(0.046)	(0.477)	(0.069)	(0.042)	(0.366)	(0.070)
GDP	0.132***	0.824***	0.145**	0.068***	0.488**	0.037	0.103***	0.721***	0.051
	(0.028)	(0.179)	(0.069)	(0.023)	(0.243)	(0.035)	(0.024)	(0.228)	(0.036)
INF	0.184***	1.322***	0.050	0.136***	1.090***	0.088*	0.165***	1.230***	0.093*
	(0.038)	(0.321)	(0.093)	(0.033)	(0.339)	(0.049)	(0.033)	(0.311)	(0.051)
Adj R-squared	0.609	0.649	0.426						
F-statistic	20.97	24.72	10.54						
p-value	0.0000	0.0000	0.0000						
LM test									
Chi-squared				54.95	11.47	189.15			
p-value				0.0000	0.0004	0.0000			
Hausman test									
Chi-squared							44.63	25.41	32.58
p-value							0.0000	0.0204	0.0020
Number of obs.	168	168	168	168	168	168	168	168	168

****p<0.01, **p<0.05, *p<0.1*

Table 9 presents the results of Model 2, which investigates the moderating impact of economic uncertainty on the link between bank profitability and country governance. Similar to Model 1, for all three profitability metrics (ROA, ROE, and NIM), Fixed-Effects Model (FEM) is the best specification for Model 2.

For ROA under the FEM specification, the coefficient of CGI remains positive and attains a higher level of statistical significance ($\beta = 0.002$, $p < 0.01$), compared with the 10% significance observed in regression results for ROA in Model 1. This stronger significance, while maintaining the same positive direction, reinforces the robustness of Hypothesis 1 and confirms that improvements in governance consistently enhance bank profitability, as has been discussed previously in Section 4.5.1. The increase in significance can be attributed to the inclusion of uncertainty-related controls, which help isolate the influence of external macroeconomic volatility on profitability.

The interaction term (CGI*WUI) yields a negative and statistically significant coefficient ($\beta = -0.016$, $p < 0.05$), supporting Hypothesis 2 that economic uncertainty weakens the positive impact of country governance on bank profitability (ROA). Even when governance conditions are strong, external shocks can diminish the advantages of political stability, regulatory quality, and corruption control, suggesting that macroeconomic turbulence weakens the effectiveness of institutional mechanisms. This finding is corroborated by prior studies. Ozili (2022) finds that in EU countries, heightened economic uncertainty prompts stricter regulations to curb non-performing loans, yet these measures inadvertently restrict credit

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supply and profitability by tightening lending standards, mirroring the dampening effect observed here. Similarly, Kamarudin et al. (2020) and Chen (2009) argue that overly rigid regulatory environments during uncertain periods elevate intermediation costs and limit operational flexibility, weakening the profitability gains from strong governance. Additionally, banks adopt risk-averse strategies under uncertainty - holding excess liquidity, delaying investments, and curbing lending - further eroding the positive governance-profitability link despite robust institutional frameworks.

The economic uncertainty variable (WUI) shows a positive but statistically insignificant coefficient in Model 2 for ROA. This finding contrasts with both the initial theoretical expectation and most prior empirical evidence, which generally document a negative relationship between uncertainty and bank profitability (e.g., Athari, 2021; Ozili, 2021; Zhang & Wang, 2023). The expected mechanism, where rising uncertainty increases risk aversion, reduces credit demand, raises funding costs, and encourages more conservative lending, would typically be associated with lower bank profitability. The absence of significance here indicates that this effect is not robust or systematic in the Vietnamese context when ROA is used to measure bank profitability.

For ROE in the FEM, the coefficient of CGI is 0.015 but statistically insignificant, consistent with the regression results for ROE in Model 1 (Section 4.5.1).Although the relationship remains non-significant when profitability is measured by ROE, the positive sign aligns with Hypothesis 1, positing that stronger country governance enhances bank profitability.

Although the interaction term between CGI and WUI (CGI*WUI) carries a negative coefficient (β = -0.089), it is not statistically significant at conventional levels. The negative sign, while small and insignificant, is consistent with the theoretical expectation that economic uncertainty may weaken the positive effect of country governance on bank profitability. However, because the effect lacks statistical significance, this moderating role cannot be empirically confirmed when profitability is measured by ROE in the Vietnamese sample.

The coefficient of the WUI in the FEM specification is negative and statistically significant at the 5% level (β = -0.123, $p < 0.05$). This finding indicates that rising levels of economic uncertainty are associated with a decline in bank profitability, as proxied by ROE. This result aligns with the theoretical expectations and previous empirical evidence suggesting that economic uncertainty negatively affects bank profitability through several channels, including higher loan defaults, increased operating costs, tighter credit supply, and lower loan demand (Caglayan & Xu, 2019; Ozili, 2022). Ozili (2021) further notes that uncertainty-driven declines in both credit demand and supply weaken banks' earnings. Athari (2021) also finds that global economic policy uncertainty reduces bank profitability, as firms delay investment, accumulate cash as a precaution, and shift toward low-yield liquid assets, all of which compress returns and margins.

Finally, for NIM in the FEM, the Country Governance Index (CGI) exhibits a positive but statistically insignificant coefficient when bank profitability is measured by NIM, while the interaction term CGI*WUI shows a negative but statistically insignificant coefficient. Both results yield identical findings to those observed in the ROE regression of Model 2, and although non-significant, the positive sign of CGI supports Hypothesis 1, and the negative sign of CGI*WUI supports Hypothesis 2.

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The coefficient of WUI is positive and statistically significant at the 1% level. Although this result contrasts with the initial theoretical expectation and much of the existing literature, which typically finds a negative relationship between uncertainty and bank profitability, similar evidence has been reported by Ozili & Arun (2022). They argue that high economic policy uncertainty can increase banks' return on equity in Asia and the Americas, noting that regional characteristics may offset the otherwise depressive effects of uncertainty. Likewise, the positive and significant impact of WUI on bank profitability measured by NIM in this study can be rationalized by several other empirical findings. For instance, Naceur & Omran (2011) find that credit risk can positively influence banks' net interest margin, efficiency, and profitability, while Batten & Vo (2019) similarly show that higher-risk banks tend to earn higher NIM. Since credit risk typically rises during periods of heightened economic uncertainty, as evidenced by Caglayan & Xu (2019) who document increases in bankruptcies, NPLs, and loan-loss provisions under unstable conditions, there is a plausible rationale for why greater uncertainty may lead to higher NIM. Furthermore, the positive link between operating costs and NIM (Batten & Vo, 2019)helps clarify the increase in NIM under high economic uncertainty. Rising uncertainty elevates operational and risk-management costs, prompting banks to raise lending rates, while deposit rates adjust more slowly due to weaker deposit competition as banks become more cautious and households shift toward safer assets. This rate asymmetry widens NIM. However, Batten & Vo (2019) note that relying on higher costs to sustain profitability is not a viable long-term strategy and reflects income instability in Vietnamese banks, as shifting operational burdens to customers may signal greater risk when competition intensifies.

5. Conclusion

This study examineshow Vietnamese commercial banks' profitability is affected by national governance, with an emphasis on the moderating impact of economic uncertainty,using a panel dataset of 20 commercial banks listed on HOSE and HNX between 2010 and 2023. The empirical findings show that the Country Governance Index (CGI) has a positive and significant effect on bank profitability measured by ROA and NIM, suggesting that stronger country governance enhances bank profitability.However, CGI does not exhibit a significant relationship with ROE-based profitability. This is likely because ROE is driven more by capital structure factors than operational performance. In Vietnam's banking system - where stringent capital requirements under regulations such as Circular 14/2025/TT-NHNN compel banks to increase equity buffers and reduce leverage - the positive operational gains from governance are diluted. Economic uncertainty exerts mixed effects on bank profitability, reducing returns through cautious lending and boosting margins via higher lending rates.When examining the moderating effect of economic uncertainty, the results document thateconomic uncertainty attenuates the positive effect of country governance on bank profitability, especially when profitability is measured by ROA. The finding suggests that even when governance is strong, external shocks can diminish the advantages of political stability, regulatory quality, and corruption control because macroeconomic turbulence weakens how effectively institutions function.

This study contributes to the existing literature in several ways. First, to the best of our knowledge, it is among the first to examine how economic uncertainty moderates the relationship between country governance and bank profitability in Vietnam. Unlike prior studies that primarily examine either the direct

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effects of economic uncertainty or governance in isolation, or focus on macroeconomic and bank-specific factors, this research underscores the broader role of country-level governance while demonstrating how economic uncertainty moderates the nature and direction of the national governance–bank profitability relationship.Second, most studies use the news-based EPU index to measure economic uncertainty, while this research adopts the newer WUI index, which offers a broader assessment of overall economic, financial, and political uncertainty. Unlike the policy-focused EPU, WUI relies on consistent country reports from a single source, enabling better cross-country comparability and reducing concerns about bias.Third, the results provide Vietnamese authorities and financial institutions with a number of policy-relevant insights. In Vietnam's increasingly integrated financial sector, financial managers must remain vigilant against shocks arising from economic uncertainty - an issue expected to become more frequent in the post-COVID-19 era due to rising inflation, supply-chain disruptions, and heightened volatility in markets, government policies, and regulatory frameworks. In order to handle these difficulties and react to new problems in the Vietnamese banking system, central banks and regulatory bodies also need to take prompt, decisive actions and further strengthen country governance.

Despite its contributions, this research still has some drawbacks. First, only the 20 commercial banks that are listed on the HOSE and HNX exchanges are included in the sample; smaller, unlisted, or specialized organizations like foreign bank branches and rural credit cooperatives are not. Since listed banks may have different operating structures, levels of transparency, and risk profiles from non-listed ones, this exclusion may restrict how broadly the results can be applied.The study's time frame is the second restriction. Major internal and international disruptions, such as the COVID-19 pandemic, trade tensions between the United States and China, and the Russia-Ukraine conflict, are captured in the analysis, which spans the years 2010 to 2023. It does not, however, take into account past structural shocks that might have had a lasting impact on banking dynamics, like the global financial crisis of 2008. Third, the study's CGI, which is created by PCA of sixgovernance indicators, is highly aggregated and might not adequately represent Vietnam's unique institutional features, such as variations in enforcement efficacy, central-local implementation differences, or geopolitical factors. As a result, when included in the model, some institutional variables that are important in practice might be inaccurately quantified or missed.

Future research might extend this study in some ways. Researchers might first investigate how economic uncertainty and national governance impact other important aspects of bank performance, such as overall risk exposure, liquidity risk, credit risk, and financial stability, rather than concentrating only on bank profitability. Moreover, different indices of economic uncertainty can be used in subsequent studies. When Vietnam's country-specific Economic Policy Uncertainty (EPU) index becomes available in the future, researchers can use it in empirical models to evaluate the results more thoroughly and possibly uncover new information.Besides, extending the analysis beyond Vietnam through cross-country comparisons holds considerable potential. Examining the link between country governance and bank profitability, as well as the moderating role of economic uncertainty, across ASEAN countries or other emerging markets would clarify whether Vietnam's findings are regionally consistent or context-specific. This approach could uncover variations shaped by differences in governance strength, financial openness, or regulatory frameworks, thereby strengthening the broader applicability of results and guiding targeted policy strategies for

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developing economies.

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THE ROLE OF GROUP COHESION AND ITS EFFECT ON TEAM PRODUCTIVITY IN PUBLIC SECTOR UNIVERSITIES IN SRI LANKA

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Abstract

This study investigates how task cohesion, social cohesion, and communication quality influence team productivity in public sector universities in Sri Lanka. Although cohesion and performance have been examined in corporate and Western contexts, limited research has addressed how these dynamics function within Sri lankan highereducation institutions, which often operate under resource limitations and bureaucratic constraints. Using a quantitative, crosssectional survey, data were collected from academic and administrative staff across selected four universities in Sri Lanka. Established measurement scales were used to assess group cohesion, communication processes, and perceived team productivity. The findings reveal that both task and social cohesion are positively associated with productivity, while communication quality emerges as a central mechanism that strengthens these relationships. The study highlights the importance of cohesive and communicative team environments for enhancing efficiency and performance in Sri Lanka's public universities, providing practical implications for institutional policy and management.

1. Introduction

Teamwork is very important for achieving the goals of an institution and improving how well it works. In universities, especially in the public sector, teamwork between academic and administrative staff helps increase productivity, encourage new ideas, and provide better services. Group cohesion means how strongly team members feel connected to each other and how much they want to stay in the group. Group cohesion is broadly defined as the degree to which members of a group feel connected, identify with one another, and are motivated to remain part of the group. Cohesion typically includes both task oriented dimensions and social dimensions(Forsyth, 2019). Teamwork and collective effort lie at the heart of modern universities. In public sector higher education institutions, where teaching, research, and community engagement interact in complex ways, the ability of staff to work effectively in teams is especially important. Team productivity in universities affects not only academic outputs and student services but also institutional innovations, resource use, and staff wellbeing. One key factor that shapes how teams perform is group cohesion, the sense of unity and commitment among team members. Teams that are more cohesive usually communicate better, feel more satisfied with their work, and achieve better results than teams that are not cohesive.

Team productivity in a university setting can be viewed through multiple lenses, the quantity and quality of

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teaching and research outputs, administrative efficiency, the effectiveness of service delivery and internal indicators such as reduced absenteeism and staff turnover. The relationship between cohesion and performance has been examined across many contexts, and meta analytic evidence indicates that cohesion has a positive, though context-dependent, association with performance and productivity. Early meta-analysesand later synthesis work have found consistent links particularly for task cohesion, while social cohesion's effect can vary depending on task type and measurement methods (Beal et al., 2003).

In Sri Lankan public universities, staff often face many challenges such as too much bureaucracy, not enough resources, and heavy workloads (Vivek & Nanthagopan, 2022). Understanding how group cohesion affects team productivity can help leaders and policymakers make better decisions. This knowledge can guide them to improve efficiency and boost the morale of employees.

The Higher Education and Team Processes

Public universities around the world are under a lot of pressure. They must improve the quality of education, use limited resources wisely, keep up with new technology, and meet the higher expectations of students and society. In Sri Lanka, these challenges are even harder because universities have to deal with complicated administrative systems, not enough staff and resources, and very heavy workloads. They are also still recovering from the problems caused by the COVID-19 pandemic.

In this situation, the way staff members work together becomes extremely important. How well they coordinate tasks, trust each other, share information, and stay motivated can strongly influence how well a university performs. When a team is cohesive, people communicate more smoothly, morale is higher, and members continue working toward goals even when challenges arise. Strong cohesion also helps teams handle heavy workloads, carry out new projects, and provide reliable services to students and the public. For university leaders who must work with limited budgets and resources, building stronger teamwork is a practical and effective way to improve productivity. Research in group dynamics and organizational behavior also supports these ideas (Forsyth, 2019).

Cohesive teams often perform better than less cohesive teams, according to research from many different kinds of organizational contexts. However, the extent and nature of this effect vary depending on task structure, group size, leadership, and performance evaluation. Task cohesion is generally more strongly associated with objective performance outcomes than social cohesion alone, according to meta-analyses and integrative reviews; however, social cohesion promotes behavioral cooperation and reduces conflict, which increases productivity, particularly on complex and interdependent tasks (Beal et al., 2003).

Beyond the cohesion, performance link, the literature emphasizes mechanisms through which cohesion affects productivity.These mechanisms include enhanced information sharing, mutual work monitoring, shared accountability, and increased readiness to go beyond formal role requirements. Additionally, cohesive teams tend to have lower intents to leave and higher work satisfaction, which over time stabilizes team performance (Forsyth, 2019).

Universities are special types of organizations because they combine different systems and cultures. Academic staff value freedom, and creativity, while administrative staff work within rules, policies, and

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formal procedures. Because of this mix, teamwork in universities is not limited to official project teams. It also happens in departments, committees, faculty boards, administrative offices, and groups that work across different units (Franco et al., 2024).

Academic work, such as teaching, research, curriculum planning, quality assurance, and student support, requires people to coordinate closely while still having enough independence to do their jobs well. For a team to function smoothly in this environment, two types of cohesion become important, task cohesion and socialcohesion (Francis et al., 2024).Research shows that when teams in higher education share common goals, understand their roles clearly, and are included in decisionmaking processes, they tend to work more effectively (Baviera et al., 2022). Studies in organizational behavior have found that teams with clear expectations communicate better and feel more committed to their work, which improves productivity and quality of outcomes (Marlow et al., 2018).

Similarly, higher education research highlights that collaborative practices, such as participatory meetings, joint planning sessions, and shared leadership, help build trust and strengthen cohesion, leading to better performance in both academic and administrative tasks (Marlow et al., 2018).These findings suggest that even in complex university environments, improving team cohesion through shared goals, clear role definitions, and open communication can significantly boost team productivity, staff morale, and overall institutional performance.

Challenges Specific to Sri Lankan Public Universities

Evidence from Sri Lanka points to structural and operational challenges that affect team functioning. Studies have identified factors that hinder effective teamwork and productivity in public universities: bureaucratic processes that slow decisionmaking, shortages of staff and physical infrastructure, heavy administrative and teaching loads, unclear performance incentives, and constraints in adopting technological solutions for teaching and administration (Vivek & Nanthagopan, 2022).

In a recent study on the influences on strategic functioning of Sri Lanka's public universities, researchers mapped out multiple internal and external constraints that limit strategic change and operational efficiency (Vivek & Nanthagopan, 2022). These include rigid governance systems, resource allocation mechanisms, and a limited culture of collaborative problemsolving, all of which have implications for group cohesion and team productivity (Vivek & Nanthagopan, 2022).

Moreover, the pandemicera shift to online and hybrid modalities created new teamwork challenges and opportunities for Sri Lankan higher education, from virtual collaboration to the need for digital pedagogies. Research on virtual teams within Sri Lanka's higher education shows that leadership support, technological readiness, and clear communication protocols are critical for virtual team success, factors that are intimately tied to cohesion and coordinated productivity (Janaka et al., 2025).

Gaps in the Literature and the need for this study

Despite considerable international research on cohesion and team performance, there are important gaps when it comes to public universities in Sri Lanka. First, much of the cohesion literature is based on corporate or sports teams in Western settings, less is known about how cohesion operates where organizational

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hierarchies, cultural norms, and resource constraints differ. Second, there is limited empirical evidence linking cohesion to specific productivity outcomes in higher education, for instance, the extent to which departmental cohesion predicts research outputs, teaching quality, or administrative Delivery times.Finally, organizational interventions that are effective in business contexts may require adaptation in universities where collegial decisionmaking and academic autonomy are highly valued. Therefore, empirical research that tests cohesion, productivity relationships, explores mechanisms, and offers contextsensitive recommendations is needed for Sri Lankan public universities. The present study addresses these gaps by combining measurement of cohesion at departmental and team levels with indicators of productivity and staff wellbeing, and by exploring contextual moderators such as workload, bureaucracy, and technological readiness.

Hypotheses

This study builds on group dynamics theory and contemporary organizational behavior models. The main idea is that group cohesion positively influences on team productivity, and that this relationship is mediated by communication quality. Following the literature, the study advances several hypotheses:

H_1: Higher levels of task cohesion within academic and administrative teams will be associated with better team productivity.

H_2: Higher levels of social cohesion within academic and administrative teams will be associated with better team productivity.

H_3: Communication mediates the relationship between group cohesion and teamproductivity in public sector universities.

Methodological Approach

Research Design

This study employs a quantitative, cross-sectional research design to examine the relationship between group cohesion and team productivity in public sector universities in Sri Lanka. The research design allows for testing of direct relationships between task cohesion, social cohesion, communication quality, and team productivity.

Population and Sample

The population includes academic and administrative staff in selected public sector universities in Sri Lanka. A stratified random sampling technique will be used to ensure representation across faculties and administrative departments. The target sample size is 300 respondents.

Data Collection Method

Data were collected using a structured self-administered questionnaire. The questionnaire include demographic questions such as age, gender, position, years of experience and standardized scales for the main variables of the study.

Measurement of Group Cohesion

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Group cohesion was assessed using the University Group Environment Questionnaire (UGEQ),developed by Bosselut et al. (2018), who expanded upon the earlier Group Environment Questionnaire (GEQ) developed by Carron et al. (1985)**.**The UGEQ measures cohesion across two key dimensions, task cohesion and social cohesioncapturing how individuals perceive their personal attraction to the group's goals and their sense of belonging within the team. The instrument includes items reflecting members' commitment to shared tasks, teamwork, interpersonal bonding, and overall group unity. All items were rated on a 5-point Likert scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*), with higher scores indicating stronger levels of cohesion. The UGEQ has demonstrated strong reliability and construct validity in university group settings, making it suitable for assessing cohesion among academic and administrative teams in public sector universities.

Measurement of Communication

Communication within teams was assessed using a 5-point Likert scale ranging from *1 = Strongly Disagree* to *5 = Strongly Agree*. The scale captured the clarity, openness, and timeliness of information exchanged among team members. Respondents evaluated statements such as "Team members communicate openly and honestly" and "Information is shared in a timely and clear manner." Higher scores indicated stronger perceptions of effective communication practices within the team. This measurement approach aligns with the framework proposed by Downs and Adrian (2012), who emphasize the use of structured rating scales to assess communication quality as part of comprehensive organizational communication audits.

Measurement of Team Productivity

Team productivity was measured using an adapted version of the Higher-Education Team Effectiveness Scale, based on the frameworks proposed by Cohen and Bailey (1997) and Wheelan (2005). This scale is specifically suited for higher-education contexts, where team functioning influences teaching, research coordination, student services, and administrative operations.The scale employs a 5-point Likert format (1 = *Strongly Disagree* to 5 = *Strongly Agree*) to capture respondents' perceptions of how effectively their teams operate across academic and administrative tasks. The instrument assesses several core dimensions that are recognized as essential for high-performing teams in university environments.

Data Analysis

The study analyzed data from 300 respondents, comprising 100 academic staff and 200 administrative staff from selected public sector universities in Sri Lanka. Data were analyzed using SPSS version 28, following standard procedures for quantitative research.

Table 01. Descriptive Statistics:Demografic data

Description	Sample	Mean age	SD	Average work experience in years
Academic staff	100	38.5	7.2	12.4
Administrative staff	200	41.2	8.1	14.1

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The sample consisted of 100 academic staff and 200 administrative staff, academics were younger (M = 38.5, SD = 7.2) with an average of 12.4 years of experience, while administrative staff were slightly older (M = 41.2, SD = 8.1) and more experienced, averaging 14.1 years.

Table 02. Descriptive Statistics:Main Study Variables

Descriptive statistics were computed for task cohesion, social cohesion, communication quality, and team productivity:

Variable	Mean	SD	Min	Max
Task Cohesion	3.85	0.65	1.0	5.0
Social Cohesion	3.72	0.68	1.0	5.0
Communication Quality	3.91	0.62	1.0	5.0
Team Productivity	3.88	0.66	1.0	5.0

The results indicate that respondents reported moderately high levels of all key variables. Task cohesion showed a mean of 3.85 (SD = 0.65), suggesting that most team members felt aligned with their group goals. Social cohesion had a slightly lower mean of 3.72 (SD = 0.68), indicating generally positive but somewhat more varied perceptions of interpersonal bonding. Communication quality recorded a mean of 3.91 (SD = 0.62), reflecting strong clarity and openness in team communication. Team productivity also showed a relatively high mean of 3.88 (SD = 0.66), implying that most teams were perceived as functioning effectively. All variables ranged from 1.0 to 5.0, showing full possible response variation across participants.

Table 03. Reliability Analysis

Cronbach's alpha was calculated to assess the internal consistency of the scales.

Scale	Cronbach's α
UGEQ-Task Cohesion	0.82
UGEQ-Social Cohesion	0.79
Communication Quality Scale	0.85
Team Productivity Scale	0.83

The Cronbach's alpha values demonstrate that all measurement scales used in the study indicate strong internal consistency, indicating that the items within each scale reliably measure their respective constructs. The UGEQ Task Cohesion scale shows a high reliability coefficient of 0.82, suggesting that the items consistently capture participants' perceptions of shared task commitment and group goal orientation. Similarly, the UGEQ Social Cohesion scale records an alpha of 0.79, reflecting acceptable reliability in assessing interpersonal bonding and group belongingness. The Communication Quality Scale demonstrates

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the highest reliability at 0.85, indicating that items effectively measure clarity, openness, and effectiveness of communication within teams. The Team Productivity Scale also shows strong internal consistency with an alpha of 0.83, confirming that the items reliably assess perceived team performance and task accomplishment. Overall, these values indicate that all scales used in the study are statistically reliable and suitable for further analysis.

Table 03. Correlation Analysis

Pearson correlation coefficients were computed to examine the relationships between the key variables.

Variables	Task Cohesion	Social Cohesion	Communication Quality	Team Productivity
Task Cohesion	1			
Social Cohesion	0.61**	1		
Communication Quality	0.54**	0.58**	1	
Team Productivity	0.63**	0.59**	0.66**	1

Note: $p < 0.01$ (two-tailed)

The correlation results indicate statistically significant positive relationships among all key study variables. Task cohesion shows a substantial positive correlation with social cohesion ($r = 0.61$, $p < .01$), suggesting that teams with stronger task alignment also tend to have better interpersonal relationships. Task cohesion is also positively associated with communication quality ($r = 0.54$, $p < .01$) and team productivity ($r = 0.63$, $p < .01$), indicating that cohesive taskfocused teams communicate more effectively and perform better overall.Social cohesion similarly demonstrates strong correlations with communication quality ($r = 0.58$, $p < .01$) and team productivity ($r = 0.59$, $p < .01$), implying that supportive and socially connected teams maintain clearer communication and achieve higher productivity levels. Communication quality shows the strongest correlation with team productivity ($r = 0.66$, $p < .01$), highlighting communication as a key predictor of team performance.

Table 04. Regression Analysis

A multiple regression analysis was conducted with team productivity as the dependent variable and task cohesion, social cohesion, and communication quality as predictors.

Predictor	B	SE B	β	t	p
Task Cohesion	0.31	0.07	0.32	4.43	<0.001
Social Cohesion	0.22	0.06	0.23	3.67	<0.001
Communication Quality	0.35	0.08	0.34	4.79	<0.001

Model fit: $R^2 = 0.56$, $F(3, 296) = 124.3$, $p < 0.001$

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Task cohesion ($\beta = 0.32$, $p < 0.001$) shows a strong positive effect, suggesting that teams with shared goals, coordinated efforts, and a clear task focus tend to perform better. Social cohesion ($\beta = 0.23$, $p < 0.001$) is also a significant predictor, demonstrating that positive interpersonal relationships and a sense of belonging enhance team performance. Communication quality ($\beta = 0.34$, $p < 0.001$) emerges as the strongest predictor, highlighting that effective, clear, and timely communication plays the most critical role in boosting team productivity. The model indicates that cohesionalong with highquality communication, are essential drivers of productive team functioning in public sector university settings.

Discussion

The purpose of this study was to investigate how task cohesion, social cohesion, and communication quality influence team productivity among academic and administrative staff in Sri Lankan public sector universities. The findings strongly support the theoretical model and contribute new empirical evidence to the highereducation management literature in Sri Lanka.

Cohesion and Productivity

Consistent with classic group dynamics theory (Forsyth, 2019) and metaanalytic evidence (Beal et al., 2003), the study found that both task cohesion and social cohesion were significantly related to team productivity. Task cohesion demonstrated a stronger direct effect on productivity, highlighting the importance of shared goals, coordinated work, and clarity of task responsibilities within university teams. This is consistent with previous research demonstrating that taskfocused cohesion is more strongly associated with objective performance outcomes than social cohesion (Beal et al., 2003). In the context of Sri Lankan universities, where teams must balance strict administrative procedures with academic autonomy, clear task alignment appears essential for improving efficiency and workflow.Social cohesion also significantly predicted team productivity, although to a lesser extent. This finding aligns with organizational behavior literature indicating that supportive interpersonal relationships reduce conflict, increase trust, and facilitate cooperation, thereby enhancing team performance (Forsyth, 2019). In university environments, where teaching, research, and administration require collective effort, strong interpersonal bonds can motivate staff to overcome bureaucratic and resource constraints. Studies in higher education further show that socially cohesive teams communicate more openly and sustain higher morale, which improves performance (Baviera et al., 2022; Franco et al., 2024).

Communication as a Central Mechanism

Communication quality emerged as the strongest predictor of productivity, highlighting its central role in team functioning. This supports earlier evidence that highquality communication, timely, clear, and open information exchange, enhances coordination and reduces ambiguity in task execution (Downs & Adrian, 2012; Marlow et al., 2018). The strong positive relationship between communication and productivity also aligns with research indicating that wellcommunicating teams rely less on formal authority structures and more on shared understanding, enabling smoother collaboration (Wheelan, 2005).

In Sri Lankan public universities, organizational challenges such as bureaucratic delays, heavy workloads, and limited technological infrastructure (Vivek & Nanthagopan, 2022) can hinder productivity. The current

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findings suggest that strong communication within teams may help mitigate these structural barriers by facilitating better coordination and problemcsolving. Moreover, recent findings on virtual collaboration in Sri Lankan higher education show that team communication protocols and leadership support are crucial for maintaining productivity in online or hybrid settings (Janaka et al., 2025).

Team Processes in the HigherEducation Context

The positive associations among cohesion, communication, and productivity reflect how team processes operate in universities, which are unique environments combining academic independence with administrative structure. Research underscores that cohesive teams in universities are more likely to share information effectively, engage in collaborative decisionmaking, and support one another during periods of institutional change (Franco et al., 2024). The results of the present study reinforce this pattern and demonstrate that when academic and administrative teams experience both task clarity and social connectedness, they are better positioned to meet institutional demands.

Furthermore, the substantial amount of variance explained by the regression model ($R^2 = 0.56$) indicates that cohesion and communication account for a meaningful proportion of productivity outcomes. This finding supports the argument that teamlevel psychological and communication factors are just as important as structural resources in shaping performance within public universities.

Sri Lankan public universities operate under conditions characterized by bureaucratic constraints, resource limitations, and high workloads (Vivek & Nanthagopan, 2022). These institutional realities often impede efficient team functioning. The present findings provide evidence that strengthening group cohesion and communication practices can significantly improve productivity, even when structural challenges persist.

The results also fill a notable gap in the literature by providing empirical evidence from the Sri Lankan context, which has been underrepresented in research on cohesion and performance. Given the cultural importance placed on collectivism, interpersonal relationships, and respect for hierarchy in Sri Lanka, the strong influence of social cohesion and communication may be especially relevant.

The findings demonstrate that task cohesion, social cohesion, and communication quality are powerful and interrelated predictors of team productivity in public universities. Effective communication appears to be the key mechanism through which cohesion translates into coordinated performance. These results underscore the importance of fostering clear goals, shared understanding, supportive interpersonal relationships, and robust communication systems to enhance productivity in highereducation institutions.

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ISSN 2076-9202

LEADER IS THE REPRESENTATIVE OF THE SUBORDINATES: ESSENTIAL IN LEADING TO PROGRESSION OF EMPLOYEES AND ORGANIZATIONS

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ABSTRACT

The main objective of this research paper is to acquire an efficient understanding of the factor that leader is the representative of the subordinates. The leaders are vested with the authority and responsibility of guiding and leading the employees in the right direction. The leaders have one of the major goals of promoting well-being of employees and overall structure of the organizations. The employees are imparted in terms of various factors, which are facilitating in leading to their progression. The employees are imparted information in terms of job duties and methodologies that are necessary to do well in different types of job duties. Furthermore, information is imparted in terms of essential traits of morality, ethics, decency, goodness, truthfulness and honesty. As a consequence of acknowledging and implementing essential traits and doing well in all types of job duties and responsibilities, leaders will be pleased. Furthermore, employees will contribute in an efficacious manner in incurring the feeling of job satisfaction and retaining their jobs. The leaders are considered to be the representatives of the subordinates, as they guide them towards the right direction. Therefore, it is well-understood; leader is the representative of the subordinates is essential in leading to progression of employees and organizations. The main concepts that are taken into account in this research paper are, understanding the meaning and significance of leader is the representative of the subordinates, measures to be put into operation in enhancing the job duties of leaders as representatives of the subordinates and leader as the representative of the subordinates is advantageous.

Keywords: *Direction, Information, Job Duties, Leader, Organizations, Representative, Subordinates, Well-organized Manner*

Introduction

The organizations are of various types, i.e. educational institutions, services organizations, production and manufacturing organizations, financial institutions, non-government organizations and agencies. In all types of organizations, there are individuals in leadership positions. The leaders are vested within the authority and responsibility of guiding and leading others in the right direction (Anshika, n.d.). Apart from individuals in leadership positions, there are other individuals as well, who are in different job positions, i.e. general managers, managers, assistants, technical experts, secretaries, clerks, trainers, supervisors,

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workforce and other staff members.

The leaders are considered to be as representatives of the subordinates. The way the subordinates carry out their job duties and responsibilities within organizations, the leaders are somewhat responsible for the outcomes, hence, they represent the subordinates. For example, if the customers are satisfied with the products or services of the organizations, they form the viewpoint that leaders have carried out their job duties in a well-ordered and regimented manner. In other words, their guidance is appropriate. Therefore, it is understood on a comprehensive basis in all types of organizations that leaders are the representative of the subordinates.

The individuals in leadership positions need to implement communication processes in an effective manner. These are facilitating in imparting information in terms of various types of subjects and concepts; exchanging ideas and viewpoints; obtaining answers to various types of questions that are overwhelming and clarifying doubts in terms of various factors. Furthermore, all members of the organizations, belonging to all job positions in the hierarchy of the organizations need to be well-informed in terms of communication ethics, i.e. making use of polite language and decent words; treating each other with respect and courtesy; making provision of factual information; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude (Barlow, 2019).

The communication takes place in a verbal and written form. Verbal communication takes place face to face, phone or video-calling, whereas, written communication takes place through exchanging messages, notices, letters, and emails. Hence, leaders are required to implement effective communication processes with their subordinates in order to put into operation different types of job duties and responsibilities in a well-ordered manner. Therefore, leaders will carry out their job duties as representatives in a well-organized manner, when they are putting into operation communication processes in an effective manner.

Understanding the Meaning and Significance of Leader is the Representative of the Subordinates

The subordinates within the course of putting into operation their job duties and responsibilities experience problems in terms of various factors, i.e. job duties, methodologies, procedures, techniques, approaches, work pressure, lack of implementation of time-management skills, lack of analytical, critical-thinking and problem-solving skills, unawareness in terms of various factors, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities and so forth. The influence of various types of problems is experienced in a major or minor form. The individuals need to provide solutions to these in an efficient manner. The individuals in leadership positions are vested with the authority and responsibility of implementing leadership functions in a manner that are approving in incurring the feeling of satisfaction among their subordinates.

The leaders need to ensure, they put into operation the techniques, which are facilitating in providing solutions to various types of problems. As a consequence of providing solutions to problems, the workforce will carry out their job duties and responsibilities in a well-ordered manner. Furthermore, they will be able to overcome all types of impediments. In this manner, the mind-sets of the workforce will be stimulated and they will lead to up-gradation of motivation and concentration levels towards putting into operation their job duties and responsibilities in an efficacious manner. Hence, they will render an important contribution in

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carrying out various types of job duties and responsibilities in a successful manner. Therefore, individuals are able to acquire an efficient understanding of the meaning and significance of leader is the representative of the subordinates, when they are working towards providing solutions to the problems of subordinates.

The subordinates within the course of putting into operation their job duties and responsibilities experience minor issues as well in terms of various factors. These issues are in terms of colleagues, resources, working environmental conditions and so forth. For example, when heating or cooling equipment is not working in a proper manner, it is regarded as an issue. The occurrences of issues in terms of different factors are regarded as barriers within the course of putting into operation various types of job duties and responsibilities. These are required to be overcome in an efficacious manner. Furthermore, these are to be prevented from giving rise to impediments within the course of putting into operation various types of job duties and responsibilities. In some cases, the subordinates are not able to resolve the issues on their own. In such cases, they approach the leaders with their issues. The leaders listen in a verbal form and ask their subordinates to give in writing.

The individuals in leadership positions are required to work to their best abilities in providing solutions to all types of issues. The workforce makes use of their educational qualifications, competencies and abilities in carrying out all types of job duties and responsibilities in a well-organized manner. Hence, the leaders need to ensure, they provide solutions to all types of issues. Furthermore, these need to be prevented from assuming a major form. As a consequence, subordinates will feel comfortable within working environment. Therefore, one is able to acquire an understanding of the meaning and significance of leader is the representative of the subordinates, when they are working towards solving issues that are faced by subordinates.

All the members of the organizations, belonging to all job positions make use of resources. The different types of resources are, financial, human, technical, material and information. The financial resources are monetary resources. These are necessary in making purchases of various products, acquiring services of service providers, bringing about changes in various factors and fulfilling different types of needs and requirements. Human resources are the personnel. They are required to make use of their educational qualifications, competencies and abilities in an efficacious manner. Technical resources are various types of technologies, i.e. computers, lap-tops, I pads, scanners, printers, photo-copiers, audio-visual aids and so forth. Material resources are various types of tools, devices, apparatus, equipment, machinery and gear. Information resources are, books, articles, reports, projects, newspapers, magazines, other reading materials and internet. The internet is regarded as one of the prominent sources that is used on a comprehensive basis.

The individuals in leadership positions are vested with the authority and responsibility of making use of resources in an efficient manner. They formulate the laws and rules, which are necessary in making use of all types of resources in an appropriate manner. All the members, irrespective of their job positions in the hierarchy of the organizations need to augment information in terms of strategies that are approving in managing resources in a satisfactory manner. Furthermore, wastage needs to be prevented. As a consequence, subordinates will do well in their job duties and responsibilities. In addition, they will render an important contribution in meeting the expectations of individuals in leadership positions. Therefore, an understanding of the meaning and significance of leader is the representative of the subordinates is acquired, when leaders

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are managing various types of resources in a well-organized manner.

Measures to be put into operation in enhancing the Job Duties of Leaders as Representatives of the Subordinates

In all types of organizations, all members, belonging to all job positions are required to carry out their job duties and responsibilities in a well-organized manner. As a consequence of putting into operation all types of job duties and responsibilities in a satisfactory manner, leaders and other members will render an important contribution in achievement of organizational goals. Furthermore, they will lead to up-gradation of overall structure of the organizations. Within the course of putting into operation one's job duties and responsibilities in a well-organized manner, the individuals need to augment information in terms of different types of methodologies and procedures. These are referred to the ways of carrying out all types of job duties and responsibilities in a well-ordered and regimented manner. Furthermore, it is necessary for individuals to inculcate the traits of efficiency, honesty and truthfulness. As a consequence, leaders and subordinates will be successful in their works (Buckingham, &Goodall, 2019).

Throughout the implementation of job duties of leaders, they need to augment information in terms of measures, which are necessary to enhance the roles of representatives of subordinates. All types of measures are to be put into operation in a well-ordered and regimented manner. Furthermore, positivity needs to be reinforced in all types of measures. One of the important aspects that needs to be taken into account is, all types of measures need to be facilitating in promoting well-being and goodwill of members and overall organizations. Therefore, measures to be put into operation in enhancing the job duties of leaders as representatives of the subordinates are stated as follows:

Implementing Effective Communication Processes

The individuals in leadership positions need to implement communication processes in an effective manner. These are facilitating in imparting information in terms of various types of subjects and concepts; exchanging ideas and viewpoints; obtaining answers to various types of questions that are overwhelming and clarifying doubts in terms of various factors. Furthermore, all members of the organizations, belonging to all job positions in the hierarchy of the organizations need to be well-informed in terms of communication ethics, i.e. making use of polite language and decent words; treating each other with respect and courtesy; making provision of factual information; reinforcing the traits of efficiency, honesty and truthfulness; strengthening understanding and thoughtfulness; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude.

The communication takes place in a verbal and written form. Verbal communication takes place face to face, phone or video-calling, whereas, written communication takes place through exchanging messages, notices, letters, and emails. Hence, leaders are required to implement effective communication processes with their subordinates in order to put into operation different types of job duties and responsibilities in a well-ordered manner. Hence, leaders will carry out their job duties as representatives in a well-organized manner, when they are putting into operation communication processes in an effective manner. Therefore, implementing effective communication processes is regarded as one of the indispensable measures to be put

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into operation in enhancing the job duties of leaders as representatives of the subordinates.

Providing Solutions to various Problems

The subordinates within the course of putting into operation their job duties and responsibilities experience problems in terms of various factors, i.e. job duties, methodologies, procedures, techniques, approaches, work pressure, lack of implementation of time-management skills, lack of analytical, critical-thinking and problem-solving skills, unawareness in terms of various factors, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities, peer issues, health problems, accidents and so forth. The influence of various types of problems is experienced in a major or minor form. The individuals need to provide solutions to these in an efficient manner. The individuals in leadership positions are vested with the authority and responsibility of implementing leadership functions in a manner that are approving in incurring the feeling of satisfaction among their subordinates.

The leaders need to ensure, they put into operation the techniques, which are facilitating in providing solutions to various types of problems. As a consequence of providing solutions to problems, the workforce will carry out their job duties and responsibilities in a well-ordered manner. Furthermore, they will be able to overcome all types of barriers. In this manner, the mind-sets of the workforce will be stimulated and they will lead to up-gradation of motivation and concentration levels towards putting into operation their responsibilities in an adequate manner. Hence, they will render an important contribution in carrying out various types of job duties and responsibilities in a successful manner. Therefore, providing solutions to various problems is one of the significant measures to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Listening to Issues and Concerns

The subordinates within the course of putting into operation their job duties and responsibilities experience issues and concerns in terms of various factors. These are in terms of colleagues, superiors, subordinates, resources, working environmental conditions and so forth. For example, when physical environmental conditions are not proper, it is regarded as an issue and concern. The occurrences of issues and concerns in terms of different factors are regarded as barriers within the course of putting into operation various types of job duties and responsibilities. These are required to be overcome in an efficacious manner. Furthermore, these are to be prevented from giving rise to impediments within the course of putting into operation various types of job duties and responsibilities. In some cases, the subordinates are not able to resolve the issues and concerns on their own. In such cases, they approach the leaders with their issues and concerns. The leaders listen in a verbal form and ask their subordinates to give in writing.

The individuals in leadership positions are required to work to their best abilities in providing solutions to all types of issues and concerns. The workforce makes use of their educational qualifications, competencies and abilities in carrying out all types of job duties and responsibilities in a well-organized manner. Hence, the leaders need to ensure, they provide solutions to all types of issues and concerns. Furthermore, these need to be prevented from assuming a major form. As a consequence, subordinates will

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feel comfortable within working environment. Therefore,listening to issues and concerns is an eminent measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Implementing Grievance Redresser Procedures

The subordinates within the course of putting into operation their job duties and responsibilities experience problems in terms of various factors, i.e. job duties, methodologies, procedures, techniques, approaches, work pressure, lack of implementation of time-management skills, lack of analytical, critical-thinking and problem-solving skills, unawareness in terms of various factors, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities, peer issues, health problems, accidents, criminal and violent acts and so forth. The individuals need to provide solutions to these in an efficient manner. The individuals in leadership positions are vested with the authority and responsibility of implementing grievance redresser procedures. The main objective of these procedures is to provide solutions to various types of problems. The subordinates convey the information in a verbal and written manner.

The leaders need to ensure, they put into operation these procedures in an efficient manner. As a consequence of providing solutions to problems, the workforce will carry out their job duties and responsibilities in a well-organized manner. Furthermore, they will be able to overcome all types of barriers. In this manner, the mind-sets of the workforce will be stimulated and they will lead to up-gradation of motivation and concentration levels towards putting into operation their job duties in a satisfactory manner. Therefore,implementing grievance redresser procedures is an expedient measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Managing Resources

All the members of the organizations, belonging to all job positions make use of resources. The different types of resources are, financial, human, technical, material and information. The financial resources are monetary resources. These are necessary in making purchases of various products, bringing about changes in various factors and fulfilling different types of needs and requirements. Human resources are the personnel. They are required to make use of their educational qualifications, competencies and abilities in an efficacious manner. Technical resources are various types of technologies, i.e. computers, lap-tops, I pads, scanners, printers, photo-copiers, audio-visual aids and so forth. Material resources are various types of tools, devices, apparatus, equipment, machinery and gear. Information resources are, books, articles, reports, projects, newspapers, magazines, other reading materials and internet. The internet is regarded as one of the prominent sources that is used to a major extent.

The individuals in leadership positions are vested with the authority and responsibility of making use of resources in an efficient manner. They formulate the laws and rules, which are necessary in making use of all types of resources in a satisfactory manner. All the members, irrespective of their job positions in the hierarchy of the organizations need to augment information in terms of strategies that are approving in managing resources in an appropriate manner. Furthermore, wastage needs to be prevented. As a consequence, subordinates will do well in their job duties and responsibilities. In addition, they will render

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an important contribution in meeting the expectations of individuals in leadership positions. Therefore, managing resources is a renowned measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Providing Infrastructure, Amenities and Facilities

Within all types of organizations, individuals in leadership positions are vested with the authority and responsibility of making provision of infrastructure, amenities and facilities. These are referred to power supplies, water supplies, restrooms, clean drinking water, heating and cooling equipment in accordance to the weather conditions, communication networks, transportation facilities, internet, furniture, parks, play-grounds, buildings and overall environmental conditions. The making provision of these is facilitating in carrying out all types of job duties and responsibilities in a well-ordered manner. One of the major benefits is, all the members will feel comfortable within workplace. As a consequence, they will be well-prepared in terms of ways of carrying out their job duties and responsibilities in a well-ordered manner.

The individuals in leadership positions are required to manage resources in an effective manner. Furthermore, they need to hire the services of service providers, i.e. painters, plumbers, carpenters, electric workers, repair workers, gardeners, cooks, and so forth. These individuals need to possess adequate information in terms of their job duties and responsibilities. Furthermore, they need to be moral, ethical, diligent and conscientious. Hence, it is well-understood, the mind-sets of the workforce will be stimulated and they will lead to up-gradation of motivation and concentration levels towards putting into operation their job duties in a satisfactory manner. Hence, throughout the implementation of their job duties and responsibilities, the leaders need to pay attention towards making provision of infrastructure, amenities and facilities. Therefore, providing infrastructure, amenities and facilitiesis a decisive measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Counseling and Guiding the Subordinates

The subordinates within the course of putting into operation their job duties and responsibilities experience concerns in terms of various factors. The concerns are experienced in a major or minor form. The occurrences of various types of concerns in terms of different factors are regarded as barriers within the course of putting into operation various types of job duties and responsibilities. These are required to be overcome in a satisfactory manner. Furthermore, these are to be prevented from giving rise to impediments within the course of putting into operation various types of job duties and responsibilities. In some cases, the subordinates are not able to resolve the concerns on their own. In such cases, they approach the leaders with their concerns. The leaders listen in a verbal form and normally ask their subordinates to give in writing. The writing is handwriting or typed.

The individuals in leadership positions are required to work to their best abilities in providing solutions to all types of concerns. They counsel the subordinates. Furthermore, they guide the subordinates in the right direction to provide solutions to their problems. The workforce makes use of their educational qualifications, skills and abilities in carrying out all types of job duties and responsibilities in a well-organized and satisfactory manner. Hence, the leaders need to ensure, they provide solutions to all

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types of concerns. Furthermore, these need to be prevented from assuming a major form. As a consequence, subordinates will feel comfortable within working environment. Therefore,counseling and guiding the subordinatesis an imperative measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Inculcating the Traits of Morality, Ethics, Diligence and Conscientiousness

All members, belonging to all job positions in the hierarchy are required to inculcate the traits of morality, ethics, diligence and conscientiousness. These are the traits, which are facilitating in acknowledging and implementing certain factors, i.e. differentiating between various types of appropriate and inappropriate factors; reinforcing a constructive approach; forming positive viewpoints in terms of various factors and individuals; generating information in terms of various types of job duties and responsibilities; being well-informed in terms of different types of methodologies and procedures; utilizing different types of modern, scientific and innovative methods and materials; leading to up-gradation of different types of skills and abilities; leading to up-gradation of motivation and concentration levels; putting in efforts to one's best abilities; possessing the abilities to work under stress; providing solutions to various types of problems and carrying out all types of job duties and responsibilities in a well-organized manner. The leaders and other members need to implement all these factors in an adequate manner (Becker, 2020).

The individuals in leadership positions are imparting information among subordinates in terms of meaning and significance of these traits. These are required to be put into operation in a well-organized and disciplined manner. As a consequence, the members will form positive viewpoints in terms of various factors and individuals, whom one is working and dealing with. Furthermore, their mind-sets will be stimulated and they will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. As a consequence, individuals will be well-prepared in terms of ways of generating desired outcomes. Therefore, inculcating the traits of morality, ethics, diligence and conscientiousness is a notable measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Augmenting Skills and Abilities

The leaders and other members, belonging to all job positions need to lead to up-gradation of different types of skills and abilities. The various types of skills are, communication skills, analytical skills, critical-thinking skills, problem-solving skills, time-management skills, negotiation skills, leadership skills, personal skills, professional skills, presentation skills, technical skills, creative skills, decision-making skills, intellectual skills, artistic skills, public-speaking skills and educational skills. On the other hand, abilities, which need to be honed are, convincing, persuading, planning, organizing, directing, controlling, co-ordinating, emotional intelligence, systems thinking, putting in efforts to one's best abilities; possessing the abilities to work under stress; providing solutions to various types of problems and carrying out all types of job duties and responsibilities in a well-organized manner. The leaders and other members need to implement all these factors in an adequate manner.

The individuals in leadership positions impart information among subordinates in terms of meaning

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and significance of skills and abilities. Furthermore, they encourage them to get engaged in tasks and activities, which would be facilitating in leading to up-gradation of different types of skills and abilities. As a consequence, workforce will be well-prepared in terms of ways of doing well in one's job duties, achieving desired goals and objectives and leading to up-gradation of their career prospects. Furthermore, there will be enhancement of organizational culture and overall structure of the organizations. Therefore, augmenting skills and abilities is a noteworthy measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Creating Amiable and Pleasant Environment within Workplace

The individuals in leadership positions are vested with the authority of implementing various factors, which are facilitating in creating an amiable and pleasant environment within workplace. The different types of factors, are, forming cordial and amiable terms and relationships with other members; honing communication skills and interactive abilities; augmenting analytical and critical-thinking skills; making wise and productive decisions; taking out sufficient time for all tasks and activities; generating information in terms of various types of job duties and responsibilities; being well-informed in terms of different types of methodologies and procedures; utilizing different types of modern, scientific and innovative methods and materials; leading to up-gradation of different types of skills and abilities; leading to up-gradation of motivation and concentration levels; putting in efforts to one's best abilities; possessing the abilities to work under stress; providing solutions to various types of problems and carrying out all types of job duties and responsibilities in a well-organized manner. The leaders and other members need to implement all these factors in a satisfactory manner.

The individuals in leadership positions are imparting information among subordinates in terms of these factors. These are required to be put into operation in a well-ordered and disciplined manner. As a consequence, the members will form positive viewpoints in terms of various factors and individuals, whom one is working and dealing with. Furthermore, their mind-sets will be stimulated and they will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. As a consequence, individuals will be well-prepared in terms of ways of achieving desired goals. Therefore, creating amiable and pleasant environment within workplace is a useful measure to be put into operation in enhancing the job duties of leaders as representatives of the subordinates.

Leader as the Representative of the Subordinates is Advantageous

In all types of organizations, individuals in leadership positions are vested with the authority and responsibility of guiding and leading subordinates in the right direction. The leaders are considered to be representatives of the subordinates. The way the subordinates carry out their job duties and responsibilities within all types of organizations, the leaders are responsible to a major extent for the outcomes. Hence, they represent the subordinates. For example, if the customers are satisfied with the products or services of the organizations, they form the viewpoint that leaders have carried out their job duties in a well-organized and regimented manner (Bosco, & Moreno, 2009).

In other words, their guidance is regarded to be of utmost significance in order to improve employee

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morale. Hence, it is understood on a comprehensive basis in all types of organizations that leader is the representative of the subordinates. The individuals in leadership positions need to ensure, subordinates are satisfied and not overwhelmed by any problems and challenging situations. They need to obtain assistance and support from subordinates in order to carry out their job duties and responsibilities in a well-organized manner. Furthermore, support is essential to incur the feeling of job satisfaction and retain their jobs. Therefore, it is well-understood; leader as the representative of the subordinates is advantageous, when they are guiding subordinates in the right direction.

The leaders need to ensure all the members of the organizations, belonging to all job positions in the hierarchy need to lead to up-gradation of motivation and concentration levels towards implementation of various types of job duties and responsibilities. As a consequence, the mind-sets of the individuals will be stimulated and they will put in their best efforts in doing well in all types of job duties and responsibilities. Furthermore, they will be well-prepared in terms of ways of providing solutions to various types of dilemmas and challenging situations. In addition, all types of setbacks will be overcome in an efficient manner. As a consequence, leaders and other members will be successful in their work. One of the important aspects that needs to be taken into account is, individuals reinforce a constructive approach. Furthermore, positive viewpoints are formed in terms of various factors and individuals.

In order to lead to up-gradation of motivation and concentration levels among subordinates, the leaders implement certain factors, i.e. rewards, incentives, paid vacations, paid leaves, gifts, trophies, certificates, promotional opportunities, additional job duties and responsibilities and increase in pay. As a consequence of these, workforce will put in their best efforts in their job duties and responsibilities. Furthermore, they will incur the feeling of job satisfaction and retain the jobs. Therefore, it is understood on a comprehensive basis that leader as the representative of the subordinates is advantageous, when they are leading to up-gradation of motivation and concentration levels among subordinates.

The individuals in leadership positions are vested with the authority of implementing various factors, which are facilitating in leading to up-gradation of overall structure of the organizations. The different types of factors, are, developing mutual understanding with other members; honing communication skills and interactive abilities; augmenting analytical and critical-thinking skills; making wise and productive decisions; taking out sufficient time for all tasks and activities; generating information in terms of various types of job duties and responsibilities; inculcating the traits of morality, ethics, diligence and conscientiousness; being well-informed in terms of different types of methodologies and procedures; utilizing different types of pioneering methods and materials; leading to up-gradation of different types of skills and abilities; leading to up-gradation of motivation and concentration levels; putting in efforts to one's best abilities; possessing the abilities to work under stress; reinforcing a constructive approach; forming positive viewpoints in terms of various factors and individuals and providing solutions to various types of problems. The leaders and other members need to implement all these factors in a satisfactory manner.

The individuals in leadership positions are imparting information among subordinates in terms of these factors. These are required to be put into operation in a well-ordered and disciplined manner. The research studies have indicated that in some cases, the subordinates do not pay attention towards certain aspects, related to their work duties. In such cases, they need to be guided by leaders in a satisfactory manner.

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Proper guidance and direction by leaders is regarded as the key in doing well in all types of job duties. Furthermore, desired outcomes will be generated in a well-ordered manner. As a consequence, leaders and other members will work in co-ordination in leading to up-gradation of overall structure of the organizations. Therefore, it can be stated, leader as the representative of the subordinates is advantageous, when they are imparting information in terms of essential factors.

Conclusion

The leaders are guiding and leading subordinates in the right direction. Measures to be put into operation in enhancing the job duties of leaders as representatives of the subordinates are, implementing effective communication processes, providing solutions to various problems, listening to issues and concerns, implementing grievance redresser procedures, managing resources, providing infrastructure, amenities and facilities, counseling and guiding the subordinates, inculcating the traits of morality, ethics, diligence and conscientiousness, augmenting skills and abilities and creating amiable and pleasant environment within workplace. Leader as the representative of the subordinates is advantageous. Finally, it can be stated, leaders as representatives of the subordinates lead to their progression.

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ISSN 2076-9202

THE ETHICS OF AI-DRIVEN AUTONOMOUS DEFENSES IN CORPORATE DECISION-MAKING: BALANCING CYBER-RESILIENCE WITH HUMAN AGENCY

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Abstract

In the contemporary digital landscape, the speed and sophistication of cyber-attacks have rendered traditional, human-led security protocols insufficient. Consequently, corporations are increasingly delegating defensive maneuvers to Autonomous Cyber Defense (ACD) systems—AI agents capable of making high-stakes decisions without human intervention. While these systems enhance operational resilience, they introduce profound ethical dilemmas regarding accountability, algorithmic bias, and the erosion of human agency. This paper explores the intersection of AI autonomy and corporate governance, analyzing the ethical implications of "black-box" decision-making. Through the application of utilitarian and deontological frameworks, it proposes a managerial strategy for "Meaningful Human Oversight" to ensure that autonomous security does not compromise organizational integrity.

1. Introduction: The Automation Imperative

By 2026, the concept of a "perimeter" in corporate security has vanished. The rise of decentralized cloud computing, the Internet of Things (IoT), and generative AI-driven social engineering has created an environment where threats move at machine speed. For a Business Administrator, the primary challenge is no longer just "prevention," but "resilience"—the ability of an organization to withstand and recover from an attack in real-time. (R. V. Solms, J. V. Niekerk, 2013).

Autonomous Cyber Defense (ACD) represents the next frontier in this evolution. Unlike traditional automated systems that follow rigid, human-defined rules, ACD utilizes deep learning and reinforcement learning to adapt to novel threats. However, when an AI system is given the authority to "quarantine" a department or "terminate" a suspected compromised account, it is making a managerial decision. These decisions carry significant weight, affecting employee productivity, customer trust, and the firm’s bottom

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line. The central problem of this research is identifying where the machine's autonomy ends and the manager's ethical responsibility begins.

2. Theoretical Grounding: Ethical Frameworks for AI

To evaluate the ethics of autonomous defense, we must move beyond technical efficacy and apply established moral philosophy to the boardroom (Floridi, 2023).

2.1 Utilitarianism and the Net-Benefit Analysis

From a utilitarian perspective, an action is ethical if it produces the greatest good for the greatest number. In cybersecurity, this translates to a risk-benefit calculus. If an ACD system prevents a catastrophic data breach by preemptively shutting down a localized network segment, the "net good" (protecting millions of customer records) outweighs the "net harm" (the temporary loss of service for a hundred employees).

However, this approach is fraught with danger. A utilitarian AI might systematically "sacrifice" the connectivity of smaller, less profitable branches to protect the core headquarters, leading to internal inequity. Managers must therefore define the thresholds of acceptable harm before deploying such systems (Bostrom and Yudkowsky, 2025).

2.2 Deontology and the Duty of Transparency

Deontological ethics focus on duty and rules. A corporation has a fiduciary duty to its shareholders and a duty of care to its employees. When a human manager fires an employee or shuts down a project, they must provide a justification. If an ACD system performs a similar action—such as locking an executive out of their accounts during a critical negotiation because of "anomalous behavior"—the lack of an immediate, human-understandable explanation violates the principle of transparency. Without "Explainable AI" (XAI), the corporation fails its deontological duty to treat its stakeholders as rational agents rather than mere data points.

3. Critical Dilemmas in Autonomous Corporate Defense

3.1 The False Positive and Operational Paralysis

In business management, a "false positive" in security is often viewed as a nuisance. In an autonomous environment, it can be a disaster. If an AI misidentifies a surge in legitimate end-of-quarter transactions as a DDoS attack and shuts down the payment gateway, the financial and reputational damage is self-inflicted. The ethical dilemma lies in the "bias toward action." Does the corporation value security over service? Managing this tension requires a strategic alignment of the AI's "aggression level" with the company's overall risk appetite (NIST, 2024).

3.2 Algorithmic Bias and Digital Redlining

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AI models are trained on historical data, which often contains human prejudices. If an ACD system learns that certain geographic regions or specific user demographics are "statistically more likely" to be sources of compromise, it may begin to "redline" those users—subjecting them to more frequent lockouts or intrusive verification. For a global enterprise, this is not just a technical error; it is a violation of Corporate Social Responsibility (CSR) and could lead to legal repercussions under emerging AI regulations (European Commission, 2024).

3.3 The Decay of Human Oversight (Automation Bias)

A psychological phenomenon known as "Automation Bias" suggests that humans tend to favor suggestions from automated systems even when they contradict their own senses. Over time, as ACD systems operate successfully, human security analysts may experience skill atrophy. In the event of a "Black Swan" event—a threat the AI was not trained for—the human managers may no longer have the expertise or the confidence to intervene, leading to a total loss of corporate agency (Daugherty and Wilson, 2024).

Table 1: Ethical Dilemmas and Managerial Considerations in Autonomous Cyber Defense

Ethical Dilemma	Description	Managerial Consideration
False Positive Paradox	AI's over-aggression causes legitimate business disruption.	Define risk appetite and acceptable collateral damage.
Algorithmic Bias	Discriminatory security actions based on biased training data.	Implement pre-deployment bias audits and diverse data training.
Black Box Problem	Lack of transparency in AI's decision-making process.	Prioritize Explainable AI (XAI) and audit trails.
Automation Bias	Humans over-relying on AI, leading to skill atrophy.	Foster "Human-in-the-Loop" protocols and continuous training.
Responsibility Gap	Unclear accountability when AI causes harm.	Update corporate bylaws and legal frameworks for AI liability.

4. Strategic Recommendations for Management

To navigate these challenges, Business Administrators must implement a multi-layered governance strategy. Implement "Human-in-the-Loop" for High-Impact Decisions: While the AI can handle routine threats

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autonomously, any action that affects business continuity or employee rights must require a "human veto" or secondary authorization. This ensures "Meaningful Human Oversight". Invest in Explainable AI (XAI): Management should prioritize vendors whose AI models provide "traceability," allowing auditors to understand the logic behind a specific defensive action. This aligns with deontological duties of transparency. Regular Ethical Auditing: Just as a firm undergoes financial audits, it must conduct "algorithmic audits" to ensure the ACD system is not developing biased or discriminatory patterns of behavior (NIST, 2024).

5. Conclusion: Towards a Proactive Ethical Posture

The transition to AI-driven autonomous defense is an operational necessity in 2026, but it must be managed with an "Ethics-First" mindset. By balancing the speed of the machine with the wisdom of human oversight, corporations can protect their digital assets without sacrificing their core values. The future of Business Administration lies not in replacing humans with AI, but in the seamless, ethical integration of both.

As we look toward 2027 and beyond, research must focus on "Adversarial Ethics"—how we respond when attackers deliberately manipulate our autonomous defenses to make "ethical" errors (e.g., tricking an AI into shutting down a hospital's power by mimicking a threat). Further exploration into the intersection of global AI regulations (like the EU's AI Act) and corporate cybersecurity governance is also crucial.

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ISSN 2076-9202

GOAL-SETTING WITHIN ORGANIZATIONS: ESSENTIAL IN LEADING TO THEIR PROGRESSION

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Abstract

Within all types of organizations, goal-setting is considered important. The individuals in leadership positions and other members need to formulate various types of goals. Furthermore, they are required to carry out different types of job duties and responsibilities in an adequate manner. Furthermore, it is necessary to implement different types of methodologies and procedures in a satisfactory manner. With advancements taking place, individuals need to utilize different types of modern, scientific and innovative methods and materials. These need to be utilized in a satisfactory manner. Furthermore, different types of goals of the organizations are, improving employee morale; meeting customer demands; implementing recruitment and selection methods in an adequate manner; bringing about improvements in training and development programs; managing financial, human, technical, material and information resources; making provision of infrastructure, amenities and facilities and so forth. In order to achieve these, all members need to inculcate the traits of morality, ethics, diligence and conscientiousness. One of the important aspects that needs to be taken into account is, all members need to form cordial and amiable terms and relationships with others. As a consequence, they will work in co-ordination with others in achievement of different types of organizational goals. Hence, when all members achieve goals in a successful manner, progression takes place of members and overall structure of the organizations. Therefore, it is well-understood, goal-setting within organizations is essential in leading to their progression. The main concepts that are taken into account in this research paper are, understanding the meaning and significance of goal-setting, measures to be put into operation in achievement of organizational goals and advantages of achievement of organizational goals.

Keywords: *Achievement, Goal-Setting, Information, Job Duties, Methodologies, Organizations, Progression, Well-ordered Manner*

Introduction

The organizations are of different types, i.e. educational institutions of all levels, training centers, production and manufacturing organizations, services organizations, financial institutions, non-government organizations, agencies and so forth. In all types of organizations, there are different types of goals that are formulated. These are, implementing recruitment and selection methods in an adequate manner; leading to up-gradation of training and development programs; utilizing various types of modern, scientific and

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innovative methods and materials; leading to an increase in productivity and profitability; augmenting various types of competencies and abilities among employees; improving employee morale; organizing seminars and workshops; managing financial, human, technical, material and information resources; making provision of infrastructure, amenities and facilities; enhancing organizational culture and leading to up-gradation of overall organizational structures. All the members of the organizations, belonging to all job positions in the hierarchy need to augment information in terms of various factors, which are facilitating in achievement of desired goals. Throughout their jobs, they need to augment the skills, which are approving in achievement of organizational goals (Group, 2017). Therefore, goal-setting is important within all types of organizations, as employees get directed towards the right path to achieve these.

Within all types of organizations, there are some job duties and responsibilities that are implemented on an individual basis, whereas, there are others, which are implemented through working in co-ordination with other members, hence, it is necessary to put into practice effective communication processes (Huitt, & Dawson, n.d.). The communication processes are facilitating in augmenting information and understanding in terms of various subjects and concepts; exchanging ideas and viewpoints; obtaining answers to all types of questions and clarifying doubts in terms of various factors. Furthermore, individuals need to be well-informed in terms of communication ethics, i.e. making use of polite language and decent words; treating others with respect and courtesy; making provision of factual information; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude. The implementation of effective communication processes leads to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. As a consequence, individuals incur the feelings of pleasure and contentment. Therefore, effective communication processes are essential in preparing oneself in an adequate manner towards achievement of desired goals.

Understanding the Meaning and Significance of Goal-Setting

All members of the organizations, belonging to all job positions need to be well-informed in terms of various types of job duties and responsibilities. When recruitment and selection of individuals takes place, the information in terms of these is acquired from employers and through training and development programs. These are manageable and complicated, these are implemented in less amount of time or can be more time-consuming and these are carried out on one's own or through working in co-ordination with other members. Furthermore, all members need to possess adequate information in terms of different types of techniques of carrying out all types of job duties and responsibilities in an appropriate manner. The members need to ensure, they inculcate the traits of morality, ethics, diligence and conscientiousness. These are regarded to be the key traits, needed in doing well in all types of job duties and responsibilities. Furthermore, individuals in leadership positions will be pleased and desired goals will be achieved.

It is apparently understood that within the course of putting into operation various types of job duties and responsibilities, there are occurrences of challenging situations in terms of various factors, i.e. methodologies, approaches, techniques, work pressure, unawareness regarding various factors etc. These need to be coped with in an appropriate manner. Furthermore, the members need to augment motivation and concentration levels towards their work. As a consequence, they will render an important contribution in

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achievement of various types of organizational goals. Furthermore, up-gradation of organizational culture will take place. Therefore, individuals are able to acquire an efficient understanding of the meaning and significance of goal-setting, when all types of job duties and responsibilities are put into operation in a well-ordered manner.

In order to carry out all types of job duties and responsibilities in a well-ordered manner, it is necessary to be well-equipped in terms of various types of methodologies and procedures. These are referred to the ways that are facilitating in doing well in all types of job duties and responsibilities. As a consequence, members will be able to achieve desired goals in a well-ordered manner. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in terms of various types of methodologies and procedures. Furthermore, the individuals need to ensure, these are put into operation in a moral and ethical manner. In addition, all types of setbacks need to be overcome in an appropriate manner. Furthermore, these are to be prevented from giving rise to impediments within the course of achievement of desired goals.

The inculcation of traits of efficiency and diligence will be approving in making use of various types of methodologies and procedures in a satisfactory manner. The tasks of conducting research; implementing communication processes with superiors, subordinates and colleagues; attending training and development programs and generating information in terms of different types of job duties and responsibilities are factors, which are facilitating in augmenting information in terms of different types of methodologies and procedures. One of the important aspects that needs to be taken into account is, these need to be favorable to the overall structure of the organizations. Therefore, one is able to acquire an understanding of the meaning and significance of goal-setting, when information is generated in terms of different types of methodologies and procedures.

With advancements taking place and with the advent of modernization and globalization, the members in all types of organizations are making use of various types of modern, scientific and innovative methods and materials. These are, utilization of different types of tools, devices, apparatus, machinery, equipment, gear and technologies. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in terms of various types of these methods and materials. Furthermore, the individuals need to ensure, these are put into operation in a moral and ethical manner. In addition, all types of problems and challenging situations need to be overcome in a satisfactory manner. As a consequence, members will be well-prepared to achieve desired goals in a well-organized manner.

The inculcation of traits of proficiency and conscientiousness will be approving in making use of various types of these methods and materials in a satisfactory manner. The various factors, which are approving in augmenting information in terms of different types of these methods and materials, are conducting research through utilizing various sources; implementing communication processes with superiors, subordinates and colleagues; attending training and development programs and generating information in terms of different types of job duties and responsibilities. One of the important aspects that needs to be taken into account is, these need to be favorable in enhancing organizational culture and in

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leading to up-gradation of overall structure of the organizations. Therefore,an understanding of the meaning and significance of goal-setting is acquired, when information is generated in terms of different types ofmodern, scientific and innovative methods and materials.

Measures to be put into operation in Achievement of Organizational Goals

Getting engaged in employment opportunities is regarded as one of the major goals of individuals, belonging to all communities and socio-economic backgrounds. The individuals get engaged in these in accordance to their educational qualifications, skills, abilities, interests and overall personality traits. The individuals need to ensure, these are suitable to them. Within all types of employment settings, the members, belonging to all job positions have different types of organizational goals to achieve. In order to achieve these, they need to be well-informed in terms of number of factors, i.e. job duties, responsibilities, methodologies, procedures, modern, scientific and innovative methods and materials, mutual understanding with others and so forth. The individuals will be successful in their job duties and responsibilities, when all types of factors are to be implemented in a well-ordered and disciplined manner (How to Develop Competencies that enhance Individual and Organizational Performance? n.d.).

Throughout the implementation of job duties of all members, they need to augment information in terms of various types of measures to be implemented to achieve all types of organizational goals. All types of measures need to be implemented in a well-ordered and regimented manner. Furthermore, positivity needs to be reinforced in these. One of the important aspects that needs to be taken into account is, all types of measures need to be facilitating to individuals and overall structure of the organizations. Therefore, measures to be put into operation in achievement of organizational goals are stated as follows:

Implementing Effective Communication Processes

Implementing effective communication processes is facilitating in preparing oneself in an adequate manner to achieve organizational goals. The communication processes are facilitating in augmenting information and understanding in terms of various subjects and concepts; exchanging ideas and viewpoints; obtaining answers to various types of questions and clarifying doubts in terms of various factors. Furthermore, individuals need to be well-informed in terms of communication ethics, i.e. making use of polite language and decent words; treating others with respect and courtesy; making provision of factual information; reinforcing the traits of efficiency, honesty and truthfulness; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude.

The implementation of effective communication processes leads to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. As a consequence, individuals incur the feelings of pleasure and contentment. The communication takes place in a verbal and written manner. Verbal communication takes place face to face, video-calling or phone, whereas, written communication takes place through exchanging messages and emails. The traits of goodness and decency need to be reinforced in communicating within all types of professional settings. Hence, effective communication processes are essential in preparing oneself in an appropriate manner towards achievement of desired goals. Therefore, implementing effective communication processes is regarded as one of the

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indispensable measures to be put into operation in achievement of organizational goals.

Being well-equipped regarding Job Duties and Responsibilities

All members of the organizations, belonging to all job positions need to be well-informed in terms of various types of job duties and responsibilities. When recruitment and selection of individuals takes place, the information in terms of these is acquired from employers and through training and development programs. These are manageable and complicated, these are implemented in less amount of time or can be more time-consuming and these are carried out on one's own or through working in co-ordination with other members. Furthermore, all members need to possess adequate information in terms of different types of strategies of carrying out all types of job duties and responsibilities in an appropriate manner. The members need to ensure, they inculcate the traits of morality, ethics, diligence and conscientiousness. These are regarded to be the key traits, needed in doing well in all types of job duties and responsibilities. Furthermore, individuals in leadership positions will be pleased and desired goals will be achieved.

It is apparently understood that within the course of putting into operation various types of job duties and responsibilities, there are occurrences of challenging situations. The various factors in terms of which these take place are methodologies, approaches, techniques, work pressure, unawareness regarding various factors, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities, facilities etc. These need to be coped with in an appropriate manner. Furthermore, the members need to augment motivation and concentration levels towards their work. As a consequence, they will render an important contribution in achievement of organizational goals. Furthermore, up-gradation of organizational culture will take place. Therefore, being well-equipped regarding job duties and responsibilities is one of the significant measures to be put into operation in achievement of organizational goals.

Being well-aware regarding Methodologies and Procedures

In implementing different types of job duties and responsibilities in a well-ordered manner, it is necessary to be well-equipped in terms of various types of methodologies and procedures. These are referred to the ways that are facilitating in doing well in different types of job duties and responsibilities. As a consequence, members will be able to achieve desired goals in a well-organized manner. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in terms of various types of methodologies and procedures. Furthermore, the individuals need to ensure, these are put into operation in a moral and ethical manner. In addition, all types of dilemmas and challenging situations will be overcome in an appropriate manner. Furthermore, these are to be prevented from giving rise to impediments within the course of achievement of desired goals.

The inculcation of traits of proficiency, adeptness and conscientiousness will be approving in making use of various types of methodologies and procedures in a satisfactory manner. The tasks of conducting research; implementing communication processes with superiors, subordinates and colleagues; attending training and development programs and generating information in terms of different types of job duties and

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responsibilities are factors, which are facilitating in augmenting information in terms of different types of methodologies and procedures. One of the important aspects that needs to be taken into account is, these need to be advantageous to the overall structure of the organizations. Therefore, being well-aware regarding methodologies and procedures is an eminent measure to be put into operation in achievement of organizational goals.

Utilizing Pioneering Methods and Materials

With the advent of technologies, the members in all types of organizations are making use of various types of pioneering methods and materials. These are, utilization of different types of tools, devices, apparatus, machinery, equipment, gear and technologies. The individuals need to acquire a satisfactory understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in terms of various types of these methods and materials. Furthermore, the individuals need to ensure, these are put into operation in a moral and ethical manner. In addition, all types of dilemmas and challenging situations will be solved in an adequate manner. As a consequence, members will be well-prepared to achieve desired goals in a well-ordered manner.

The inculcation of traits of expertise and meticulousness will be approving in making use of various types of these methods and materials in an appropriate manner. The various factors, which are approving in augmenting information in terms of different types of these methods and materials, are conducting research through utilizing various sources; implementing communication processes with superiors, subordinates and colleagues; attending training and development programs and generating information in terms of different types of job duties and responsibilities. One of the important aspects that needs to be taken into account is, these need to be favorable in enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Therefore, utilizing pioneering methods and materialsis an expedient measure to be put into operation in achievement of organizational goals.

Forming Cordial and Amiable Terms and Relationships with others

Within all types of organizations, there are some job duties and responsibilities that are implemented on an individual basis, whereas, there are others, which are implemented through working in co-ordination with other members, hence, it is necessary to form cordial and amiable terms and relationships with others. In order to carry out this task, the individuals need to be well-informed in terms of communication ethics, i.e. making use of polite language and decent words; treating others with respect and courtesy; making provision of factual information; reinforcing the traits of efficiency, honesty and truthfulness; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude. As a consequence of acknowledging and implementing all these factors, individuals will be able to form cordial and amiable terms and relationships with superiors, subordinates and colleagues.

As a consequence, individuals will lead to up-gradation of motivation and concentration levels towards job duties and responsibilities. Furthermore, they will be able to take help and assistance from others in carrying out all types of job duties and responsibilities in a successful manner. If any types of

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problems cannot be solved on one's own, help is obtained from others in solving these. In this manner, individuals will incur the feelings of pleasure and contentment. Therefore, forming cordial and amiable terms and relationships with others is a renowned measure to be put into operation in achievement of organizational goals.

Managing Resources

In all types of organizations, individuals, belonging to all job positions need to make use of various types of resources, i.e. financial, human, technical, material, and information. The financial resources are the monetary resources. The individuals make use of these in carrying out all tasks, related to functioning of organizations, i.e. making purchases of various products, acquiring services of service providers, bringing about changes in various factors and fulfilling different types of needs and requirements. Human resources are personnel. They are required to make use of their educational qualifications, skills and abilities in an adequate manner. Technical resources are various types of technologies, i.e. computers, lap-tops, I pads, scanners, printers, photo-copiers, audio-visual aids, projectors and so forth. Material resources are, tools, devices, apparatus, equipment, machinery, gear and gadgets. Information resources are, books, articles, reports, projects, newspapers, magazines, other reading materials and internet. The internet is regarded as one of the prominent sources that is utilized on comprehensive basis.

The management of resources is regarded to be of utmost significance in achievement of all types of organizational goals. The individuals, belonging to all job positions in the hierarchy need to augment information in terms of measures, which are facilitating in utilization and management of resources. Furthermore, these need to be utilized in a well-ordered manner and wastage needs to be prevented. Hence, it is well-understood, management of resources is facilitating in achievement of various types of organizational goals. Therefore, managing resources is a decisive measure to be put into operation in achievement of organizational goals.

Providing Infrastructure, Amenities and Facilities

Within all types of organizations, it is necessary to make provision of infrastructure, amenities and facilities. These are referred to power supplies, water supplies, clean drinking water, restrooms, heating and cooling equipment in accordance to the weather conditions, furniture, communication networks, internet, transportation facilities, parks, play-grounds, ramps, elevators, buildings and overall environmental conditions. The individuals in leadership positions are vested with the authority and responsibility of making provision of these. The management of financial resources is regarded to be of utmost significance. These need to be utilized in an appropriate manner. Furthermore, the services need to be hired of service providers, i.e. electric workers, repair workers, painters, carpenters, plumbers, gardeners, cooks and so forth. These individuals need to carry out their job duties and responsibilities in a well-ordered manner.

As a consequence of making these available, the individuals feel comfortable within working environmental conditions. Furthermore, they are able to hone motivation and concentration levels towards work. In addition, they will render an important contribution in doing well in all types of job duties and responsibilities. As a consequence, individuals will render an important contribution in achievement of

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organizational goals. Hence, throughout one's jobs, all members need to be well-informed in terms of factors, which are facilitating in achievement of all types of organizational goals. In this manner, infrastructure, amenities and facilities will be managed in a satisfactory manner. Therefore, providing infrastructure, amenities and facilitiesis an imperative measure to be put into operation in achievement of organizational goals.

Inculcating Traits of Morality, Ethics, Diligence and Conscientiousness

All members, belonging to all job positions need to inculcate the traits of morality, ethics, diligence and conscientiousness. These are the traits, which are facilitating in acknowledging and implementing certain factors, i.e. differentiating between various types of appropriate and inappropriate factors; reinforcing a constructive approach; forming positive viewpoints in terms of various factors and individuals; being well-equipped regarding job duties and responsibilities; being well-aware regarding methodologies and procedures; utilizing pioneering methods and materials; leading to up-gradation of different types of skills and abilities; leading to up-gradation of motivation and concentration levels; providing solutions to various types of problems and carrying out all types of job duties and responsibilities in a well-ordered manner. As a consequence of acknowledging and implementing all these factors, individuals will contribute in an efficient manner in achieving various types of organizational goals.

Throughout the implementation of job duties, the individuals need to ensure, they inculcate these traits. Furthermore, these need to be put into operation in a well-ordered and regimented manner. Individuals need to ensure, these are facilitating in promoting well-being of members and leading to up-gradation of overall structure of the organizations. Furthermore, all types of organizational goals will be achieved in an appropriate manner. This opens the doors in promoting goodwill of all members and enhancing the overall organizational structure. Therefore, inculcating traits of morality, ethics, diligence and conscientiousness is an advantageous measure to be put into operation in achievement of organizational goals.

Making Wise and Productive Decisions

The decision-making processes are regarded as an integral part in leading to functioning of overall organizations in a suitable manner. The individuals in leadership positions are vested with the authority and responsibility of making decisions in terms of various factors i.e. job duties, responsibilities, methodologies, procedures, techniques, approaches, strategies, training and development programs, recruitment and selection methods, organizational culture and overall structure of the organizations. In putting into operation the decision-making processes in terms of various factors, analysis needs to be conducted in terms of various types of alternatives and options that are available. After the analysis is conducted, selection is made of the most favorable and worthwhile alternative or option. On the other hand, critical-thinking skills are facilitating in implementing rational, logical and methodological thinking. Hence, the up-gradation of analytical and critical-thinking skills is facilitating in making wise and productive decisions in terms of various factors (How to Build Your First Employee Training Program? n.d.).

The individuals in leadership positions make decisions in terms of functioning of overall organizational structure. The individuals need to ensure, these are flexible. In other words, changes can be

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brought about in these in a satisfactory manner. One of the important aspects that needs to be taken into account is, changes need to be facilitating in promoting well-being of members and leading to up-gradation of overall structure of the organizations. Furthermore, all types of organizational goals will be achieved in an appropriate manner. Therefore, making wise and productive decisions is a favorable measure to be put into operation in achievement of organizational goals.

Implementing Time-Management Skills

All members of the organizations, belonging to all job positions need to be well-informed in terms of time-management skills. The individuals, irrespective of their job positions have number of job duties and responsibilities to carry out. These are more or less time-consuming. These are the skills, which are facilitating in putting into operation all types of job duties and responsibilities within required time-frame. The individuals assign priorities to various types of job duties and responsibilities. The ones, which are more important are carried out first, whereas, the ones, which are less important are implemented after the completion of more important ones. Procrastination is avoided. Hence, these skills are facilitating in taking out sufficient amount of time for all types of job duties and responsibilities. Hence, when all members are wholeheartedly committed towards achievement of desired goals, they need to acknowledge the meaning and significance of these skills.

As a consequence of implementing time-management skills, all members will render an important contribution in doing well in all types of job duties and responsibilities. Furthermore, individuals in leadership positions will be pleased with the job performance of all members. Furthermore, all types of organizational goals will be achieved in an appropriate manner. This will open the doors in promoting goodwill of all members and leading to up-gradation of overall organizational structure. Therefore,implementing time-management skills is a useful measure to be put into operation in achievement of organizational goals.

Advantages of Achievement of Organizational Goals

In all types of organizations, there are different types of goals that are formulated. All the members of the organizations, belonging to all job positions in the hierarchy need to augment information in terms of various factors, which are facilitating in achievement of desired goals. Throughout their jobs, they need to lead to up-gradation of various types of competencies and abilities, which are approving in achievement of organizational goals. One of the important aspects is, all members need to lead to up-gradation of motivation levels towards work. As a consequence, they will put in their best efforts towards achievement of all types of organizational goals. Within all types of organizations, there are number of job duties and responsibilities, which are put into operation by all members. These are put into operation in an individual basis or through working in co-ordination with other members. Furthermore, information needs to be augmented in terms of different types of methodologies and procedures. All these need to be put into operation in an efficacious manner in generation of desired outcomes (How to Improve Student Behaviour in the Classroom, 2020).

In cases of complicated job duties and responsibilities, the individuals do get overwhelmed by the feelings of apprehensiveness and vulnerability. These need to be overcome in an appropriate manner.

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Furthermore, these need to be prevented from giving rise to impediments within the course of doing well in all types of job duties and responsibilities. As a consequence, all members will be successful in their work. All the members, throughout their jobs need to be wholeheartedly committed towards achievement of organizational goals. This is considered to be advantageous to members and overall structure of the organizations. Hence, goal-setting is important within all types of organizations, as employees are led towards the right direction to achieve these. Therefore, advantages of achievement of organizational goals are stated as follows:

1. Honing communication skills and interactive abilities.
2. Honing analytical and critical-thinking skills.
3. Making wise and productive decisions.
4. Inculcating the traits of morality and ethics.
5. Implementing the traits of diligence, resourcefulness and conscientiousness.
6. Reinforcing the traits of efficiency, honesty and truthfulness.
7. Leading to up-gradation of motivation and concentration levels.
8. Putting in efforts to one's best abilities.
9. Reinforcing a constructive approach.
10. Forming positive viewpoints in terms of various factors and individuals.
11. Providing solutions to various types of problems.
12. Possessing the abilities to work under stress.
13. Taking out sufficient time for all types of job duties and responsibilities.
14. Promoting community well-being.
15. Developing mutual understanding with all other members.
16. Managing resources in a wise manner.
17. Providing infrastructure, amenities and facilities.
18. Preventing wastage of resources, infrastructure, amenities and facilities.
19. Promoting enhancement of organizational culture.
20. Leading to up-gradation of organizational structure.

Conclusion

In all types of organizations, there are various goals to achieve. Measures to be put into operation in achievement of organizational goals are, implementing effective communication processes, being well-equipped regarding job duties and responsibilities, being well-aware regarding methodologies and procedures, utilizing pioneering methods and materials, forming cordial and amiable terms and relationships with others, managing resources, providing infrastructure, amenities and facilities, inculcating traits of morality, ethics, diligence and conscientiousness, making wise and productive decisions and implementing time-management skills. Achievement of organizational goals is advantageous to members and overall organizational structure. Finally, it can be stated, goal-setting and achieving these is essential in leading to progression of organizations.

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ISSN 2076-9202

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ISSN 2076-9202

HOW ORGANIZATIONAL AGILITY ENHANCES FIRM ESG PERFORMANCE: EVIDENCE FROM SMES

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Funding: This research was funded by Huazhong University of Science and Technology.

ABSTRACT

Purpose of this research is to examine the relationship between organizational agility (OA) and the Environmental, Social, and Governance (ESG) performance of firms. Specifically, it seeks to understand theorganizational agility and agility in various industriesof Pakistani firms including some control variables e.g. firm size, firm age, industry and city. Data is collected from 300 firms of Pakistan and the respondents are middle and senior managers. R studio(version 4.5.2)is used to analyze data The analysis techniques include; descriptive statistical, correlation, reliability, validity,Common Method Variance (CMV), Structural Equation modeling (SEM) and regression (including control variables). Data is collected from the industries of IT, Manufacturing, Textiles, Electronics, and Automobile, in eight cities of Pakistan. Results show that there exists a positive relationship between organizational agility and firm ESG Performance. This study contributes to the literature by the importance of organizational agility as a dynamic capability in achieving ESG goals, providing new directions for future research and practical recommendations for policymakers and industry leaders.

KEYWORDS: *Organizational Agility (OA), Firm ESG Performance (ESG),R Studio,Common Method*

ISSN 2076-9202

Variance (CMV), Structural Equation Modeling (SEM)

Introduction

In this era, regulators, investors, and the public have increased their expectations regarding the organizations' environmental, social and governance (ESG) practices. Over the last few years, ESG ratings and disclosures have become common standards for assessing corporate social responsibility, risk, and sustainable value creation(Aydoğmuş et al., 2022). Recent research shows that digital transformation fosters positive ESG outcomes by providing the transparency, efficiency, and stakeholder collaboration needed to address environmental and social challenges. However, even with the existing research around the positive impacts of digital transformation on ESG outcomes, there is a gap in understanding the internal organizational mechanisms that lead to positive outcomes on ESG performance. One of the mechanisms within theliterature that has gained prominence is the concept of organizational agility. This is the ability to recognize change in the environment, make appropriate decisions in good time, and reorganize resources adeptly and efficiently. Agility is crucial in turbulent contexts, as these are the areas within which businesses encounter unpredictable regulations, fluctuating stakeholder concerns, and technological changes. Research shows that digitalization and digital transformation bolster firms reconfiguring processes and changing business models, hence improving organizational agility(Chen & Wang, 2024; Jin & Wu, 2024; M. Zhang & Huang, 2024). Other scholars suggest that more agile firms are in a better position to adopt and practice sustainability, address some of the ESG-related business risks, and embed sustainability in the primary business strategies.

Organizational agility and ESG performance are closely interrelated. However, these areas of study seem to have advanced separately. In recent literature, emphasis is placed on the various performance outcomes, such as innovations, improved financial returns, or enhanced competitive advantage. In ESG literature, the focus shifts to governance, stakeholder pressures, and institutional frameworks. Only a handful of recent publications have sought to address the intersection of organizational agility and firm ESG performance (Al Jabri et al., 2024; Bux et al., 2025; J. Zhang et al., 2025). This study is the first one to study organizational agility and firm ESG relationship in SMEs context for a developing nation like Pakistan. This creates a paradox of sorts, as we are limited in our understanding of the strategies employed in digital transformation to alter a firm’s internal capabilities, subsequently enhancing the firm’s ESG outcomes(Kwasek et al., 2025). Filling this gap, this study develops and tests a model where organizational agility (OA) impacts firm ESG performance. Based on dynamic capabilities theory, we contend that the ESG benefits come primarily from the creation and deployment of valuable, rare, and inimitable digital resources paired with dynamic capabilities such as agility(Chen & Wang, 2024; Y. Liu et al., 2025). More specifically,OA enables firms to harness these resources to enhance environmental stewardship, social responsibility, and governance.This study extends the scholarly literature in three principal respects. First, it integrates the streams of ESG by theorizing and empirically testing the organizational agility and firm ESG chain, thereby advancing the literature that has recently examined the digital transformation and ESG relationship in a more diffuse manner, neglecting the organizational agility(Chen & Wang, 2024; Li et al., 2025; M. Zhang & Huang, 2024). Second, it considers organizational agility as the primary of these dynamic capabilities, and as how

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strategies are transformed into sustainability-oriented outcomes, offering a needed internally based, capabilities- oriented explanation for the differences in ESG performance among firms(Jianqiang et al., 2022; Kwasek et al., 2025; Pelletier et al., 2025; J. Zhang et al., 2025). Third, by concentrating on this intricate capability nexus, the study offers in practical terms the justification for major investments not only on the grounds of efficiency or profit, but more importantly, for ESG outcomes.

The rest of this article is organized as follows. The next section discusses the theoretical foundations oforganizational agility, and ESG performance, using the dynamic capability theory as its framework. We then specify the hypotheses that connect these variables together, and finally, based on the empirical outcomes (which are set out in the later sections of the paper), we articulate the contributions made to theory and practice.

Literature Review

Organizational Agility

A firm's ability to rapidly adjust to changes in its external environment in an informed manner while simultaneously reshaping its existing workflows and resource configurations is referred to as organizational agility(Ahmed et al., 2022). Organizational agility has three related components: sensing, decision-making and acting. Construct measures frequently applied in empirical studies include responsiveness, process flexibility, and reconfiguration(J. Zhang et al., 2025).On the contrary, an organization is more agile the better it can capitalize on emerging digital technologies as it is able to rapidly adapt and refine its strategic approach while avoiding a tightly controlled organizational framework that impedes the digital innovation's organizational benefits.Within uncertain environments, the ability of an entity to maintain its competitive edge and advanced performance relative to its competitors is increasingly recognized as a dynamic capability(Teece, 2007a). This specialized form of organizational agility is expected to provide competitive advantages needed for the sustainable performance of the entity.

Many empirical studies have developed frameworks that establish positive correlations between innovation, financial performance, and resilience during crises, and agility. In the most recent studies focusing on sustainability, agility is also connected to the ability of firms to handle ESG risks and opportunities, which implies that more socially and environmentally responsible agile organizations can more seamlessly incorporate social and ecological factors into their business practices and frameworks.

Firm ESG Performance

Performance on the ESG criteria is an indication of the level of the firm's ESG risks, which is the environmental, social, and governance headwinds that a firm faces. It is normal to measure this using different indices that include but are not limited to carbon emissions, energy use, employee welfare, social equity, community participation, independent governance of the board, and the rights of shareholders. Investors and rating organizations have increasingly adopted the use of ESG benchmarks to determine the prospective values and risks of organizations and their alignment with the principles of sustainable development(Y. Liu et al., 2025). In recent times, ESG performance has been believed to be more than a matter of reputation, and this has been demonstrated in literature, when analyzed, improved innovation, and financial performance, with a decrease in the associated risks(Pu, 2025). It has been noted that Firms with

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better ESG performance have also been noted to have better social capital, lower costs of capital, and more socio-ecological resilience. To achieve high levels of ESG performance, significant overhauls in the information systems, and the entire decision-making processes, reporting systems, and routines must be put in place.

Research on small and medium-sized businesses (SMEs) shows that ESG performance can be attained outside of large corporations. For example, SMEs' ESG results significantly improve when they combine organizational innovation with strong leadership(Zhu & Huang, 2023). Although, research also reveals a problem with measurement and comparability: Cross-study comparisons are made more difficult by the wide variations in ESG indicators and disclosure requirements among companies and industries(Khan et al., 2024; Waldau, 2025).Studies published in narrated evidence review what approach firms have taken to implement their ESG goals through the use of their internal capabilities, particularly those related to digital transformation. Findings from research conducted on publicly traded organizations indicate that firms with strong dynamiccapabilities (i.e., Learning, Coordination, and Innovation) and digital transformation activities are positioned to achieve better ESG results than those firms without these attributes(L. Zhang et al., 2024). It demonstrates that organizational agility &resource reconfiguration are integral to the success of ESG.

Theoretical Background and Hypothesis Development

Dynamic Capabilities Theory

From this perspective, organizational agility the main dynamic capability that enables firms to identify ESG-related risks and opportunities, such as carbon regulation and social activism, strategically respond to them through green investments and inclusive HR practices, and adapt the firms' structures, processes, and technologies(X. Liu & Wang, 2025).Dynamic capability theory(Teece, 2007b; Teece et al., 1997)states that firms will succeed over their competitors if they identify external changes, take advantage of them, and reconfigure their internal mechanisms to adapt successfully. Organizational agility embodies these dynamic capabilities, as it permits the assimilation of information and the reconfiguration and modification of resources, and ensures appropriate changes to the firm's strategies within a time frame (Overby et al., 2006; Sukati et al., 2014). Looking through the lens of DCT, a firm that possesses strong agile capabilities will interpret the pressures and regulatory and stakeholder changes relating to sustainability more effectively and result in the incorporation of ESG factors into its decisions more seamlessly.Agility also explains the ESG outcomes a firm achieves because it enables the shifting of processes toward cleaner, ethically, and transparently governed technologies and practices. Compared to their less agile counterparts, firms with agile processes will be faster to go through the operational redesign, eco-innovation adoption, social responsibility operationalization, and governance improvement cycle (Eisenhardt & Martin, 2000a). In dynamic contexts, these capabilities are crucial to achieving measurable outputs against pre-set ESG goals.

Dynamic capability theory thus explains clearly despite the substantive outlines in the literature why agile firms achieve higher ESG performance: agility embodies the sensing, seizing, and transforming capacities required to respond proactively to environmental, social, and governance demands.

Hypothesis Development

The Role of Organizational Agility in Firm's ESG Performance

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Organizational agility is viewed as a trait of an organization that has the capacity to perform sustainably because it demonstrates the ability to accommodate changing expectations of a firm regarding ESG and its regulatory requirements. For example, agile organizations can more easily integrate new environmental requirements, respond to emissions reduction processes and redesign products, and address stakeholders' concerns regarding labor conditions and community impacts(Pu, 2025).

Several recent studies support this view. Evidence exists from the ESG, and performance research domain suggests that as organizations and/or managers invest in ESG data and related initiatives, they perform better, and this is because they can respond positively and instantly manage internal process and governance structures. It is posited that organizational agility is the missing link that mediates the explanatory relationships between ESG activities and financial as well as innovative performance(Jianqiang et al., 2022). This is because it enables companies to implement a converted form of operationalization of the ESG principles. In agile project and knowledge intensive contexts, agility has been positively correlated to performance because of the contribution of the agility to the impact of ESG practices on performance through enhanced learning, coordination, and stakeholder participation(Mariani et al., 2025).

Moreover, on a more positive note, agility accommodates organizational resilience such that it enables organizations to more effectively absorb shocks because of adverse climate events, social unrest, or related governance scandals. Such ESG firms that are endowed with a higher level of agility, such as those with the capacity to rapidly alter portfolios, relocate supply chains, or change reporting practices, are in a better position to protect their ESG standing as well as their overall performance(Deng & Karia, 2025).Overall, it is argued that the collective contribution of the organizational agility factors enhances an organization's capacity to address its ESG aspirations and to respond to and address the changing demands of sustainability. Therefore, the following can be proposed:

Hypothesis: There is a positive relationship between organizational agility and firm ESG performance

Theoretical Model

Based on Dynamic Capabilities Perspective the theoretical model is drawn below.

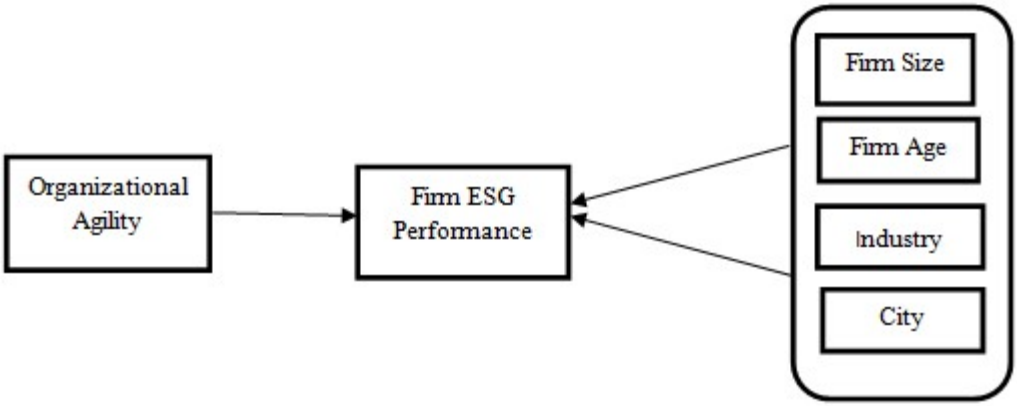

Figure 1: Theoretical Framework

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ResearchMethodology

Data Collection and Sample

Data is collected from 300 firm managers of eight cities of Pakistan. Data is collected from small and medium sized firms. Survey method is used to collect data. The cities include Lahore, Karachi, Islamabad, Rawalpindi, Faisalabad, Multan, Peshawar, and Quetta from all the four provinces of Pakistan. 550 questionnaires were distributed and 300 were returned in usable condition to further draw statistical analysis. The firms are chosen from the industries of IT, Manufacturing, Textiles, Electronics, and Automobile. The research sample is mainly derived from the cross-sectional data of firm managers.

Table 1: Firm Characteristics

Variable	Categories	Counts (n)	Percent (%)
Firm Size	1 = ≤20 2 = 21-249 3 = 250-300	104, 164, 32	34.66, 54.67, 10.67
Firm Age	1 = ≤5 years2 = 6–10 years3 = 11–14 years4 = ≥15 years	65, 111, 81, 43	21.67, 37.00, 27.00, 14.33
Industry	Information Technology, Manufacturing, Textile, Electronics, Automobiles	97, 64, 51, 56, 32	32.33, 21.33, 17.00, 18.67, 10.67
City	Lahore, Islamabad, Faisalabad, Karachi, Rawalpindi, Multan, Peshawar, Quetta	72, 48, 31, 35, 28, 28, 33, 25	24.00, 16.00, 10.33, 11.67, 9.33, 9.33, 11.00, 8.33

Scale Development

We used Liker five-point scale to measure our variables organizational agility and firm ESG performance. To enhance the validity of results the questionnaire is translated from English to Urdu (local language) and then back translated to English. The scale for independent variable is adapted from(Ahmed et al., 2022). While the scale for dependent variable is adapted by (Wang & Esperança, 2023). There are several control variables taken into consideration for this study e.g. firm size, firm age, industry and city. Firm size for this study is <20 to 300. Firm size categories were based on established SME criteria (*SMEDA, 2018*, n.d.).According to the legal regulations in the survey area, most industries define SMEs as firms with fewer than 300 employees.The criteria for firm age are considered from ≤5 years to ≥15 years. The other important control variables are city and industry, as the tendency of agility and firm ESG varies based on these variables. These control variables are given in detail in Table 1 above.

Descriptive Statistics and Correlation

The Table 2 shows the descriptive statistics and correlation of all variables including Organizational agility (OA) and ESG performance and all control variables. The findings indicate that all variables have significant mean and less than 1 standard deviation according to threshold. The correlation between organizational agility and ESG performance is highly significant confirming the bivariate relationship and directs to check

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SEM test of the hypothesized path. The control variables have moderate level correlation with OA and ESG performance.

Table 2: Descriptive Statistics and Correlation

Variable	Mean	SD	(OA)	(ESG)	(Gender)	(Age)	(Edu)	(Marital)	(Desig.)	(City)	(Exp.)	(Income)	(FirmAge)	(FirmSize)	(Industry)
OA	3.51	0.57	1***												
ESG	3.23	0.62	0.26***	1***											
Gender	1.38	0.49	-0.07	0.02	1***										
Age	2.72	1.02	0.05	0.05	0.06	1***									
Education	3.04	0.69	-0.04	0.06	0.10	0.02	1***								
MaritalStatus	1.60	0.49	0.01	-0.02	0.11	0.00	0.09	1***							
Designation	1.76	0.90	0.08	0.00	0.00	-0.06	-0.07	0.06	1***						
City	3.35	2.19	-0.10	-0.08	-0.06	0.10	0.06	0.04	-0.05	1***					
Experience	1.73	0.93	-0.01	0.05	0.04	-0.09	0.07	0.01	0.09	0.06	1***				
Income	2.23	1.22	-0.03	0.04	-0.05	-0.05	0.10	-0.17**	-0.04	0.00	0.08	1***			
FirmAge	2.34	1.04	0.04	0.00	-0.01	0.13*	0.08	0.08	0.06	0.03	0.05	-0.02	1***		
FirmSize	1.86	0.68	0.18**	0.09	0.11	-0.05	-0.07	0.02	0.02	-0.01	0.05	-0.03	-0.03	1***	
Industry	2.49	1.30	0.06	-0.02	-0.04	0.01	0.02	-0.04	0.06	0.09	0.05	0.06	0.06	-0.09	1***

Reliability and Validity Analysis

The reliability analysis of all constructs is tested through Cronbach's alpha (Ten Berge, 1995)that includes independent and dependent variables. Table 3 shows that all variables are significantly higher than the acceptable threshold of Cronbach's alpha which is 0.60. All constructs have values of Cronbach's alpha ranging from 0.823 to 0.856 which indicates the good internal consistency. It introduces that items reliably reflect each construct. The KMO test shows 0.89 and Bartlett's test have 659.84, determine the significant values for explanatory factor analysis (EFA). The study also examines the convergent and discriminant validity to confirm the reliability and validity of the measurement model. In Confirmatory factor analysis (CFA), the factor loading rang is also reliable from 0.683 to 0.795, determines the stability and significancy, as shown in Table 3. The CFA model fit across the indices confirmed an excellent model fit. These valuable insights suggest that the hypothesized latent structure accurately and constantly represents the underlying data.

The results of Composite Reliability (CR) and Average Variance Extracted (AVE) verified the validity such as CR values variates from 0.826 to 0.856 and AVE values exceeding 0.50 for all constructs that indicate adequate convergent validity(Fornell & Larcker, 1981), as shown in Table 3. The square root AVE of OA is 0.547 that is acceptable for threshold while ESG has 0.465 value which is slightly below the threshold but the values between 0.4 to 0.5 remains acceptable in social science research if the reliability indicators are strong (Jr. & Rolph E. Anderson, 2019).

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Table 3: Convergent and Discriminant Validity

Item	Construct	Factor Loading	Cronbach's Alpha	CR	AVE	√AVE
OA1	OA	0.694	0.856	0.857	0.500	0.547
OA2	OA	0.683	0.856	0.857	0.500	0.547
OA3	OA	0.742	0.856	0.857	0.500	0.547
OA4	OA	0.722	0.856	0.857	0.500	0.547
OA5	OA	0.685	0.856	0.857	0.500	0.547
OA6	OA	0.709	0.856	0.857	0.500	0.547
ESG1	ESG	0.717	0.823	0.826	0.544	0.465
ESG2	ESG	0.713	0.823	0.826	0.544	0.465
ESG3	ESG	0.711	0.823	0.826	0.544	0.465
ESG4	ESG	0.795	0.823	0.826	0.544	0.465

Common Method Variance

The Harman's single-factor analysis is performed to test the common method variance analysis. The common method bias, reveals the general factor to accounts all common variance(Podsakoff et al., 2003). In this study, the results confirmed that the first factor accounted for 40% of the total variance, below the 50% acceptable threshold that somehow create the significant common method bias in the factor. It is suggesting that CMV has no severe problem as it has no dominant single factor. It shows that there is no harm in the validity of the constructs through common method variance. The CFA model has poor fit, also confirming that common method variance does not threaten the validity of insights.

Structural Equation Modeling (SEM)

The SEM test is performed to confirm the direct effect and complex relationship among different variables. This structural model is including Organizational Agility (OA) and ESG performance to conduct the outstanding fit of direct effect, proving that the typical theoretical relationships are encouraged by the data. Table 4 is showing that each construct of organizational agility and ESG performance has significant p-value (<0.001) and R^2 values. The direct effect of organizational agility and ESG performance have $\beta = 0.314$, significant p-value and R^2 value is 0.091 that appears small but indicates that organizational agility is not only factor that rely on ESG performance(Jr. & Rolph E. Anderson, 2019). This insight shows that many other factors such as stakeholder, regulatory, supply chain, and market pressure also add value in ESG performance and organizational agility plays a minor role in this.

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Table 4: SEM Analysis

Construct / Variable	Indicator	Factor Loading (Std.all)	Estimate	Std.Err	z-value	P-value	R^2
Organizational Agility (OA)	OA1	0.694	1.000	0.040	12.894	<0.001	0.482
	OA2	0.683	0.966	0.091	10.601	<0.001	0.466
	OA3	0.742	1.113	0.112	9.899	<0.001	0.551
	OA4	0.722	1.046	0.083	12.628	<0.001	0.521
	OA5	0.685	0.981	0.092	10.624	<0.001	0.470
	OA6	0.709	1.010	0.092	10.967	<0.001	0.503
ESG Performance (ESG)	ESG1	0.717	1.000	0.041	13.119	<0.001	0.514
	ESG2	0.713	0.998	0.086	11.658	<0.001	0.509
	ESG3	0.711	0.982	0.100	9.857	<0.001	0.506
	ESG4	0.795	1.195	0.110	10.853	<0.001	0.632
Direct Effect	ESG ~ OA	-	0.314	0.076	4.130	<0.001	0.091

Regression Analysis

The results of regressions with control variable display that the Firm Size has positive influence over Organizational Agility ($\beta = 0.154$, $p = 0.001$) as shown in Table 5. In contrast, Firm Age, and Industry are non-significant predictors. It interprets that firm's size including medium firms has greater resource bases that ultimately promote higher agility levels as compare to other control variables.

Table 5: Regression Analysis

Dependent Variable	Independent Variable	Estimate	Std. Error	t value	P-value
ESG	Intercept	3.096	0.152	20.371	<0.001
	Firm Age	0.004	0.035	0.105	0.916
	Firm Size	0.077	0.053	1.463	0.144
	Industry	-0.005	0.028	-0.180	0.858
OA	Intercept	3.089	0.138	22.358	<0.001

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Firm Age	0.020	0.031	0.642	0.521
Firm Size	0.154	0.048	3.223	0.001
Industry	0.034	0.025	1.334	0.183

Discussion

This research provides meaningful insights regarding the relationship between organizational agility and ESG performance in firms. The overall results indicate that organizational agility has significant positive influence on ESG performance, determining the fact that firms with higher organizational agility have better sustainability practices. This concept confirms the dynamic capability theory, which evaluate that firms with flexible structure and quick response strategies are appropriate to adapt the stakeholder expectations and sustainable environment (Teece, 2007c). This study shows the importance of ESG as the strategic imperative as compare to any voluntary reporting exercise. In this rivalry environment, organizations are directed to generate transparency, accountability, sustainability across all environmental, social, and governance sectors. Many other firms are working on ESG performance to establish compliance or firm's regulatory rather than to identify that organizational agility is the core drive of ESG performance. This research confirms that organizational agility has empirical meaningful relationship with environmental, social, and governance sectors.

The study examines the significant relationship among organizational agility and ESG performance by various robust analyses. The descriptive statistics and correlation show the strong and significant correlation between OA and ESG. The reliability analysis supports the internal consistency by maintaining the threshold of Cronbach's alpha. The CFA has excellent model fit indices among organizational agility and ESG performance. The convergent and discriminant validity shows that all factor loadings are exceeding the normal threshold which indicating the strong convergence between observed measurements and their latent variables. The composite reliability (CR) and AVE further confirm the robustness of all constructs, as OA and ESG both are surpassing the normal threshold of 0.80 reliability benchmark. It shows the strong reliability and internal validity(Fornell & Larcker, 1981). The square root AVE of OA is significant and acceptable for threshold while ESG has slightly low range that is below the threshold but the slightly low values remain acceptable in social science research if the reliability indicators are strong(Jr. & Rolph E. Anderson, 2019). The Harman's single factor analysis of this study shows there is no threat of common method bias, as the poor model also confirms that there is no harm in the validity of common method variance. The structural equation modeling (SEM) determines that each construct of organizational agility and ESG performance has significant p-value (<0.001) and R^2 values. The direct effect of organizational agility and ESG performance have significant β, p-value but R^2 value is small, indicates that organizational agility is not only factor that rely on ESG performance(Jr. & Rolph E. Anderson, 2019). This insight shows that many other factors such as stakeholder, regulatory, supply chain, and market pressure also add value in ESG performance and organizational agility plays a minor role in this.

This research promotes that organizational agility is the core driver to facilitate cross-functional communication, collaborative decision making, and sustainability. These factors are supportive for ESG

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advancements, specifically for social responsibilities and environmental sustainability(Eisenhardt & Martin, 2000b). Organizational agility enhances growth opportunity in firm's internalize ESG rather than to become the part of regulatory compliance. In recent literature studies, the organizational agility promotes strategic flexibility by improving firm's ability towards market uncertainty and to adapt stability. Thus, organizational agility improves the decision-making structures, as they allow teams to implement sustainability measures for project achievement. This framework enhances the ESG performance in firms. The recent literature(Tallon & Pinsonneault, 2011)argued that agility firms transfer information into faster decision-making actions that enable data driven to meet sustainability mechanism. In these terms, agility enhances the quick digital integration, cross-functional integration, and robust analytics that boost the standards of ESG performance.

The firms that adopt agility, also enhance ESG performance through innovation pathways. The organizations that allow agility practices, invest into innovative technologies, digital learning, integration, energy-efficient processes, and competitive advantage. Furthermore, organization agility also brings resilience in firms. During uncertain environment challenges such as market uncertainty, regulatory shifts, and climate problems, agility allows firms to overcome risk and sustain ESG performance under any economic challenges. This is necessary for those firms that operate in volatile or emerging markets where uncertainty is a core driver and constant. Thus, organizational agility is the strategic framework for ESG performance capability instead of particular corporate narrative. The firms should enhance their sustainability performance and innovation through agility rather than to allow it only for compliance-based perspective.

Conclusion

This study provides valuable insights by the interactions between organizational agility (OA) and environmental, social, and governance (ESG) performance.Additionally, the study highlights the vital role of organizational agility in driving ESG performance, particularly in enhancing operational efficiency, stakeholder engagement, and sustainability. Findings of the study reveal a positive link between organizational agility and firm ESG performance, also agility work as a critical dynamic capability for SMEs. Interpreted through dynamic capability theory, agility improves a firm's capacity to recognize new sustainability requirements, take advantage of ESG-related opportunities, and reorganize procedures to fulfil environmental, social, and governance goals. Agility offers a workable way to incorporate ESG priorities without requiring significant investments for SMEs, which frequently have limited resources. SMEs are better able to identify market trends, stakeholder concerns, and regulatory changes, thanks to trivial digital tools, simplified decision-making, and cross-functional coordination. These agile routines assist SMEs in allocating resources to ethical practices like transparent governance, employee welfare, and energy efficiency. Additionally, the ability to modify internal processes allows SMEs to continuously improve operations in accordance with ESG objectives. Overall, the results indicate that SMEs' sustainability performance and long-term competitiveness can be greatly enhanced by building agility-oriented capabilities.

Limitations and Future Research

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Data for this study was collected from a diverse range of industries, including Information Technology, Manufacturing, Textile, Electronics, and Automobiles, across major cities in Pakistan. This broad coverage adds depth to the findings but also presents limitations in terms of context-specific control variables. Future research should consider examining these relationships in different sectors and geographic regions to enhance the generalizability of the results. This study is derived from a cross-sectional data of firm managers in future a multigroup analysis (MGA) can be performed on two different samples to see a true picture of ESG implementation among them. Moreover, exploring additional moderating and mediating variables such as leadership support, organizational culture, external pressures, and digital capabilitiescould provide further insights into the conditions under which digital transformation influences sustainability. Policymakers and organizational leaders should focus on fostering knowledge integration and digital literacy to effectively navigate the challenges and opportunities in ESG research.

In this study, the scale adopted is an established one, used in (Wang & Esperança, 2023) on ESG and the items were used to reflect the ESG performance in an aggregate manner. Future studies can help to disaggregate ESG in three dimensions; environmental, social and governance to get finer effects. Although, common method variance is implied by the one factor test conducted by Harman, it is not very serious. Future research should recommend the use of objective ESG indicators or multi-respondents design of the survey data. The current research is founded on cross-sectional data that is restricting the causal conclusion. The future studies that use longitudinal designs would be able to present more evidence on the time sequence between organizational agility and ESG performance.

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ISSN 2076-9202

RECEIVING SALARY AND INCENTIVES: ESSENTIAL IN LEADING TO PROGRESSION OF ALL MEMBERS WITHIN ALL EMPLOYMENT SETTINGS

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Abstract

Within all types of organizations and employment settings, individuals, belonging to all job positions in the hierarchy have one of the primary goals of receiving salary and incentives. For this purpose, they need to put into operation various types of job duties and responsibilities in a well-ordered manner. Furthermore, possession of information in terms of different types of methodologies and procedures is essential. In addition, they need to lead to up-gradation of different types of skills and abilities. Furthermore, inculcation of traits of morality, ethics, diligence and conscientiousness is regarded to be of utmost significance. These are the traits, which are facilitating in doing well in various types of job duties and responsibilities, achieving desired goals and objectives and meeting the expectations of individuals in leadership positions. The members, belonging to all job positions in the hierarchy are required to work hard in getting an increase in salary. Furthermore, they will get various types of incentives, which are facilitating in leading to an increase in motivation levels among them. As a consequence, members will incur the feeling of job satisfaction. Therefore, it is understood on a comprehensive basis that receiving salary and incentives is essential in leading to progression of all members within all employment settings. The main concepts that are taken into account in this research paper are, understanding the importance of salary and incentives, measures to be put into operation in receiving salary and incentives and advantages of experiencing an increase in salary and receiving incentives.

Keywords: *Abilities, Incentives, Individuals, Job Duties, Methodologies, Organizations, Salary, Skills*

Introduction

The organizations are of various types, i.e. educational institutions of all levels, training centres, financial institutions, services organizations, production and manufacturing organizations, non-government organizations, agencies and so forth. In all types of organizations, the individuals are different from each other in terms of their job duties and responsibilities. The individuals, belonging to all job positions have one of the major goals of earning salary and incentives, i.e. paid leaves, paid vacations, rewards, trophies, promotional opportunities, additional job duties and responsibilities, increase in pay and so forth (Chapter II, n.d.). In order to earn salary and incentives, individuals, belonging to all job positions need to be

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well-equipped in terms of their job duties and responsibilities. These are complicated and manageable, these are implemented on an individual basis or through working in teams, comprising of two or more members. Hence, possession of information in terms of these is facilitating in meeting the expectations of individuals in leadership positions. Therefore, individuals will be able to receive salary and incentives, when they are generating information in terms of various types of job duties and responsibilities.

In doing well in different types of job duties and responsibilities, putting into operation different types of methodologies and procedures is regarded to be of utmost significance. These are the ways, which are approving in doing well in all types of job duties and responsibilities, achieving desired goals and objectives and meeting the expectations of leaders. Hence, throughout the jobs of individuals, belonging to all job positions need to augment information in terms of various types of methodologies and procedures. In cases of different types of methodologies and procedures, individuals need to acquire an efficient understanding of the concepts. Furthermore, one needs to get engaged in regular practice. This is facilitating in augmenting information in terms of various types of methodologies and procedures. In addition, individuals will be able to hone confidence levels and overcome the feelings of apprehensiveness and vulnerability (Boyer, Edmondson, Artis, & Fleming, 2014). This is facilitating in meeting the expectations of individuals in leadership positions and receiving salary and various types of incentives. Therefore, one is able to receive salary and incentives, when information is generated in terms of various types of methodologies and procedures.

Understanding the Importance of Salary and Incentives

With advancements taking place and with the advent of modernization and globalization, individuals, belonging to all job positions in the hierarchy are to make use of various types of modern, scientific and innovative methods and materials. The various types of these methods and materials are, utilization of various types of tools, devices, apparatus, machinery, equipment and gear. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. This is facilitating in augmenting information in terms of various types of these methods and materials. In addition, individuals will be able to hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. This is facilitating in meeting the expectations of individuals in leadership positions and receiving salary and various types of incentives.

One of the major benefits of these methods and materials is, individuals will be able to carry out different types of job duties and responsibilities in an effective manner. Furthermore, these may get completed in less amount of time or can be more time-consuming. Hence, it is understood on a comprehensive basis that possession of adequate information in terms of various types of these methods and materials is facilitating in achieving various types of organizational goals, promoting enhancement of organizational culture and leading to up-gradation of overall structure of organizations. Furthermore, individuals will be able to render an important contribution in incurring the feeling of job satisfaction. Therefore, individuals are able to acquire an efficient understanding of importance of salary and incentives, when information is generated in terms of various types of modern, scientific and innovative methods and materials.

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The individuals, belonging to all job positions in all types of organizations usually possess information in terms of various types of job duties and responsibilities. Furthermore, they need to augment information in terms of traits of efficiency, honesty and truthfulness. The possession of information in terms of these traits by individuals is from the stage of early childhood. The family members and educators in educational institutions of all levels are the first and foremost individuals, who are imparting information in terms of these traits. These are the traits, which are facilitating in carrying out all types of job duties and responsibilities in a satisfactory manner; meeting the expectations of individuals in leadership positions; achieving various types of organizational goals; promoting enhancement of organizational culture and leading to up-gradation of overall structure of organizations. Hence, it is understood on a comprehensive basis that individuals, belonging to all job positions need to acknowledge and implement these traits on regular basis. This is regarded to be of utmost significance in incurring the feeling of job satisfaction and retaining one's jobs.

As a consequence of acknowledging and implementing these traits, individuals will render an important contribution in meeting the expectations of individuals in leadership positions. Furthermore, they will render an important contribution in promoting enhancement of career prospects. Hence, throughout their jobs, members, belonging to all job positions in the hierarchy need to be well-informed in terms of these traits. These are facilitating in meeting the expectations of individuals in leadership positions and receiving salary and various types of incentives. Therefore, one is able to acquire an understanding of importance of salary and incentives, when information is generated in terms of traits of efficiency, honesty and truthfulness.

Within various types of organizations, there are organization of seminars and workshops. The individuals in leadership positions are vested with the authority and responsibility of organizing seminars and workshops. These are organized for one day, two days, one week, two weeks or a month. When they form the viewpoint that individuals need to be imparted information in terms of various types of subjects and concepts, they organize seminars and workshops related to that subject and concept. Furthermore, the individuals need to augment information in terms of various factors, i.e. dates, timings, venue, location, program, prospectus and refreshments. The individuals in leadership positions and other job positions are invited from other organizations. They give presentations and deliver speeches in terms of the subjects and concepts. Furthermore, individuals are also provided with the opportunities to give presentations and deliver speeches. In this manner, they are contributing in leading to up-gradation of presentation and public-speaking skills. Hence, participation in seminars and workshops are enriching on a comprehensive basis.

When the individuals are participating in seminars and workshops, they are able to please the individuals in leadership positions. One of the major benefits is, individuals will be able to hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. Furthermore, they are able to augment information in terms of various types of pioneering methods and materials. Hence, individuals will be able to augment their information and understanding in terms of various factors. As a consequence, individuals will be well-prepared in terms of ways of meeting the expectations of individuals in leadership positions and receiving salary and various types of incentives. Therefore, an understanding of importance of salary and incentives is acquired, when individuals are organizing and participating in seminars and

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workshops.

Measures to be put into operation in Receiving Salary and Incentives

In all types of organizations, individuals, belonging to all job positions need to carry out various types of job duties and responsibilities in a well-ordered and regimented manner. Furthermore, they need to augment information in terms of different types of methodologies and procedures. In addition, individuals will have to focus on leading to up-gradation of different types of competencies and abilities. Furthermore, it is of utmost significance for all individuals to reinforce the traits of morality, ethics, diligence and conscientiousness. These are regarded as indispensable in carrying out different types of job duties and responsibilities in a satisfactory manner; meeting the expectations of individuals in leadership positions; achieving various types of organizational goals, promoting enhancement of organizational culture and leading to up-gradation of overall structure of organizations. As a consequence, individuals will be well-prepared in terms of ways that are approving in receiving salary and incentives (Building more Effective, Accountable, and Inclusive Institutions for All, 2015).

Individuals, belonging to all job positions need to augment information in terms of measures which are facilitating in receiving salary and incentives. All types of measures are to be put into operation in a well-ordered and regimented manner. Furthermore, positivity needs to be reinforced in all types of measures. One of the important aspects that needs to be taken into account is, all types of measures need to be facilitating in promoting well-being of members and overall structure of the organizations. Therefore, measures to be put into operation in receiving salary and incentives are stated as follows:

Being well-informed regarding Job Duties and Responsibilities

In order to earn salary and incentives, individuals, belonging to all job positions need to be well-equipped in terms of their job duties and responsibilities. These are complicated and manageable, these are implemented on an individual basis or through working in teams, comprising of two or more members. Furthermore, individuals need to augment information in terms of various techniques. These need to be put into operation in an efficacious manner in order to generate desired outcomes. In addition, individuals will have to focus on leading to up-gradation of different types of competencies and abilities. Furthermore, it is of utmost significance for all individuals to reinforce the traits of morality, ethics, diligence and conscientiousness. These are regarded as the key in carrying out all types of job duties and responsibilities in a well-ordered and regimented manner.

The possession of information in terms of essential traits and expertise are regarded as indispensable in carrying out all types of job duties and responsibilities in a satisfactory manner. Hence, possession of information in terms of these is facilitating in meeting the expectations of individuals in leadership positions. Hence, it is understood on a comprehensive basis that individuals will be able to receive salary and incentives, when they are generating information in terms of various types of job duties and responsibilities. Hence, throughout one's jobs, possession of information in terms of these is advantageous to individuals to a major extent. Therefore, being well-informed regarding job duties and responsibilities is considered as one of the indispensable measures to be put into operation in receiving salary and incentives.

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Being well-aware in terms of Methodologies and Procedures

In order to do well in different types of job duties and responsibilities, putting into operation different types of methodologies and procedures is regarded to be of utmost significance. These are the ways, which are approving in doing well in all types of job duties and responsibilities, achieving desired goals and objectives and meeting the expectations of leaders. Hence, throughout the jobs of individuals, belonging to all job positions need to augment information in terms of various types of methodologies and procedures. In cases of different types of methodologies and procedures, individuals need to acquire an efficient understanding of the concepts. Furthermore, one needs to get engaged in regular practice. This is facilitating in augmenting information in terms of various types of methodologies and procedures. In addition, individuals will be able to hone confidence levels and overcome the feelings of apprehensiveness and vulnerability.

The individuals will have to focus on leading to up-gradation of different types of skills and abilities. Furthermore, it is of utmost significance for all individuals to reinforce the traits of reliability, meticulousness and assiduousness. This is facilitating in meeting the expectations of individuals in leadership positions and receiving salary and various types of incentives. Hence, one is able to receive salary and incentives, when information is generated in terms of various types of methodologies and procedures. This is regarded as vital in order to meet the expectations of individuals in leadership positions. Therefore, being well-aware in terms of methodologies and procedures is one of the significant measures to be put into operation in receiving salary and incentives.

Utilizing Pioneering Methods and Materials

With the advent of technologies, individuals, belonging to all job positions in the hierarchy are to make use of various types of pioneering methods and materials. The various types of these methods and materials are, utilization of various types of tools, devices, apparatus, machinery, equipment and gear. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. This is facilitating in augmenting information in terms of various types of these methods and materials. In addition, individuals will be able to hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. This is facilitating in meeting the expectations of individuals in leadership positions and receiving salary and various types of incentives.

One of the major benefits of these methods and materials is, individuals will be able to carry out all types of job duties and responsibilities in an appropriate manner. Furthermore, these may get completed in less amount of time or can be more time-consuming. Hence, it is understood to a major extent that possession of appropriate information in terms of various types of these methods and materials is facilitating in achieving various types of professional goals, promoting enhancement of organizational culture and leading to up-gradation of overall structure of organizations. Furthermore, individuals will be able to render an important contribution in incurring the feeling of job satisfaction and receiving an increase in salary and various types of incentives. Therefore, utilizing pioneering methods and materials is an eminent measure to be put into operation in receiving salary and incentives.

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Reinforcing the Traits of Reliability and Proficiency

The individuals, belonging to all job positions in all types of organizations need to augment information in terms of traits of reliability and proficiency. The possession of information in terms of these traits is generated by individuals from the stage of early childhood. The family members and educators in educational institutions of all levels are the first and foremost individuals, who are imparting information in terms of these traits. These are the traits, which are facilitating in carrying out all types of job duties and responsibilities in a satisfactory manner; meeting the expectations of individuals in leadership positions; achieving various types of professional goals; promoting enhancement of organizational culture and leading to up-gradation of overall structure of organizations. Hence, it is understood on a comprehensive basis that individuals, belonging to all job positions need to acknowledge and implement these traits on regular basis. This is regarded to be of utmost significance in generating desired outcomes, incurring the feeling of job satisfaction and retaining one's jobs.

As a consequence of acknowledging and implementing these traits, individuals will render an important contribution in meeting the expectations of individuals in leadership positions. Furthermore, they will render an important contribution in promoting enhancement of career prospects. Hence, throughout their jobs, all members, belonging to all job positions in the hierarchy need to be well-informed in terms of these traits. These are facilitating in meeting the expectations of individuals in leadership positions and receiving salary and various types of incentives. Therefore, reinforcing the traits of reliability and proficiency is an expedient measure to be put into operation in receiving salary and incentives.

Organizing and Participating in Seminars and Workshops

Within various types of organizations, there are organization of seminars and workshops. The individuals in leadership positions are vested with the authority and responsibility of organizing seminars and workshops. These are organized for one day, two days, one week, two weeks or a month. When they form the viewpoint that individuals need to be imparted information in terms of various types of subjects and concepts, they organize seminars and workshops related to that subject and concept. Furthermore, the individuals need to augment information in terms of various factors, i.e. dates, timings, venue, program, prospectus, invitations and refreshments. The individuals in leadership positions and other job positions are invited from other organizations. They give presentations and deliver speeches in terms of the subjects and concepts. Furthermore, individuals are also provided with the opportunities to give presentations and deliver speeches. In this manner, they are contributing in leading to up-gradation of presentation and public-speaking skills. Hence, participation in seminars and workshops are enriching to a major extent.

When the individuals are participating in seminars and workshops, they are able to please the individuals in leadership positions. One of the major benefits is, individuals will be able to hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. Furthermore, they are able to augment information in terms of various types of pioneering methods and materials. Hence, individuals will be able to augment their information and understanding in terms of various types of subjects and factors. As a consequence, individuals will be well-prepared in terms of ways of meeting the expectations of individuals

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in leadership positions and receiving salary and various types of incentives. Therefore, organizing and participating in seminars and workshops is a renowned measure to be put into operation in receiving salary and incentives.

Providing Solutions to various Problems

Within the course of putting into operation various types of job duties and responsibilities, there are occurrences of problems in terms of various factors, i.e. methodologies, procedures, approaches, techniques, work pressure, unawareness in terms of various factors, lack of implementation of time-management skills, lack of analytical, critical-thinking and problem-solving skills, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities and so forth. The influence of various types of problems is experienced in a major or minor form. The individuals need to provide solutions to these in order to be successful in various types of job duties and responsibilities.

The individuals need to lead to up-gradation of problem-solving skills. These are the skills, which are facilitating in providing solutions to various types of problems. Furthermore, these are to be prevented from giving rise to impediments within the course of generating desired outcomes. Hence, individuals need to cope with these in an effective manner. These are solved on one's own or through obtaining support and assistance from other members. Hence, throughout one's jobs, individuals need to form cordial and amiable terms and relationships with other members. This is regarded as essential in leading to up-gradation of motivation levels towards work. Furthermore, employees will receive an increase in salary and various types of incentives, when they will solve all types of problems. The main reason being, they will carry out different types of job duties and responsibilities in a successful manner. Therefore, providing solutions to various problems is a decisive measure to be put into operation in receiving salary and incentives.

Possessing the Abilities to Work under Stress

It is apparently understood that individuals, belonging to all job positions in the hierarchy get overwhelmed by various types of stressful situations. The different factors in terms of which these are experienced are, job duties, responsibilities, methodologies, procedures, strategies, techniques, work pressure, unawareness in terms of various factors, lack of implementation of time-management skills, lack of analytical, critical-thinking and problem-solving skills, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities, peer issues, health problems, illnesses and so forth. The individuals need to possess the abilities to work under stress. This is a measure, which is facilitating in coping with various types of stressful situations in an adequate manner.

This is the measure, which is facilitating in coping with various types of stressful situations in a satisfactory manner. Furthermore, these are to be prevented from giving rise to impediments within the course of doing well in one's jobs and generating desired outcomes. Hence, individuals need to possess the abilities to work under stress. Furthermore, obtaining support and assistance from other members is regarded crucial in coping with these in an appropriate manner. Hence, throughout one's jobs, individuals need to develop mutual understanding with other members. This is regarded as essential in augmenting of motivation levels towards work. Furthermore, employees will receive an increase in salary and various types

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of incentives, when they will possess the abilities to work under stress. The main reason being, they will promote a normal mind-set. Therefore, possessing the abilities to work under stressis an imperative measure to be put into operation in receiving salary and incentives.

Augmenting Skills and Abilities

In all types of organizations and employment settings, individuals, belonging to all job positions need to lead to up-gradation of different types of skills and abilities. The various types of skills are, communication skills, decision-making skills, critical-thinking skills, problem-solving skills, analytical skills, technical skills, creative skills, personal skills, professional skills, presentation skills, leadership skills, negotiation skills, artistic skills, public-speaking skills, educational skills and intellectual skills. On the other hand, abilities which need to be honed are, convincing, persuading, planning, organizing, directing, controlling, co-ordinating, emotional intelligence, systems thinking, putting in efforts to one's best abilities, possessing the abilities to work under stress, coping with various types of dilemmas and challenging situations in an appropriate manner and carrying out all types of job duties and responsibilities in an adequate manner. Hence, leading to up-gradation of various types of skills and abilities is essential throughout the jobs of all members.

As a consequence of leading to up-gradation of different types of skills and abilities, individuals, belonging to all job positions will contribute in carrying out various types of job duties and responsibilities in an effective manner, achieving desired goals and objectives and meeting the expectations of individuals in leadership positions. As a consequence, there will be an increase in salary and individuals will receive various types of incentives. Therefore, augmenting skills and abilities is a notable measure to be put into operation in receiving salary and incentives.

Developing Mutual Understanding with others

Throughout one's jobs, development of mutual understanding with others is regarded to be of utmost significance. This is with superiors, subordinates and colleagues. For this purpose, the individuals need to be well-informed in terms of communication ethics, i.e. making use of polite language and decent words; treating others with respect and courtesy; making provision of factual information; building trust and understanding; reinforcing the traits of efficiency, honesty and truthfulness; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude. Throughout one's jobs, individuals need to acknowledge and implement these factors. As a consequence, within workplaces, individuals will render an important contribution in forming an effective social circle (Basis for Cultural Education, 2017).

As a consequence, members will obtain support and assistance from other members in overcoming various types of setbacks. Hence, individuals need to develop mutual understanding with other members in leading to up-gradation of concentration levels towards putting into operation various types of job duties and responsibilities. This is regarded as essential in leading to up-gradation of motivation levels towards work. Furthermore, employees will receive an increase in salary and various types of incentives, when they will develop mutual understanding with other members. The main reason being, they will carry out different

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types of job duties and responsibilities in a successful manner. Therefore, developing mutual understanding with othersis a noteworthy measure to be put into operation in receiving salary and incentives.

Generating Information regarding various Factors

Individuals, belonging to all job positions, throughout their jobs need to generate information regarding various factors, i.e. implementing effective communication processes; honing analytical and critical-thinking skills; making wise and productive decisions in terms of various factors; inculcating the traits of morality and ethics; implementing the traits of diligence, resourcefulness and conscientiousness; reinforcing the traits of efficiency, honesty and truthfulness; being well-informed regarding job duties and responsibilities; being well-aware in terms of different types of methodologies and procedures; utilizing various types of pioneering methods and materials; providing solutions to various types of problems; forming cordial and amiable terms and relationships with other members; augmenting different types of skills and abilities; augmenting motivation and concentration levels towards work and carrying out all types of job duties and responsibilities in a satisfactory manner.

The individuals generate information in terms of all these factors on their own or through communicating with other members. Furthermore, work experience is regarded as crucial in augmenting information in terms of these in an appropriate manner. The acknowledgement and implementation of all these factors is facilitating in carrying out various types of job duties and responsibilities in a satisfactory manner, achieving desired goals and objectives and meeting the expectations of individuals in leadership positions. As a consequence, there will be an increase in salary and individuals will receive various types of incentives. Therefore, generating information regarding various factors is a useful measure to be put into operation in receiving salary and incentives.

Advantages of Experiencing an Increase in Salary and Receiving Incentives

In all types of organizations, the individuals are different from each other in terms of their job duties and responsibilities. The individuals, belonging to all job positions have one of the major goals of earning salary and incentives. This in some cases is manageable, whereas, in other cases, this is complicated. Hence, individuals need to be well-prepared in terms of various factors in doing well in their works and receiving salary and incentives. In order to earn salary and incentives, individuals, belonging to all job positions need to be well-equipped in terms of their job duties and responsibilities. These are complicated and manageable, these are implemented on an individual basis or through working in teams, comprising of two or more members. Hence, possession of information in terms of these is facilitating in meeting the expectations of individuals in leadership positions. Hence, individuals will be able to receive salary and incentives, when they are generating information in terms of various types of job duties and responsibilities (Burns, Heywood, Taylor, Wilde, & Wilson, 2004).

One of the important aspects that needs to be taken into account is, individuals need to possess clarity of mind-sets. Furthermore, they need to implement the traits of morality, ethics, diligence and conscientiousness. In addition, leading to up-gradation of different types of skills and abilities is facilitating in generating desired outcomes. These are essential in doing well in various types of job duties and

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responsibilities, achieving desired goals and meeting the expectations of individuals in leadership positions. As a consequence, individuals will receive salary and incentives. This is considered to be advantageous on a comprehensive basis. Therefore, advantages of experiencing an increase in salary and receiving incentives are stated as follows:

1. Implementing effective communication processes.
2. Leading to up-gradation of analytical and critical-thinking skills.
3. Making wise and productive decisions in terms of various factors.
4. Inculcating the traits of morality and ethics.
5. Implementing the traits of diligence, resourcefulness and conscientiousness.
6. Reinforcing the traits of efficiency, honesty and truthfulness.
7. Being well-informed regarding various types of job duties and responsibilities.
8. Being well-aware in terms of different types of methodologies and procedures.
9. Utilizing various types of pioneering methods and materials.
10. Providing solutions to various types of problems.
11. Possessing the abilities to work under stress.
12. Forming cordial and amiable terms and relationships with other members.
13. Augmenting different types of skills and abilities.
14. Augmenting motivation and concentration levels towards work.
15. Meeting expectations of individuals in leadership positions.
16. Promoting community well-being.
17. Promoting enhancement of organizational culture.
18. Leading to up-gradation of overall structure of the organizations.
19. Incurring the feeling of job satisfaction and retaining one's jobs.
20. Leading to up-gradation of overall personality traits and standards of living.

Conclusion

Different incentives are, paid leaves, paid vacations, rewards, trophies, promotional opportunities, additional job duties and responsibilities, increase in pay and so forth. Measures to be put into operation in receiving salary and incentives are, being well-informed regarding job duties and responsibilities, being well-aware in terms of methodologies and procedures, utilizing pioneering methods and materials, reinforcing the traits of reliability and proficiency, organizing and participating in seminars and workshops, providing solutions to various problems, possessing the abilities to work under stress, augmenting skills and abilities, developing mutual understanding with others and generating information regarding various factors. Furthermore, one needs to be aware of advantages of experiencing an increase in salary and receiving incentives. Finally, it can be stated, receiving salary and incentives is facilitating in promoting enhancement of career prospects of all members.

ISSN 2076-9202

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ISSN 2076-9202

A FRAMEWORK FOR APPLYING BEHAVIOURAL ECONOMICS TO ENVIRONMENTAL POLICY: ENCOURAGING FIRMS TO ADOPT PRO-ENVIRONMENTAL PRACTICES

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ABSTRACT:
Behavioural economics provides critical insights into human decision-making that can enhance environmental policy, especially in encouraging firms to adopt pro-environmental practices. While traditional economic tools like taxes, subsidies, and regulations have been widely used to promote sustainability, they often overlook the psychological, cognitive, and social factors that influence firm behaviour. This paper proposes a framework for integrating behavioural economics into environmental policy to address these challenges. The framework is built around three core principles: understanding and overcoming cognitive biases, leveraging social norms, and promoting long-term commitment. It focuses on how behavioural tools such as nudges, default options, social influence, and goal setting can be applied to encourage firms to engage in environmentally responsible practices. Through this approach, the framework aims to make sustainability more appealing and achievable for firms by reshaping decision-making processes at both the individual and organizational levels. The paper concludes with recommendations for policy implementation and further research to refine the behavioural interventions for enhanced corporate sustainability.

Keywords: *Behavioural Economics; Environmental Policy*

1.0 INTRODUCTION

The urgency of addressing environmental degradation requires a multifaceted approach, especially as industries play a significant role in shaping environmental outcomes. While governments often use traditional regulatory tools to push for corporate sustainability, behavioural economics can offer a fresh perspective by accounting for the psychological and social factors influencing decision-making within firms. These factors often hinder the adoption of pro-environmental practices, even when they could lead to long-term cost savings and environmental benefits. The behavioural economics framework recognizes that firms are not always rational actors, but are influenced by biases, habits, and social dynamics that affect their choices.The primary objective of this paper is to develop a framework for applying behavioural economics to encourage firms to adopt pro-environmental practices.

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2.0 LITERATURE REVIEW

2.1.1 Traditional Economic Tools and Their Limitations

Traditional economic policy tools, such as carbon taxes, cap-and-trade systems, and subsidies for green technologies, have shown mixed results in encouraging businesses to adopt pro-environmental practices. While these mechanisms provide financial incentives or penalties, they often assume that firms make decisions based solely on economic calculations of costs and benefits. However, research in behavioural economics indicates that firms' decisions are influenced by cognitive biases, such as present bias (emphasizing short-term gains over long-term sustainability), loss aversion (fear of upfront costs), and status quo bias (preference for maintaining current practices). These biases can prevent firms from pursuing green alternatives even when they are financially beneficial in the long run.

2.1.2 Behavioural Economics and Firm Decision-Making

Behavioural economics emphasizes that individuals and organizations often make decisions based on heuristics and social influences rather than rational economic calculations. For example, firms may resist adopting energy-efficient technologies because of upfront costs, even though they would save money over time. Additionally, firms may fail to adopt sustainable practices because they underestimate long-term benefits or because their peers are not engaging in similar actions. Behavioural interventions aim to address these challenges by influencing decision-making through subtle changes in the decision-making environment, nudging firms toward better environmental outcomes without requiring heavy-handed regulations.

2.1.3 Nudging and Behavioural Interventions

Several behavioural economics tools have been proposed to encourage firms to adopt pro-environmental practices. These include:

- **Nudging**: Providing firms with environmentally friendly choices as the default option (e.g., automatically opting into green energy programs) or framing choices in a way that highlights environmental benefits (e.g., showing the savings or environmental impact reductions).
- **Social Norms**: Leveraging the power of social comparison and peer influence, firms can be motivated to adopt sustainable practices if they observe others in their industry doing the same.
- **Commitment Devices**: Encouraging firms to set specific environmental goals and publicly commit to them can help overcome procrastination and build accountability, thus fostering long-term sustainability.

2.1.4 Challenges in Applying Behavioural Economics to Environmental Policy

- **Mistrust of Behavioural Tools**: Some firms may view behavioural interventions, such as nudging, as manipulative or insufficient compared to more direct economic or regulatory measures. There may be resistance to interventions that seem to undermine firms' autonomy in decision-making.

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- **Effectiveness of Nudges**: The effectiveness of nudges and other behavioural interventions can vary depending on the industry, firm size, and corporate culture. What works for large corporations may not be as effective for small and medium-sized enterprises (SMEs), which may have fewer resources and more pressing short-term concerns.
- **Balancing Behavioural Interventions with Regulation**: Behavioural tools should complement, not replace, traditional regulatory measures. A hybrid approach that combines behavioural nudges with market-based incentives and strong regulatory frameworks is likely to be more effective than relying on one approach alone.
- **Monitoring and Accountability**: Tracking the effectiveness of behavioural interventions can be challenging. Policymakers need robust systems for monitoring firms' environmental practices to ensure that interventions lead to meaningful and sustained change.

3.0 POLICY RECOMMENDATIONS

(i) Policymakers should incorporate behavioural insights into environmental regulations, using nudges to encourage firms to adopt pro-environmental practices without the need for extensive regulatory mandates. For example, offering default green options for firms (such as energy-efficient equipment or sustainable supply chains) could nudge businesses toward more sustainable behaviours.

(ii) Establishing industry-wide sustainability norms and recognizing leading firms through public recognition programs or certifications can create social pressures that encourage other firms to adopt similar practices.

(iii) Firms should be incentivized to set public sustainability goals and track their progress, fostering a sense of accountability. Commitment devices, such as pledges or voluntary agreements with regulatory bodies, can enhance firms' commitment to sustainability.

(iv) To overcome the cognitive bias of loss aversion, governments should offer financial incentives, such as subsidies, grants, or tax credits, to firms that invest in green technologies and sustainable practices.

(v) Policymakers should monitor the effectiveness of behavioural interventions through regular data collection and feedback mechanisms. This will ensure that interventions are working as intended and allow for adjustments as necessary.

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3.1.1 Framework for Applying Behavioural Economics to Environmental Policy

The framework is structured around three core principles: cognitive biases, social norms, and long-term commitment. Each of these principles can be integrated into existing environmental policy tools to foster pro-environmental behaviour in firms.

(i) Overcoming Cognitive Biases:

- **Present Bias and Loss Aversion**: Firms may delay environmental actions due to the perceived high upfront costs, even if the long-term benefits outweigh these costs. Behavioural economics suggests that framing these investments in terms of long-term savings (e.g., energy cost reductions) or minimizing the "pain" of initial costs through incentives (e.g., rebates, tax credits) can overcome resistance.
- **Default Options**: Making environmentally friendly practices the default option for firms can help bypass cognitive biases. For example, an automatic opt-in to renewable energy sources or energy-efficient technologies can increase the likelihood that firms adopt these practices without needing to actively decide.

(ii) Leveraging Social Norms:

- **Industry Norms**: Creating industry-specific sustainability benchmarks or certification programs can influence firms to conform to pro-environmental practices. Social norms can be powerful motivators, as firms tend to follow the practices of leading organizations within their industry. Policies that publicly recognize and reward firms for adopting green practices can amplify this effect.

- **Peer Pressure and Competition**: Firms that see competitors taking steps to adopt sustainable practices may feel compelled to do the same to maintain their reputation or competitive edge. Policymakers can harness this dynamic by creating public sustainability indices or reports that showcase which companies are leading in terms of environmental responsibility.

(iii) Promoting Long-Term Commitment:

- **Goal Setting and Commitment Devices**: Encouraging firms to set specific sustainability targets (e.g., reducing carbon emissions by a set percentage over five years) and publicly commit to them can enhance accountability. Public pledges, coupled with regular reporting on progress, can help firms maintain focus on their long-term environmental goals.

- **Public and Private Partnerships**: Encouraging firms to enter into partnerships or sign sustainability agreements with governments or NGOs can help reinforce their commitment. These partnerships may include environmental goals and mutual accountability for achieving them.

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4.0 CONCLUSION

Integrating behavioural economics into environmental policy offers a powerful way to overcome the psychological and social barriers that prevent firms from adopting pro-environmental practices. By understanding how cognitive biases, social norms, and long-term commitment influence corporate decision-making, policymakers can design more effective interventions that motivate businesses to engage in sustainability. The proposed framework provides a structured approach to applying behavioural insights to corporate sustainability and highlights the potential for combining these tools with traditional regulatory measures to achieve lasting environmental change. As firms face increasing pressure to address environmental challenges, the integration of behavioural economics into policymaking can play a key role in driving the transition toward a more sustainable and responsible corporate sector.

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ISSN 2076-9202

LONG-TERM FISCAL POLICY FOR ZIMBABWE: THE ECONOMICS OF DEBT AND DEFICITS

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ABSTRACT
This study critically examines Zimbabwe's fiscal trajectory from 1980 to 2025, focusing on the persistent challenges of debt accumulation, structural deficits, and fiscal instability. Using a doctrinal analysis and policy review, the research traces the historical and institutional drivers of deficit bias, debt overhang, and fiscal dominance, highlighting their macroeconomic consequences. The findings reveal that recurrent expenditure pressures, inefficient subsidy allocation, and constrained revenue mobilisation have perpetuated reliance on high-cost borrowing, undermining growth and investor confidence. In response, the study recommends a comprehensive long-term fiscal strategy encompassing public wage bill rationalization, targeted social protection, modernized tax administration, and proactive debt restructuring with multilateral and bilateral creditors. It further advocates the implementation of legally codified fiscal rules, independent fiscal oversight, and countercyclical policy frameworks to enhance macroeconomic resilience. These measures collectively offer Zimbabwe a pragmatic pathway toward sustainable debt management, fiscal stability, and a credible foundation for long-term economic growth.

Key Words: *Fiscal Policy, Debts, Deficit*

1.0 INTRODUCTION

Fiscal policy plays a central role in shaping Zimbabwe's economic trajectory. Since independence in 1980, fiscal management has oscillated between periods of discipline and prolonged fiscal excess. Public debt has been a persistent challenge, with debt-to-GDP ratios rising sharply in the late 1990s and again in the aftermath of the 2008 hyperinflationary crisis. By 2025, Zimbabwe remains burdened by unsustainable debt levels, with limited access to concessional financing, a history of arrears to multilateral lenders, and reliance on short-term domestic borrowing.The fiscal challenge in Zimbabwe is compounded by structural factors: low productivity, a narrow tax base, large informal economy, and vulnerability to external shocks. Persistent deficits have often been financed through domestic debt issuance or quasi-fiscal operations by the central bank, leading to inflationary pressures. This paper explores the long-term implications of such fiscal patterns and assesses the prospects for sustainable debt management in Zimbabwe.

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2.0 THEORETICAL FRAMEWORK

Debt, Deficits and Fiscal Sustainability

One of the most enduring features of Zimbabwe's fiscal landscape is the persistence of deficit bias, a phenomenon widely discussed in the public finance literature (Kavila, 2021; de Haan, Ohnsorge, & Yu, 2024). Deficit bias arises when governments, under the influence of political economy pressures, systematically spend more than they collect in revenues, often rationalizing such choices under the banner of development or social protection (World Bank, 2024). In Zimbabwe, this has historically manifested through expansive wage bills, politically motivated subsidies, and populist policies introduced during electoral cycles (Kavila, 2021; World Bank, 2024). The wage bill, in particular, has consumed an unsustainable proportion of the national budget, leaving little room for productive capital expenditure (World Bank, 2024). Electoral considerations have further reinforced this pattern, with fiscal expansion often timed to coincide with election periods, thereby entrenching a structural deficit (de Haan, Ohnsorge, & Yu, 2024). Such fiscal behaviour not only distorts resource allocation but also undermines macroeconomic stability by generating recurrent financing gaps that, in turn, necessitate recourse to unsustainable borrowing or monetary financing (Kavila, 2021; World Bank, 2024).

Debt Overhang Effects

Zimbabwe's fiscal challenges are also exacerbated by debt overhang effects, which occur when excessive public debt dampens investment and economic growth by creating uncertainty about future taxation and default risks (Corden, 1982; Pattillo, Poirson, & Ricci, 2002). Investors, both domestic and foreign, perceive high debt levels as a signal of likely fiscal adjustment through increased taxation or inflationary financing, leading to hesitation in committing long-term capital (Pattillo et al., 2002; Reinhart & Rogoff, 2010). In Zimbabwe's case, the debt overhang problem is aggravated by arrears to multilateral institutions such as the IMF, World Bank, and AfDB, which have restricted access to concessional borrowing and hindered creditworthiness (World Bank, 2024; IMF, 2023). The accumulation of external arrears has created a vicious cycle: without clearance, the government cannot access affordable finance, forcing it to resort to costly domestic borrowing, which in turn exacerbates the debt burden (Kavila, 2021). The private sector bears the brunt of this environment, as government borrowing crowds out private investment, elevates interest rates, and limits the growth of credit to productive enterprises (World Bank, 2024). Consequently, the debt overhang not only undermines investor confidence but also perpetuates the very fiscal fragility it was meant to resolve (Reinhart & Rogoff, 2010).

Fiscal Dominance

A third critical theme shaping Zimbabwe's fiscal dynamics is fiscal dominance, a condition in which monetary policy becomes subservient to the financing needs of the government (Sargent & Wallace, 1981; Kydland & Prescott, 1977). In theory, central banks should focus on maintaining price stability and financial sector soundness (Mishkin, 2019). However, in Zimbabwe's experience, particularly in the 2000s, the Reserve Bank was drawn into extensive quasi-fiscal operations aimed at bridging persistent budgetary

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shortfalls (Hanke, 2008; World Bank, 2024). These operations included direct financing of government expenditures, subsidized credit facilities, and interventions in parastatals and agriculture (Hanke, 2008). While politically expedient in the short term, such measures severely undermined the independence of monetary policy and accelerated the erosion of macroeconomic stability (Mishkin, 2019). The inflationary consequences were profound, culminating in the hyperinflation episode of 2008 (Hanke, 2008). Even in the post-dollarization period, episodes of fiscal dominance resurfaced through Treasury Bill issuances and other instruments that effectively pressured monetary authorities to accommodate fiscal imbalances (World Bank, 2024). This erosion of policy credibility illustrates the dangers of subordinating monetary policy to fiscal exigencies, as it not only fuels inflation but also destabilizes exchange rates and weakens confidence in the financial system (Mishkin, 2019).

3.0 HISTORICAL OVERVIEW OF ZIMBABWE'S FISCAL TRAJECTORY

3.1 Early Independence and Rising Debt (1980-1990s)

At independence in 1980, Zimbabwe inherited a relatively modest and manageable external debt burden from the Rhodesian government, alongside an economy that, while structurally unequal, was comparatively advanced relative to many African peers (Gono, 2001; Kavila, 2021). The post-independence government, driven by a vision of redressing historical inequalities, embarked on ambitious social spending programs. Education and health sectors were prioritised, with policies aimed at universal primary education, expanded secondary schooling, and free or subsidised healthcare (Mlambo, 2014; World Bank, 2024). These initiatives had transformative social impacts, rapidly improving literacy rates and access to basic services, but they also placed mounting pressure on the fiscus, as recurrent expenditure rose sharply while the revenue base, constrained by a dual economy and a large rural subsistence sector, struggled to keep pace (Kavila, 2021).

The fiscal trajectory of the 1980s was further shaped by extensive subsidies and parastatal support. The government maintained price controls and provided subsidies on basic commodities, fuel, and agricultural inputs, partly to cushion vulnerable households and partly to secure political legitimacy in a newly enfranchised electorate (Mlambo, 2014; Hanke, 2008). Parastatals such as the Grain Marketing Board and National Railways of Zimbabwe became heavily dependent on fiscal transfers, eroding efficiency and compounding the fiscal burden (World Bank, 2024). In addition, defence and security expenditures remained high due to regional conflicts and domestic political tensions, including involvement in the Mozambican civil war and internal disturbances (Kanyenze, 2004). The combined effect of these policies was a rising fiscal deficit, financed through both domestic borrowing and external loans (Kavila, 2021). Although initial growth in the 1980s was positive, buoyed by relatively strong commodity prices, the seeds of long-term debt accumulation were being sown (Mlambo, 2014).

By the late 1980s, the growing mismatch between recurrent expenditure and revenue had become unsustainable. Zimbabwe increasingly relied on external borrowing to finance its developmental and social obligations, which gradually increased the external debt stock (Kavila, 2021; World Bank, 2024). Debt service obligations began to rise, diverting resources from capital expenditure and productive investment. At the same time, the inefficiencies of protected industries under import substitution policies reduced

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competitiveness, leading to trade imbalances and a widening current account deficit (Hanke, 2008). This economic environment set the stage for a decisive policy shift, as the government sought external assistance to restore fiscal balance and promote growth.

The adoption of the Economic Structural Adjustment Programme (ESAP) in 1991 marked a significant turning point in Zimbabwe's fiscal and debt trajectory (Kanyenze, 2004; World Bank, 2024). ESAP, introduced under the auspices of the World Bank and International Monetary Fund, was intended to liberalize the economy, restore fiscal sustainability, and enhance efficiency. Its central features included the reduction of government expenditure, removal of subsidies, trade liberalisation, deregulation of labour markets, and privatization of state enterprises (Mlambo, 2014). In theory, these measures were expected to improve competitiveness, stimulate investment, and reduce fiscal imbalances. In practice, however, the implementation of ESAP coincided with severe economic shocks, including droughts in 1992 and 1995, which sharply reduced agricultural output and export earnings (World Bank, 2024).

Instead of generating growth, ESAP ushered in a period of contraction and social discontent. The removal of subsidies and public sector retrenchments led to rising unemployment and poverty, while reductions in government spending undermined the quality of education and healthcare systems that had been celebrated in the 1980s (Kanyenze, 2004; Mlambo, 2014). Fiscal consolidation efforts were undermined by revenue shortfalls and weak compliance, while the cost of servicing existing debt continued to climb (Kavila, 2021). External borrowing, which was supposed to ease the transition, increased the debt stock further, pushing Zimbabwe into a debt spiral. By the mid-1990s, debt-to-GDP ratios had risen significantly, while fiscal deficits persisted, reflecting structural weaknesses in the economy and the limited capacity of ESAP to generate growth (World Bank, 2024).

Social discontent intensified as the benefits of adjustment failed to materialize. The urban poor bore the brunt of rising food and transport costs, while retrenchments swelled the ranks of the unemployed (Kanyenze, 2004). Labour unrest and political opposition to austerity mounted, undermining the legitimacy of the reform process. By the end of the decade, ESAP had largely lost credibility, and Zimbabwe was grappling with the dual challenges of rising debt and social instability (Mlambo, 2014). The reforms had succeeded in liberalizing trade and reducing some subsidies, but at the cost of deindustrialisation, deteriorating public services, and heightened inequality (World Bank, 2024).

The 1980s and 1990s thus stand as a formative period in Zimbabwe's fiscal history. What began as an era of optimism and social investment devolved into a debt-laden economy struggling under the weight of failed reforms and fiscal imbalances. The legacy of this period is significant: ambitious but fiscally unsustainable social spending created structural expenditure pressures, while the ESAP experiment entrenched debt dependence and set the stage for deeper fiscal crises in the 2000s (Kavila, 2021; Mlambo, 2014). Zimbabwe entered the new millennium with weakened fiscal capacity, rising external arrears, and an increasingly fragile social contract, underscoring the long-term consequences of early fiscal choices (World Bank, 2024).

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3.2 Fiscal Meltdown and Hyperinflation (2000–2008)

The dawn of the new millennium brought seismic shifts in Zimbabwe's political economy that had far-reaching fiscal consequences. The fast-track land reform programme, launched in 2000, fundamentally altered the structure of agriculture, the backbone of the economy and the country's largest source of export earnings (Richardson & Webster, 2007; Mlambo, 2014). While the programme aimed at redressing colonial land imbalances, its abrupt and chaotic implementation precipitated a collapse in commercial agriculture. Tobacco, once a leading foreign exchange earner, saw production plummet, while food crop shortages became recurrent (Richardson & Webster, 2007). The decline in agricultural output not only reduced government revenues from taxes and foreign exchange receipts but also forced increased reliance on food imports and subsidies, thereby aggravating fiscal pressures (World Bank, 2024).

At the same time, military expenditures escalated significantly. Zimbabwe's involvement in the Democratic Republic of Congo (DRC) conflict in the late 1990s had already imposed a heavy fiscal burden, but the costs continued into the 2000s as the government expanded security spending to quell rising political opposition at home (Kanyenze, 2004). Elections in 2000, 2002, and 2005 were highly contested, prompting increased resource allocations to security forces and patronage networks. These expenditures were politically expedient but fiscally destabilizing, widening deficits at a time when revenues were contracting due to economic decline (Kavila, 2021).

Fiscal deficits were increasingly monetized by the Reserve Bank of Zimbabwe (RBZ), which became the principal financier of government shortfalls (Hanke, 2008; World Bank, 2024). Quasi-fiscal operations proliferated, with the RBZ directly funding parastatals, subsidizing agriculture and industry, and extending credit to politically strategic sectors. These interventions blurred the line between fiscal and monetary policy, resulting in a rapid expansion of money supply unsupported by productive activity (Hanke, 2008). The inflationary consequences were immediate, as excess liquidity in the system fueled price increases. As confidence in the local currency eroded, demand for foreign exchange intensified, leading to a parallel market with soaring exchange rate differentials (IMF, 2009).

By the mid-2000s, Zimbabwe had entered a vicious cycle of hyperinflation. The government's recourse to money printing as a fiscal financing tool became entrenched, with denominations of the Zimbabwean dollar repeatedly revalued and then rendered worthless (Hanke, 2008; IMF, 2009). Inflation rates, already staggering in the early 2000s, reached astronomical levels by 2008, estimated at over 79.6 billion percent per month according to the IMF (IMF, 2009). This hyperinflationary spiral devastated household savings, obliterated the real value of wages, and collapsed the financial sector (Hanke, 2008). Fiscal policy, rather than serving as a stabilizing tool, became a source of macroeconomic chaos, as the budget process lost all credibility in the face of monetary financing (World Bank, 2024).

The debt situation simultaneously deteriorated to unsustainable levels. Zimbabwe fell into arrears with major international creditors, including the World Bank, International Monetary Fund (IMF), and African

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Development Bank (AfDB) (World Bank, 2024; IMF, 2009). The accumulation of arrears cut off access to concessional lending and external support, forcing the government to rely on short-term domestic borrowing and money creation to finance its obligations. Debt service obligations crowded out any meaningful capital expenditure, leaving infrastructure to decay and public services underfunded (Kavila, 2021). The inability to access external credit markets further deepened economic isolation, making it virtually impossible to stabilise the economy through orthodox fiscal means (World Bank, 2024).

The social consequences of the fiscal meltdown were equally severe. Public health and education systems, once the pride of post-independence Zimbabwe, collapsed under the weight of underfunding and brain drain (Mlambo, 2014). Teachers, doctors, and civil servants abandoned their posts as wages lost all real value. Basic commodities became scarce, queues for fuel and food became routine, and poverty levels surged. The informalization of the economy accelerated as formal businesses closed, leaving the state with an ever-dwindling revenue base (Kanyenze, 2004). Social discontent erupted in waves of protests, strikes, and political opposition, to which the government responded with further security expenditure, reinforcing the destructive cycle of fiscal stress and repression (Richardson & Webster, 2007).

By 2008, Zimbabwe's fiscal system had effectively imploded. The budget had lost meaning, as expenditures were increasingly financed outside the formal fiscal framework through monetary printing and quasi-fiscal activities (Hanke, 2008; World Bank, 2024). Hyperinflation destroyed the unit of account, rendering official statistics meaningless and undermining all mechanisms of fiscal accountability. Public debt, though difficult to measure accurately under hyperinflation, was clearly unsustainable, with arrears to international creditors mounting and domestic liabilities growing exponentially (IMF, 2009). The fiscal meltdown of 2000–2008 represents a stark illustration of how unchecked deficits, political expediency, and monetary subordination can collapse an economy into hyperinflation and debt distress (World Bank, 2024).

3.3 Dollarization and Temporary Stability (2009-2015)

The introduction of the multi-currency regime in 2009, dominated by the United States dollar, marked a decisive break from the hyperinflationary collapse of the preceding decade (Hanke, 2008; World Bank, 2024). Dollarization immediately anchored inflation expectations, restored confidence in the use of money, and created a veneer of macroeconomic stability. For the first time in years, Zimbabwe experienced positive growth rates as economic activity normalized, imports increased, and previously suppressed markets revived (IMF, 2012). The removal of the Zimbabwe dollar eliminated the inflation tax and provided households and firms with a predictable unit of account. This new environment temporarily strengthened fiscal discipline, as the government could no longer rely on monetary financing to cover deficits (Hanke, 2008).

However, despite these initial gains, the structural weaknesses of Zimbabwe's fiscal framework persisted. The government's expenditure commitments, particularly a large and rigid wage bill, continued to exert pressure on the budget (Kavila, 2021; World Bank, 2024). With limited scope for seigniorage under dollarization, deficits were increasingly financed through domestic borrowing instruments such as Treasury

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Bills. This strategy provided short-term liquidity but set the stage for a build-up of domestic arrears and a crowding out of private sector credit (IMF, 2012). By the mid-2010s, banks were heavily exposed to government securities, creating a fragile financial intermediation system vulnerable to fiscal shocks (World Bank, 2024).

On the external front, dollarization did little to resolve Zimbabwe's entrenched debt crisis. The country remained in arrears to major international financial institutions, including the IMF, World Bank, and AfDB, constraining access to concessional financing and debt relief mechanisms (IMF, 2012; World Bank, 2024). The government engaged in various re-engagement efforts and debt negotiation initiatives, such as the Zimbabwe Accelerated Arrears Clearance and Debt Relief Strategy, but tangible progress was limited (Kavila, 2021). As a result, the fiscal space remained narrow, with the government heavily reliant on short-term domestic resources while unable to access long-term international capital (World Bank, 2024).

The stability of this period, therefore, rested on a fragile equilibrium. While dollarization curbed inflation and fostered relative growth, it also constrained the government's fiscal options, forcing reliance on domestic borrowing and exposing the economy to liquidity risks. By 2015, the limits of this model had become evident: arrears were mounting, public debt was once again rising, and the absence of structural fiscal reform signaled that the apparent stability was unsustainable (IMF, 2012; World Bank, 2024). What began as a reprieve from hyperinflation eventually evolved into another debt-driven cycle, foreshadowing renewed fiscal stress in the years to come (Kavila, 2021).

3.4 Reintroduction of Local Currency and Renewed Debt Crisis (2016–2025)

The period from 2016 onward was marked by mounting fiscal imbalances that strained the temporary stability achieved under dollarization (World Bank, 2024). In the years leading up to the reintroduction of the Zimbabwe dollar in 2019, the government had increasingly relied on the issuance of Treasury Bills to finance widening deficits. Domestic financial institutions, particularly banks and pension funds, became major holders of government paper, deepening systemic vulnerabilities (Kavila, 2021). At the same time, persistent arrears to international financial institutions continued to block access to concessional loans and debt relief initiatives, forcing the government to depend almost exclusively on domestic sources of financing (IMF, 2023). This reliance entrenched fiscal dominance over monetary policy, as the central bank struggled to manage liquidity pressures stemming from rising government borrowing (Hanke, 2008).

The reintroduction of the Zimbabwe dollar in mid-2019 was intended to restore monetary sovereignty and ease chronic cash shortages that had worsened under the multi-currency regime (World Bank, 2024). Initially framed as a measure to rebuild macroeconomic policy flexibility, the move quickly reignited inflationary pressures. Confidence in the local currency was weak from the outset, as memories of hyperinflation remained fresh (Hanke, 2008). The absence of fiscal consolidation further undermined credibility, as the government continued to run large deficits financed through money creation. By 2020, annual inflation had surged into triple digits, eroding real incomes and rekindling the economic instability

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that dollarization had temporarily subdued (IMF, 2023).

These dynamics gave rise to a renewed debt crisis. Public debt, already elevated, escalated to unsustainable levels, surpassing 90 percent of GDP by 2025 (World Bank, 2024). Interest payments absorbed a growing share of government revenues, severely constraining fiscal space for social services and infrastructure investment (Kavila, 2021). The debt burden also exerted crowding-out effects, as private borrowers found themselves squeezed out of credit markets dominated by government financing needs (IMF, 2023). Simultaneously, efforts at re-engagement with multilateral institutions stalled in the absence of credible reform commitments, leaving Zimbabwe excluded from debt restructuring frameworks and concessional finance (World Bank, 2024).

The economic and social consequences were severe. Rising inflation, currency depreciation, and mounting debt service obligations eroded the real value of wages and savings, further diminishing household welfare (Hanke, 2008; World Bank, 2024). Private sector investment remained subdued due to uncertainty over exchange rate stability and the risk of future fiscal shocks. Meanwhile, social discontent deepened, as austerity measures and subsidy reductions exacerbated vulnerabilities among the poor (Kanyenze, 2004). The cycle of deficit financing, monetary expansion, and escalating debt thus reasserted itself, underscoring the unresolved structural weaknesses of Zimbabwe's fiscal regime (Kavila, 2021).

By 2025, the reintroduction of the local currency had failed to achieve its intended goals of stability and sovereignty. Instead, it amplified macroeconomic fragilities, with debt, deficits, and inflation once again dominating the policy landscape (World Bank, 2024). Zimbabwe's fiscal trajectory during this period illustrates the high costs of delayed reforms and the dangers of attempting monetary policy normalization without parallel fiscal discipline (IMF, 2023; Hanke, 2008).

4.0 THE ECONOMICS OF DEFICITS IN ZIMBABWE

4.1 Macroeconomic Consequences of Persistent Deficits

Zimbabwe's fiscal history demonstrates that chronic deficits have had far-reaching macroeconomic repercussions, undermining both stability and long-term growth prospects (Kavila, 2021; World Bank, 2024). The most immediate and visible effect has been the entrenchment of inflationary pressures. Whenever government expenditure has consistently outpaced revenues, authorities have frequently resorted to monetary financing, either through direct borrowing from the Reserve Bank of Zimbabwe or via quasi-fiscal operations (Hanke, 2008). This practice, particularly pronounced during the hyperinflationary era of the 2000s and later revived after the reintroduction of the local currency, created a self-reinforcing cycle of deficit monetization and price instability. Inflationary shocks eroded real incomes, weakened savings, and disrupted planning horizons for households and businesses alike, thereby entrenching a climate of uncertainty detrimental to investment (IMF, 2023).

Another critical consequence of sustained deficits has been the crowding out of private investment. With limited access to external concessional financing due to persistent arrears, the government has heavily relied

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on domestic borrowing to finance recurrent expenditure (Kavila, 2021). This demand for domestic credit exerted upward pressure on interest rates, diverting scarce financial resources from productive private sector activities to debt servicing (World Bank, 2024). The banking sector became increasingly skewed toward holding government securities rather than extending credit to firms and households, stifling entrepreneurship, innovation, and capital accumulation. In effect, the fiscal stance not only undermined macroeconomic stability but also weakened the foundations for private-led economic growth (IMF, 2023).

Persistent fiscal deficits have also undermined exchange rate stability. Investor and public confidence in the sustainability of fiscal policy has been consistently low, with deficit-induced inflationary expectations fueling currency depreciation (Hanke, 2008; World Bank, 2024). In both the hyperinflationary crisis of the 2000s and the post-2019 reintroduction of the Zimbabwe dollar, fiscal imbalances eroded trust in domestic money, accelerating dollarization pressures in informal markets. As deficits widened and reserves dwindled, the gap between official and parallel market exchange rates expanded, further distorting resource allocation and fueling speculative behaviour (IMF, 2023). This instability not only discouraged foreign investment but also heightened the risks of capital flight and external sector fragility (World Bank, 2024).

Equally important has been the erosion of fiscal space due to rising debt service obligations. As deficits accumulated into unsustainable debt stocks, interest payments began to consume a disproportionate share of government revenues (Kavila, 2021; World Bank, 2024). By the mid-2020s, interest servicing alone absorbed resources that could otherwise have been allocated to infrastructure development, education, and health. This “debt overhang” effect constrained the state’s ability to implement countercyclical fiscal measures or invest in long-term growth-enhancing projects (Reinhart & Rogoff, 2010). Consequently, the cycle of deficits, debt accumulation, and reduced development expenditure entrenched a form of fiscal dependency where short-term survival consistently took precedence over structural reform (Kavila, 2021).

Taken together, the macroeconomic consequences of persistent deficits in Zimbabwe underscore the perils of fiscal indiscipline. Inflation, crowding out, exchange rate volatility, and shrinking fiscal space are not isolated outcomes but interlinked phenomena that reinforce one another (World Bank, 2024). Without credible measures to restore fiscal balance, these dynamics threaten to perpetuate a cycle of instability and stagnation, leaving the economy vulnerable to recurrent crises (IMF, 2023).

4.2 External Constraints and Debt Overhang

A defining feature of Zimbabwe’s fiscal distress has been the persistent accumulation of arrears to international creditors,which has severely constrained the country’s access to concessional finance (IMF, 2023; World Bank, 2024). Institutions such as the IMF, World Bank, and AfDB have, for decades, maintained arrears clearance as a prerequisite for new lines of credit. This exclusion from the global concessional lending architecture has left Zimbabwe increasingly reliant on short-term, high-cost domestic instruments and bilateral creditors, particularly non-traditional partners (Kavila, 2021). Such financing arrangements, while plugging immediate fiscal gaps, have entrenched a cycle of mounting obligations and heightened debt vulnerability (World Bank, 2024).

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The debt overhang problem has further discouraged both portfolio and foreign direct investment. International investors perceive Zimbabwe's unsustainable debt trajectory and protracted arrears as indicators of sovereign risk, limiting capital inflows and raising the risk premium on any available financing (Reinhart & Rogoff, 2010). Even when opportunities exist in mining, agriculture, or infrastructure, the spectra of fiscal insolvency reduces investor confidence in the predictability of returns. This creates a vicious circle: weak investment limits growth, subdued growth constrains revenue mobilisation, and low revenues prolong dependence on borrowing (Kavila, 2021). In this way, debt overhang perpetuates fiscal fragility by locking the economy into a low-growth, high-debt equilibrium (World Bank, 2024).

The external financing constraint has also restricted the government's ability to implement comprehensive countercyclical policies. Unlike other emerging economies that can draw upon concessional borrowing in times of external shocks, Zimbabwe has had to rely heavily on ad hoc domestic resource mobilisation, which is both costly and distortionary (IMF, 2023). For example, the issuance of Treasury Bills and recourse to quasi-fiscal activities by the Reserve Bank of Zimbabwe have increased liquidity risks and exacerbated inflationary pressures (Hanke, 2008). In the absence of affordable long-term borrowing, the government has been forced into short-termism, prioritising immediate deficit financing over sustainable investment in human capital and infrastructure (World Bank, 2024).

Moreover, the debt overhang has strained Zimbabwe's diplomatic and economic relations. Re-engagement strategies with the Paris Club, IMF Staff-Monitored Programs, and the AfDB's arrears clearance framework have yielded limited progress, often due to concerns over governance, fiscal transparency, and reform credibility (IMF, 2023; Kavila, 2021). The failure to clear arrears not only curtails external financing but also perpetuates Zimbabwe's isolation from global capital markets. This isolation deepens economic vulnerability, as the country remains unable to diversify sources of funding or hedge against global economic shocks through concessional facilities (World Bank, 2024).

In essence, Zimbabwe's external financing constraints and debt overhang have locked the economy in a precarious fiscal position. Exclusion from concessional markets has heightened reliance on costly borrowing, discouraged foreign investment, and undermined growth prospects (IMF, 2023). Unless a credible and comprehensive arrears clearance and debt restructuring programme is pursued—backed by governance reforms and fiscal consolidation—the cycle of fiscal fragility will persist, leaving Zimbabwe with limited room to manoeuvre in addressing its pressing developmental challenges (Kavila, 2021; World Bank, 2024).

5.0 ASSESSING FISCAL SUSTAINABILITY

Fiscal sustainability in Zimbabwe remains a central concern for both policymakers and economic analysts, given the country's history of chronic deficits, high debt levels, and recurrent macroeconomic crises. At its core, fiscal sustainability is defined as the government's ability to meet current and future obligations without resorting to destabilizing borrowing or monetary expansion (IMF, 2025a). In Zimbabwe, this

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assessment must account for three interrelated dynamics: the debt-to-GDP ratio, the primary balance, and the real interest-growth differential, each of which has contributed to the country's ongoing fiscal fragility (World Bank, 2025a).

The debt-to-GDP ratio provides the most immediate indicator of fiscal health. In Zimbabwe, this ratio has been persistently high, frequently exceeding 90 percent of GDP by the mid-2020s (World Bank, 2025a; IMF, 2025b). Such elevated debt levels impose significant constraints on fiscal policy, as the government must allocate substantial portions of revenue toward interest servicing rather than productive expenditure (IMF, 2025a). The historical trajectory of Zimbabwe's debt, from manageable levels in the early post-independence period to unsustainable heights following hyperinflation and renewed deficits, highlights the dangers of persistent borrowing without corresponding growth in revenue or economic output (IMF, 2025c). High debt-to-GDP ratios reduce investor confidence, increase the cost of borrowing, and narrow the policy space available for countercyclical measures, creating a self-reinforcing cycle of fiscal stress (World Bank, 2025a).

The primary balance, defined as the difference between government revenues and non-interest expenditures, is another critical component of sustainability. Zimbabwe has historically exhibited a structural primary deficit, meaning that even before accounting for interest payments, the government spends more than it collects (IMF, 2025b). This persistent imbalance underscores the need for fiscal consolidation and expenditure rationalization. Without corrective measures to restore a primary surplus, the government remains trapped in a cycle of borrowing to service existing debt, further exacerbating debt accumulation and crowding out private sector investment (World Bank, 2025b). The primary balance is thus both a diagnostic indicator and a policy lever: achieving a sustainable surplus would signal credible fiscal management and help break the cycle of debt accumulation (IMF, 2025a).

Finally, the real interest-growth differential (r - g) captures the relationship between borrowing costs and economic expansion, a central determinant of debt sustainability. When the real interest rate on government debt exceeds the economy's growth rate, debt accumulation accelerates even in the absence of new deficits (IMF, 2025b). In Zimbabwe, negative growth shocks, high borrowing costs, and periods of economic contraction have consistently worsened this differential. During hyperinflation and subsequent periods of weak recovery, r exceeded g by wide margins, forcing the government to finance debt through monetization or short-term borrowing (IMF, 2025c). This dynamic has amplified vulnerability to fiscal shocks, eroded public confidence, and constrained long-term investment. A negative or unfavorable r - g differential thus not only signals unsustainability but also highlights the urgency of restoring growth-enhancing fiscal and structural policies (World Bank, 2025a).

In sum, assessing fiscal sustainability in Zimbabwe requires a multidimensional analysis. The combination of a persistently high debt-to-GDP ratio, a structural primary deficit, and an adverse real interest-growth differential paints a stark picture of fiscal vulnerability. Without comprehensive reforms aimed at

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consolidating the primary balance, reducing debt dependency, and stimulating economic growth, Zimbabwe risks perpetuating cycles of fiscal instability that undermine both macroeconomic stability and long-term development objectives (IMF, 2025a; World Bank, 2025a). Effective policy interventions must therefore simultaneously address debt management, expenditure rationalization, and growth enhancement to restore credibility and sustainability to the country's public finances (IMF, 2025b; World Bank, 2025b).

6.0 POLICY OPTIONS FOR LONG-TERM FISCAL STABILITY

(i)Fiscal Consolidation and Expenditure Rationalization

Achieving long-term fiscal stability in Zimbabwe necessitates a decisive approach to fiscal consolidation and expenditure rationalization. Central to this strategy is the reduction of the structural deficit, which has historically constrained the government's ability to finance development while servicing an escalating debt burden. One of the most pressing areas for intervention is the public wage bill, which consistently consumes a disproportionate share of revenues. Rationalization measures could include aligning wages with productivity, restructuring employment in overstaffed sectors, and adopting performance-based compensation frameworks. While politically sensitive, these reforms are crucial to free fiscal space for productive investments rather than recurrent consumption.

Subsidy rationalization is another critical pillar of consolidation. Historically, Zimbabwe's subsidies on agricultural inputs, fuel, and basic commodities have supported short-term social and political objectives but imposed significant fiscal costs. Reorienting subsidies toward targeted social protection programs, such as conditional cash transfers or support for vulnerable households, would allow the government to maintain social equity while reducing fiscal drain. Simultaneously, resources currently allocated to generalized subsidies could be redirected toward infrastructure investment, which has higher economic multipliers and long-term growth benefits. Prioritising capital expenditure over recurrent consumption spending not only enhances productivity but also improves the economy's capacity to generate future revenue, creating a virtuous cycle of fiscal stability.

Fiscal consolidation must also be complemented by reforms to budget execution and transparency. Strengthening expenditure controls, enforcing strict procurement standards, and enhancing public sector financial management would ensure that rationalization efforts translate into tangible fiscal savings. Medium-term expenditure frameworks could provide a roadmap for aligning spending priorities with strategic development goals, ensuring that cuts in recurrent expenditures do not compromise essential public services. Such measures would restore credibility to fiscal management, enhance investor confidence, and create the conditions for sustainable debt reduction.

Ultimately, fiscal consolidation and expenditure rationalization are not merely technical exercises but require strong political commitment and institutional capacity. By curbing the wage bill, rationalizing subsidies, and prioritising investment in infrastructure and growth-enhancing sectors, Zimbabwe can establish the foundation for long-term fiscal sustainability. These reforms would reduce dependence on debt

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and deficit financing, mitigate inflationary pressures, and strengthen the government's ability to respond to macroeconomic shocks, thereby securing a more stable economic trajectory for the country.

(ii)**Revenue Mobilisation**

A cornerstone of Zimbabwe's long-term fiscal stability is the effective mobilisation of domestic revenues. Expanding the tax base is critical, particularly through the formalization of the informal sector, which constitutes a significant portion of economic activity yet remains largely untaxed. Policies aimed at incentivizing registration, simplifying compliance requirements, and providing access to formal financial services can bring informal operators into the fiscal net while promoting economic formalization. Enhanced compliance among existing taxpayers, coupled with improved auditing and enforcement mechanisms, would further increase revenues without imposing disproportionate burdens on households and firms.

Modernising tax administration is equally important. The adoption of digital tax platforms can streamline collection, reduce leakages, and enhance transparency, while automated reporting and e-filing systems can simplify compliance for businesses and individuals. Broader coverage of the Value Added Tax (VAT), particularly in sectors previously exempted, could provide a stable and predictable source of revenue. In combination with targeted, growth-friendly tax measures, these reforms would not only strengthen the government's fiscal position but also create a more equitable and efficient taxation system. Effective revenue mobilisation is thus central to reducing deficits, financing priority development projects, and decreasing reliance on borrowing.

(iii) **Debt Restructuring and Re-engagement**

Equally critical for fiscal stability is the resolution of Zimbabwe's debt overhang through proactive restructuring and re-engagement with international creditors. A credible arrears clearance strategy with multilateral institutions such as the IMF, World Bank, and African Development Bank is indispensable for restoring access to concessional financing, reducing debt service costs, and regaining investor confidence. Successful negotiations must be underpinned by demonstrable fiscal discipline, transparent accounting of public debt, and institutional reforms that signal the government's commitment to sustainable borrowing practices.

Debt restructuring should be approached strategically, balancing immediate relief with long-term sustainability. Instruments such as maturity extensions, interest rate reductions, and partial debt swaps can ease fiscal pressures while creating space for growth-enhancing expenditures. Engagement with bilateral creditors, particularly non-traditional partners, must be structured to avoid creating contingent liabilities that could compromise future fiscal flexibility. By reducing debt service obligations and restoring credibility in international capital markets, Zimbabwe would not only alleviate short-term fiscal stress but also lay the groundwork for sustainable growth and macroeconomic stability.

Together, revenue mobilisation and debt restructuring form complementary pillars of a credible long-term

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fiscal strategy. While domestic revenue reforms strengthen the government's ability to finance expenditure internally, successful re-engagement with external creditors reduces dependency on high-cost borrowing and mitigates fiscal fragility. Implemented concurrently, these measures provide a pragmatic pathway toward fiscal consolidation, debt sustainability, and enhanced macroeconomic resilience in Zimbabwe.

(iv) **Strengthening Institutions and Fiscal Rules**

Institutional strengthening is a fundamental prerequisite for sustainable fiscal management in Zimbabwe. The adoption of well-defined fiscal rules, such as debt ceilings, expenditure limits, and primary balance targets, can serve as an anchor for expectations, helping to limit deficit bias and reduce the tendency for politically driven overspending. By codifying constraints into law, these rules provide a framework for disciplined budgetary conduct, offering both policymakers and markets greater certainty about the trajectory of public finances.

Complementing fiscal rules, the establishment of independent fiscal councils could significantly enhance transparency, accountability, and evidence-based policymaking. Such institutions can monitor compliance with fiscal targets, provide objective assessments of budget proposals, and issue warnings when policy deviates from sustainable paths. In the Zimbabwean context, where past cycles of deficit expansion and debt accumulation have been exacerbated by weak oversight and politicized expenditure, independent institutions would reinforce credibility, promote responsible fiscal behaviour, and signal commitment to both domestic and international stakeholders. Strong institutions and credible rules thus create the foundation for a more stable, predictable, and sustainable fiscal environment.

(v) **Countercyclical Fiscal Policy under High Debt**

High public debt in Zimbabwe significantly constrains the government's ability to implement countercyclical fiscal policies, which are critical for smoothing economic cycles and mitigating shocks. When debt levels are elevated, discretionary fiscal interventions, such as stimulus spending during recessions, become limited due to financing constraints and concerns over macroeconomic stability. This highlights the need for a dual approach: building fiscal buffers during periods of economic growth while strengthening automatic stabilizers, such as unemployment benefits, social transfers, and progressive taxation, that respond naturally to fluctuations without exacerbating deficits.

By accumulating reserves and maintaining credible medium-term fiscal frameworks during expansionary periods, the government can create the necessary space to respond to future shocks without destabilizing debt dynamics. In addition, institutionalizing rules for countercyclical spending, alongside enhanced revenue forecasting and debt management, can ensure that fiscal policy remains stabilizing even under conditions of high indebtedness. Such measures balance the imperative of economic stabilization with the constraints imposed by debt sustainability, allowing Zimbabwe to pursue growth-oriented and socially responsive policies without compromising long-term fiscal health.

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Together, institutional strengthening, fiscal rules, and prudent countercyclical policy provide a comprehensive framework for maintaining fiscal discipline while preserving the flexibility needed to respond to economic shocks. In Zimbabwe, implementing these measures would reduce deficit bias, improve public sector accountability, and create credible mechanisms for balancing macroeconomic stabilization with long-term debt sustainability.

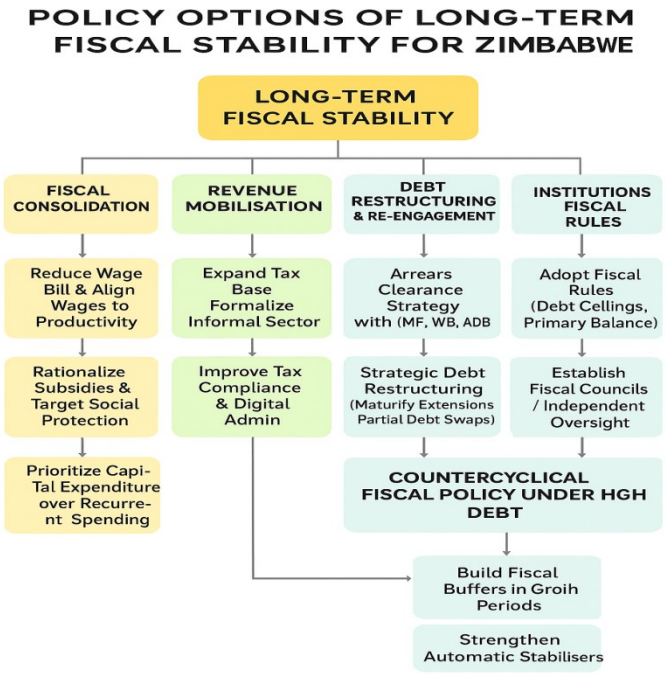

Figure 6.1: Policy Options for Long-Term Fiscal Stability for Zimbabwe
[Source: Author, 2025]

CONCLUSION

In conclusion, Zimbabwe's long-term fiscal trajectory hinges critically on the government's capacity to implement comprehensive and sustained reforms that transcend short-term fixes. Persistent budget deficits, coupled with a mounting debt stock, have constrained public investment, heightened vulnerability to external shocks, and perpetuated macroeconomic instability, illustrating that the challenge is as much political and institutional as it is economic. Achieving fiscal sustainability demands a multidimensional strategy that integrates rigorous expenditure rationalization, enhanced and equitable revenue mobilisation, strategic debt restructuring, and the strengthening of public financial management institutions to ensure accountability and transparency. Furthermore, the political economy dynamics, ranging from governance quality, policy credibility, and stakeholder buy-in, play a decisive role in determining the success of any fiscal intervention, underscoring that without broad-based commitment to reform, even technically sound policies may falter. Ultimately, long-term fiscal stability in Zimbabwe will require not only disciplined economic management but also visionary leadership that prioritizes sustainable development, restores investor confidence, and builds resilient fiscal institutions capable of supporting inclusive growth in an increasingly complex global and domestic environment.

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ISSN 2076-9202

DIGITAL TRANSFORMATION AND PROFITABILITY OF VIETNAMESE COMMERCIAL BANKS: A COMPARATIVE ANALYSIS FOR THE PRE- AND POST-COVID PERIOD

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Abstract

The study attempts to design a research framework for examining the effects of digital transformation on the profitability of Vietnamese commercial banks from 2015 to 2024, particularly emphasizing the alterations that occurred before and after the COVID-19 pandemic. The study employs quarterly panel data and a composite ICT index to assess digital maturity, utilizing econometric methodologies—Pooled OLS, Fixed Effects, Random Effects, and Feasible Generalized Least Squares (FGLS)—to evaluate the direct impacts of digital transformation and the moderating influences of bank size and risk profile. Structural break analysis investigates the impact of COVID-19 on the relationship between digital transformation and profitability. The study advances theoretical discourse by redirecting focus from risk mitigation to profit maximization, while also providing pragmatic insights for bank executives and policymakers regarding strategic digital investment and regulatory framework development.

Keywords: *Commercial Banks, COVID 19, Digital Transformation, Profitability.*

1. Introduction

1.1 Background of the Study

Digital transformation (DT) has transformed the banking industry in the last 20 years by revolutionizing service delivery, customer experience, and operational configurations. Digital transformation (DT) entails the embedding of emerging technologies like big data analytics, AI, cloud computing, and machine learning into the core banking functions. This makes banking efficient, competitive, and enjoyable to customers. The Dynamic Capabilities Theory (DCT) and Resource-Based View (RBV) describe that digital assets are dynamic capabilities and strategic resources that allow banks to find new opportunities, change swiftly, and retain their competitive advantage. The COVID-19 pandemic has accelerated this change by forcing banks to

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launch more digital channels to keep their businesses running. This study utilizes a composite ICT index to assess digital maturity and examines its correlation with profitability through three primary metrics: Return on Assets (ROA), Tobin's Q, and Operating Income Margin (OIM).

Even though DT is strategically important, its effect on profits in Vietnam is still not well known. Current research prioritizes risk mitigation over profit generation and utilizes annual data, obscuring significant quarterly fluctuations. Furthermore, the moderating influences of bank size and risk profile have not been adequately examined, resulting in unresolved inquiries regarding varying advantages. This study fills these gaps by looking at profitability outcomes, using quarterly data, and examining moderating effects. It makes both theoretical contributions and practical suggestions for managers and policymakers.

1.2 Problem Statement

While DT is widely acknowledged as a strategic priority, its financial implications remain ambiguous, especially in emerging economies. Four research gaps underscore the need for deeper investigation:

The lack of a multidimensional profitability:Most Vietnamese studies focus on risk reduction, neglecting direct profitability outcomes across accounting, operational, and market dimensions.

Inconsistent and ambiguous findings: Global evidence is mixed, often due to methodological limitations, such as reliance on annual data that obscure short-term fluctuations.

Lack of analysis of moderating effects: Few studies examine how bank size or risk profile shapes the DT-profitability relationship, leaving questions about which institutions benefit most.

Lack of Structural Break Analysis: The transformative effects of COVID-19 on this relationship remain largely unexplored.

1.3 Research Objectives

Building upon the four gaps identified in the research problem, this study defines four research objectives. Each objective is designed to address a specific limitation in the literature and contribute both theoretically and practically to the understanding of digital transformation (DT) and bank profitability in Vietnam, specifically:

- Estimating the direct impact of DT on profitability across multiple measures.
- Assessing the moderating role of bank size.
- Examining the moderating role of risk profile.
- Identifying structural changes in the DT-profitability relationship before and after COVID-19.

2. Literature Review and Hypothesis Development

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2.1 Definition of Key Concepts

Digital Transformation in Banking

Digital transformation (DT) in banking means using digital technologies in a planned way to make financial products, services, processes, and business models more efficient, lower costs, improve customer experiences, and stay competitive. DT is different from regular IT upgrades because it means that banks need to completely rethink how they do business, interact with customers, and make money. Artificial intelligence (AI) for credit scoring and fraud detection, big data analytics for understanding customer behavior, blockchain for secure transactions, and cloud computing for cost-effectiveness and scalability are some of the main technologies that make DT possible.

Bank Profitability

Profitability, the central dependent variable in this study, is typically measured through three complementary indicators:
Return on Assets (ROA):A way to tell how well a bank uses its assets to make money based on its accounting.
Tobin's Q is a market-based measure that shows how much a company's market value is compared to the cost of replacing its assets.
Operating Income Margin (OIM): a measure of how well a business runs that shows how much of its revenue it keeps as profit after paying for operating costs.

Bank Size and Risk Profile

The size of a bank is an important organizational trait that shows how many resources it has and how much it can save by using them. Larger banks usually have more money and people, which means they can spend more on new technologies, pay for the fixed costs of digital platforms, and spread these costs out over more customers.

The Risk Profile tells you how stable a bank's money is. The Z-score and the Non-Performing Loan (NPL) ratio are the two things that make it up. The Z-score is a measure of stability that tells you how much room a bank must stay in business. The NPL ratio tells you how many loans are either defaulting or about to default.

2.2 Literature Review

The Resource-Based View (RBV) says that companies can get a long-lasting competitive edge by using resources that are valuable, rare, hard to copy, and not replaceable. When used wisely, digital tools like proprietary platforms, data analytics, and ICT infrastructure can meet these requirements. DT increases profits by making operations more efficient (lowering costs), more effective (better pricing and cross-selling), and better at managing risk (accurate scoring and fraud detection).

The Dynamic Capabilities Theory (Teece, 2007) expands upon the Resource-Based View by emphasizing a firm's capacity to not only possess resources but also to swiftly integrate, modify, and rejuvenate them in

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response to environmental shifts. DCT builds on RBV by focusing on a company's ability to combine, change, and renew resources in environments that are always changing. In banking, technology changes quickly, and customers' needs change all the time, so banks must keep up.

The Technology–Organization–Environment (TOE) framework (Tornatzky& Fleischer, 1990) is a third theoretical perspective relevant to this study. The TOE framework elucidates innovation adoption as influenced by technological, organizational, and environmental contexts. The technological dimension includes things like being ready for ICT and having digital skills. The organizational dimension includes things like the size of the bank and its risk profile. The environmental dimension includes things like regulatory pressure and outside shocks like COVID-19.

Signaling Theory, introduced by Spence (1973), which explains how one person (the signaler) gives information to another person (the receiver) when the two people don't know the same things. Companies in financial markets use actions that people can see, like announcing dividends, making decisions about capital structure, or investing in new technology, to show things that people can't see, like profitability, stability, or growth potential.

Innovation Diffusion Theory (Rogers, 2003) explains how digital transformation is spreading in the banking industry. It goes along with the Theory of Everything (TOE). The theory posits that innovations propagate through populations in stages, with early adopters gaining potential advantages over late adopters.

Empirical studies on digital transformation (DT) and banking performance yield inconclusive findings. Numerous studies validate beneficial outcomes: Citterio et al. (2024) and Zhu & Jin (2025) identified that digitalization improves profitability, efficiency, and resilience. However, Kriebel and Debener (2020) observe diminishing returns at elevated digital maturity levels, while other sources indicate postponed profitability attributable to initial investment expenses.In emerging markets, digital transformation (DT) often makes things more efficient and raises the value of a bank's stock, but it doesn't always mean that profits will go up right away. There isn't much research on Vietnam yet, and most of it is about lowering risk instead of making money. Nguyen & Le (2025) emphasize favorable market reactions to ICT adoption while overlooking operational results. Linh et al. (2025) investigate pre- and post-COVID effects but do not identify structural changes owing to annual data constraints.

2.3 Hypotheses Development

From the theoretical frameworks and empirical shortcomings, the following hypotheses are developed.
On the basis of the Resource-Based View (Barney, 1991), which says that technological resources can give a company a long-term competitive edge if they are valuable, rare, and used well. In banking, these kinds of resources include online service channels, data analytics, and digital platforms. Citterio, King, and Locatelli (2024) discovered that European banks that adopted digitalization experienced substantial profit growth. Zhu and Jin (2025) observe a similar phenomenon in Chinese banks. Vietnamese evidence, though limited, supports this direction. Nguyen and Le (2025) show that using ICT raises market value through Tobin's Q,

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while Linh, Ha, and Huyen (2025) show that it has small but positive effects on profitability.

H1: Digital transformation has a positive impact on bank profitability.

The study is founded on the Resource-Based View (RBV) and the Technology-Organization-Environment (TOE) framework (Tornatzky& Fleischer, 1990), illustrating how organizational characteristics influence the advantages of technology adoption. Larger banks tend to have more resources, more customers, and a better ability to deal with complicated digital systems (Do, Le, & Hoque, 2022). On the other hand, smaller banks might have problems like not having enough money, not having a strong enough IT system. International evidence corroborates this rationale: larger European and Chinese banks often exhibit more significant digital profitability effects compared to their smaller counterparts (Citterio et al., 2024; Zhu & Jin, 2025).

H2:The size of a bank positively influences the correlation between DT and profitability

Based on the Dynamic Capabilities perspective (Teece, 2007), prior empirical studies suggest that banks with strong fundamentals are more proficient at transforming digital innovation into profitability. Stable banks incur diminished credit losses, enabling them to allocate resources towards the integration of new technologies rather than crisis management. Hoque, Le, and Le (2024) assert that digital transformation reduces banks' inclination to engage in risk-taking.

H3: The relationship between DT and profitability changes positively depending on the bank's risk profile.

The fourth hypothesis is based on the theory of Dynamic Capabilities Theory and Innovation Diffusion Theory (Rogers, 2003). The COVID-19 pandemic was an outside force that made Vietnamese banks use digital technology more quickly. International evidence shows that banks with strong digital infrastructure were better able to handle the crisis (Zhu & Jin, 2025). Nonetheless, Vietnamese studies have yet to discern significant structural breaks, likely due to their reliance on annual data (Linh, Ha, & Huyen, 2025). We specifically hypothesize that the coefficient of ICT on profitability is greater in the post-COVID period (2020–2024) than in the pre-COVID period (2015–2019).

H4:The DT-profitability effect is a more positive impact in the post-COVID period (2020–2024) than in the pre-COVID period (2015–2019).

3. Research Methodology

3.1 Research Design

This section explains the analytical design that was used to see how Digital Transformation (DT) changed the profits of Vietnamese commercial banks from 2015 to 2024 (quarterly). Three related metrics—ROA, Tobin's Q, and Operating Income Margin—are used to measure profitability. A composite ICT index made for the banking sector is used to measure Digital Transformation. The framework is clearly based on panels, which lets it look at how things changed before and after COVID (2015–2019 and 2020–2024). It does this by looking at structural breaks. Standard panel regressions is employed to identify average relationships and a

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structural-change design incorporating period dummies or interactions to illustrate the impact of COVID-19 on operational dynamics.

3.2. Variable Measurement

Dependent Variables are profitability measures that are calculated quarterly: ROA, Tobin's Q, and Operating Margin.

Return on Assets (ROA)is calculated as net income divided by total assets. Investopedia (2023a):

$$ROA_{i,t} = \frac{Net\ income\ i,t}{Total\ Assets\ i,t}$$

Tobin's Q: Tobin's Q is calculated as the ratio of the market value of a firm to the book value of its assets or equity. In the context of the listed Vietnamese banks, Investopedia (2023b):

$$Tobin's\ Q_{i,t} = \frac{Market\ Capitalization_{i,t}}{Book\ Value\ of\ Equity_{i,t}}$$

Operating income margin: Operating efficiency is captured through the operating income margin, defined as:

$$Operating\ Margin_{i,t} = \frac{Operating\ income\ i,t}{Total\ Revenue\ i,t}$$

Independent Variables: Digital Transformation (DT), which is shown by a composite ICT index, is the independent variable that we are interested in. It has a few different parts:

ICT Infrastructure: Availability and quality of digital networks, servers, and hardware.

Human Resources:Spending money on training IT staff and improving their digital skills.

Internal Applications:Bringing together digital systems for risk management, compliance, and accounting.

External Services: Offering mobile banking, internet banking, and partnerships with fintech companies.

Moderating Variable: Two moderators are incorporated to examine how organizational characteristics shape the DT-profitability relationship.

Bank Size:Bank size is measured as the natural logarithm of total assets:

$$SIZE_{i,t} = \ln(Total\ Assets_{i,t})$$

The log transformation makes the distribution of assets less skewed and lets you see it in terms of changes in

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percentage. Digital transformation is expected to give bigger banks more profitable advantages because of economies of scale and better absorptive capacity (Do, Le, & Hoque, 2022).

Risk Profile:Risk is proxied primarily through the Z-score, a widely accepted measure of financial stability:

$$\text{Zscore}_{i,t} = \frac{ROA_{i,t} + \frac{Equity}{Assets_{i,t}}}{\sigma(ROA_{i,t})}$$

Higher Z-scores meana lower risk of insolvency because profitability and capitalization give you more protection against changes in the market (FRDS.io, 2023). The non-performing loan (NPL) ratio will also be used with a robustness measure:

$$\text{NPL Ratio}_{i,t} = \frac{Non-Performing\ Loans_{i,t}}{Total\ Loans_{i,t}}$$

These measures allow us to test how stable banks benefit more from digital transformation compared to riskier ones. Quarterly measurement is a critical way, as risk profiles can change rapidly during crises or periods of credit expansion.

Control Variables

Capital Adequacy Ratio (CAR): Measures solvency and regulatory compliance.
Loan-to-Deposit Ratio (LDR):Shows how well a bank manages its liquid assets and how much risk it is taking on.
Ownership Structure: A dummy variable that tells the difference between state-owned banks and private banks.
Macroeconomic Controls: Inflation, GDP growth, or monetary policy indicators, absorbed through quarterly fixed effects.

3.3. Model Specification

The analysis begins with a baseline specification estimated using Pooled Ordinary Least Squares (Pooled OLS), establishing an initial benchmark by modeling the average relationship between digital transformation (DT) and profitability, while not accounting for individual bank characteristics. However, pooled OLS may yield biased results as it fails to consider unobserved heterogeneity. To mitigate this limitation, the study employs two more sophisticated estimators:

Fixed Effects Model (FEM): lets each bank have its own intercept, which controls for bank-specific characteristics that don't change over time.
Random Effects Model (REM): This model assumes that effects that are specific to a bank are random and not related to explanatory variables.

A set of diagnostic tests helps choose the best model. The F-test compares pooled OLS and FEM to see if fixed

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effects are needed. The Breusch–Pagan Lagrange Multiplier (LM) test checks for random effects compared to pooled OLS. Finally, the Hausman test tells the difference between FEM and REM. The Variance Inflation Factor (VIF) finds multicollinearity between explanatory variables, while White's and Breusch–Pagan tests look for heteroskedasticity.

3.4. Equations Model

The baseline model is specified as:

$$Profit_{i,t}=\beta_0+\beta_1 ICT_{i,t}+\beta_2 SIZE_{i,t}+\beta_3 RISK_{i,t}+\beta_4(ICT\times SIZE)_{i,t}+\beta_5(ICT\times RISK)_{i,t}+\sum\gamma_k Control_{k,i,t}+\mu_i+\lambda_t+\varepsilon_{i,t}$$

$Profit_{i,t}$represents ROA, Tobin's Q, or Operating Margin for bank *i* in quarter *t*. The inclusion of quarterly time effects (λ_t) ensures that seasonal and crisis-specific shocks are absorbed.In this model, $SIZE_{i,t}$ is the natural logarithm of total assets, while $RISK_{i,t}$is measured either by the Z-score or NPL ratio. The coefficients β_4 and β_5 on the interaction terms indicate whether size and risk significantly moderate the profitability impact of digital transformation.

To evaluateHypothesis 4,which asserts that the profitability effects of digital transformation are more pronounced in the post-COVID era:

$$Profit_{i,t}=\beta_0+\beta_1 ICT_{i,t}+\beta_2 PostCOVID_t+\beta_3(ICT\times PostCOVID)_{i,t}+\sum\gamma_k Control_{k,i,t}+\mu_i+\lambda_t+\varepsilon_{i,t}$$

$PostCOVID_t$is a dummy variable equal to 1 for quarters between 2020 and 2024, and 0 otherwise. The coefficient β_3 on the interaction term ICT×PostCOVID indicates whether the effect of digital transformation on profitability increased after the onset of the pandemic. This specification directly tests for structural change while controlling for other factors. Additionally, models will be estimated separately for pre-COVID and post-COVID subsamples to compare coefficients and confirm robustness.

3.5. Data Collection and Analysis

The main sources are banks' quarterly financial statements, which are available to the public on their websites and the State Bank of Vietnam (SBV). Commercial databases like FiinPro and RefinitivEikon provide consistent time-series data on assets, equity, profitability, and market capitalization. With Tobin's Q, market valuation datais collected from the Ho Chi Minh Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX). The ICT Index is a proxy for digital transformation, which is from the Ministry of Information and Communications' annual ICT Readiness Reports (Ministry of Information and Communications, 2023).

The process of cleaning and preparing the data is made to ensure that the collected dataisaccurate, consistent, and reliable across banks and quarters. Winsorization at the 1st and 99th percentiles helped reduce outliers in important variables like ROA, OIM, and NPL ratios. This study uses linear interpolation for isolated gaps and a last-observation-carried-forward approach for ICT indicators that weren't available to fill in missing values caused by reporting delays.To validate the data, it is necessary to check if the computed ratios

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matched up with the annual reports and that the quarterly transitions went smoothly.

The study will firstly employ Pooled OLS, Fixed Effects Model (FEM), and Random Effects Model (REM) to estimate baseline panel regressions.Next, diagnostic tests like the F-test, Breusch–Pagan LM test, and Hausman test are done to find the best model and look for problems like heteroskedasticity, autocorrelation, and multicollinearity. To improve reliability, robust or clustered standard errors and Feasible Generalized Least Squares (FGLS) are used when needed. A structural break analysis is conducted by incorporating a post-COVID dummy variable and interaction terms to assess alterations in the DT-profitability relationship prior to and subsequent to the pandemic.

4. Conclusion

The study's key purpose is to develop a research model for investigating the impact of digital transformation on the profitability of Vietnamese commercial banks, with the emphasis on the moderating effectsof COVID-19 pandemic.The study employs a quarterly panel dataset covering the period 2015–2024, which enables a dynamic assessment of the relationship between digital transformation and profitability in Vietnamese commercial banks. The study results are expected to provide significant ramifications for both theoretical frameworks and practical applications. Theoretically, they will enhance current frameworks by illustrating how digital resources and dynamic capabilities lead to sustained financial performance across diverse conditions. In practice, they will offer bank managers useful information on how to improve digital strategies and policymaker's useful information on how to create regulatory environments that help.

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ISSN 2076-9202

STOCK PRICE AND ESG NEWS IN AN EMERGING COUNTRY

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Abstract

Previous studies, while focusing on ESG news, primarily analyzed the relationship between ESG (Environment; Social; Governance) ratings and their impact on stock prices. However, such studies mainlyfocus on a few events and do not consider the normal daily operations of companies that might use ESG news, thereby ignoring investor responses to those activities. This study attempts to fill that gap by designing a research model for analyzing the relationship between ESG news on the stock market in an emerging country, Vietnam. The study is based on 3 theories: The resource-based theory (RBT); Agency theory; and Stakeholder theory. Stock price data is collected from the HOSE exchange from 2019 to 2025 in Vietnam of 100 enterprises certified in the top 100 ESG by the Ministry of Finance. The study employes the OLS (Ordinary Least Squares) regression model to explore the impact relationship between stock prices and each type of ESG news; in a variety of financial fields; industry and services. The results of the study are expected to make practical contributions for businesses to understand the recent concerns of investors related to sustainable development.

Keywords: *Agency Theory; ESGNews; Stakeholder Theoy; Stock Price; Resource-Based Theory*

1. Introduction

1.1 Research Background

In recent years, the seriousness of environmental pollution, climate change, and social injustice has been increasing (Liu et al., 2018). As a result, many countries around the world have identified the urgency of sustainable development to address this issue (Ha et al., 2024). To overcome problems in the process of achieving sustainability, the United Nations (UN) has established the Sustainable Development Goals (SDGs) with a consensus on 17 sustainable development goals specifically implemented with 169 goals (Khaled et al., 2021).

Recently, alongside the financial perspective which traditionally focuses on a company's economic value through financial data, a new non-financial perspective has emerged: ESG which is seen as a measure of sustainability (Yu et al., 2023). Specifically, it's a framework that helps stakeholders assess a company's performance across three key dimensions: environmental, social, and governance. The importance of the ESG rating system is growing, and it's increasingly being used to evaluate a company's sustainable growth (Avramov et al., 2022). This is because ESG is a non-financial factor that reflects a company's image and reputation, which in turn helps it gain a lasting competitive advantage (Zanatto et al., 2023). This non-financial value is even presented as a resource that provides a basis for companies to improve

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operational capabilities beyond their competitors, such as by reducing costs and increasing revenue (Zanatto et al., 2023). This statement is supported by the Resource-Based Theory (RBT), which posits that changes in unique, intangible resources are often difficult for competitors to build, imitate, or fully improve upon. Consequently, a company that possesses

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these resources is highly likely to achieve superior performance and sustainable competitive advantage (Wernerfelt, 1984; Wong & Zhang, 2022).

In terms of investment, the improved reputation resulting from ESG disclosures gives companies a better opportunity to build reputational capital and enhance organizational value (Orlitzky et al., 2003). As a result, Jones (1995) argues that when a company has a good reputation, investors predict future growth and stock prices remain stable. A recent trend noted by Leit & Uysal (2023) is that investors are increasingly considering factors like "impact," "sustainability," and "corporate social responsibility (CSR)" in their investment decisions. According to data from Bloomberg Intelligence, "as of the end of 2020, global ESG assets have reached $40 trillion and are expected to grow to $53 trillion by the end of 2025." This further confirms that ESG is not only gradually becoming an emerging trend but also being recognized by investors as an investment philosophy (Ha et al., 2024). This, in turn, puts greater pressure on companies, compelling them to engage more in activities like CSR or ESG reporting to maintain a good corporate reputation.

Specifically, the role of media in the financial market has been clearly established: investors receive public announcements and news, analyzing them to assess future cash flows, potential risks, or asset values (Naumer & Yurtoglu, 2022; Zanatto et al., 2023). However, traditional forms of financial information, specifically financial reports, often lack timeliness and fail to fully reflect the value of intangible assets. This leads to non-financial values or intangible assets being overlooked (Lourenço et al., 2014). Consequently, investors and financial analysts are increasingly recognizing the value of intangible assets, such as information on CSR and ESG reports, which may not be disclosed in traditional financial information but can be found in media releases (Wong & Zhang, 2022).

1.2 Problem Statement

Previous studies, while focusing on ESG news, primarily analyzed the relationship between ESG ratings and their impact on stock prices (Lyon & Shimshack, 2015; Robinson et al., 2018). Furthermore, studies have also measured the negative impact of extreme ESG news, such as toxic spills, racial discrimination scandals, and accounting fraud, on a company's market value (Capelle-Blancard et al., 2021). However, such studies have limitations: they focus on a few events and do not consider the normal daily operations of companies that might use ESG practices, thereby ignoring investor responses to those activities (Capelle-Blancard & Petit, 2019). Therefore, Griffin & Sun (2013) proposed expanding company information to include annual ESG reports, voluntary community contributions, green/sustainability awards, and certifications from professional and government agencies (Piccioni et al., 2024). This also minimizes the "greenwashing" effect, ensuring that the information provided is verified to avoid manipulation aimed at pleasing investors (Serafeim, G., & Yoon, A., 2022). Additionally, most previous studies have selected companies in Brazil, the US, and China (Gao & Tran, 2021; Robinson et al., 2018), but there has been little research focused on Southeast Asian markets, which also have high rankings in sustainable development reporting (ERIA/OECD, 2024). There is a research also indicates that different ESG news in various industries can convey more

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value-relevant information about a company's future growth, risks, and competitive positioning (Serafeim, G., & Yoon, A., 2022). Consequently, this study focuses on various companies in manufactory, service and finance industries in Vietnam.

1.3. Research Objectives

This study aims to fill that gap by analyzing the relationship between ESG news on the stock market by assessing the impact on reactive stock prices, thereby assessing the level of investor interest in the context of sustainable development that is gradually being implemented in Southeast Asia. Male from 2019 to 2025. Specifically, this study aims to examine investors' interest in ESG news and contribute to theories, specifically this study discusses and redefines 2 theories: Agency theory and Stakeholder theory in the context of whether managers publish ESG news is supported by investors or not. At the same time, this study also provides practical recommendations for businesses whether they should focus on ESG activities or in other words, proactively provide and publish more ESG news to contribute to influencing their stock prices. In addition, find out whether the level of investor interest in each ESG pillar or for each industry is different.

2. Literature Review

2.1. Review of Theories

2.1.1. Resource-Based Theory (RBT)

Resource-based theory (RBT) argues that differences in resources, especially intangible resources, can form a sustainable competitive advantage because intangible resources are difficult to accumulate, spread, develop, or replicate from competitors (Wong & Zhang, 2022). Therefore, the benefits of corporate reputation are seen as a resource to create a premise for stakeholders to commit and build a business that is superior to other competing businesses, such as reducing costs and increasing revenue (Zanatto et al., 2023). Not only that, the fact that businesses are committed to sustainable development or also fulfill social responsibility through the publication of positive information, this serves as a positive signal for stakeholders such as attracting investment, retaining important stalkholders including financiers, etc employees, customers, or suppliers (Sabbaghi, 2022; Wong & Zhang, 2022; Zanatto et al., 2023). This also encourages businesses to actively pursue sustainable operations, environmental protection to build a sustainable competitive advantage and enjoy benefits such as a good reputation (Hart, 1995). And in fact, researchers also observe that a business that actively participates in environmental and social sustainability activities is increasingly appreciated (Adomako & Tran, 2022).

2.1.2. Agency Theory

Agency theory focuses on emphasizing that the separation of ownership and control is likely to lead to deep management, affecting long-term business plans, goals, and shareholder returns (Jensen & Meckling, 2019). Managers are often motivated to invest in short-term financial assets, which provide the lowest immediate returns, costs and risks, thereby meeting short-term goals to maintain operational performance and ensure the expected stock price (Orhangazi, 2008). However, according to Tan & Teng (2025), ESG news can change short-term dynamics because it encourages managers to focus on long-term investments such as participating in sustainable business growth and sustainable competition. First, from the perspective of

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monitoring and managing communication channels, it has a significant impact on improving the quality of corporate governance from within, while minimizing risks and problems within the agency itself (Dyck et al., 2008). Although positive ESG news is recognized as building a good corporate image, increasing its reputation in the market and attracting more investors, it also creates a contradiction from increasing the cost of reputation to ensure that ESG news is published consistently (Yu et al., 2023). The reason is because, while ESG news is also risky under media scrutiny, positive ESG news information that is not accurate can become a risk of punishment from stakeholders such as affected stock prices (Tan & Teng, 2025; Fletcher et al., 2012). In other words, studies have shown that ESG-related activities can reduce financial performance, that business executives who choose to pursue ESG are seen as a costly decision to build their reputation, not only at the expense of shareholder interests as well as reducing the value of stocks (Ruan & Liu, 2021). In fact, as Marsat & Williams (2013) observe that the cost of investing in corporate social responsibility sometimes negatively affects corporate value, managers need to consider that the optimal cost should not outweigh the benefits to stakeholders, especially in the context of emerging markets (Lima Crisóstomo et al., 2011).

2.1.3. Stakeholder Theory

Based on stakeholder theory, businesses and stakeholders form a close-knit "community of destiny" (Casciaro and Piskorski, 2005). More specifically, the sustainable development of enterprises is based on satisfying the needs of stakeholders and protecting the interests of stakeholders, and in this context, high-quality ESG performance has become an important communication medium between businesses and stakeholders (Zheng et al., 2022). What kind of feedback from stakeholders on such positive communication has caught the attention of scholars. For creditors, they are often willing to provide businesses with good ESG performance with higher credit ratings and lower debt interest rates (Di Tommaso and Thornton, 2020). When assessing the solvency of a business, they will refer to ESG performance that can represent the sustainable development of the business and allow creditors to mitigate the risk of not recovering capital on time. In particular, for investors, with the rise of the concept of "green investment", ESG scores are an important basis for investors to assess the sustainable development of enterprises, and play an increasingly important role in investment decisions (Zheng et al., 2022). Furthermore, Serafeim and Yoon (2022) found that ESG scores can predict future news and investors are less sensitive to negative news from high-quality ESG companies, reducing market reaction and stock price volatility. For government agencies, the state has introduced a series of preferential and punitive policies to call for and encourage ESG practices (Zheng et al., 2022). Businesses can strengthen political ties and receive government support and subsidies through active participation in ESG. For suppliers, Baumgartner et al. (2020) found that good ESG performance can enhance a business's bargaining power. They tend to partner with businesses with high ESG scores for a long time. They believe that businesses with high ESG scores have a low risk of default and benefit from a good corporate image of their partners. For employees, a business's active ESG practices can first directly improve employee wages and benefits, focus on employee skills training and health security issues, and provide a better working environment, it is largely possible to avoid negative behaviors and employee turnover intentions, improve work enthusiasm, and better employee engagement (Hui, 2021). Furthermore, a corporate image shaped by good ESG performance can stimulate employee pride at work and identification

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with the business, and increase their happiness (Bocean et al., 2022), as higher employee identification and satisfaction contribute to improved work efficiency and performance, indirectly increase enterprise value (Wang et al., 2016). For management, a business's high-quality ESG performance can also affect the manager's own reputation and salary. This study applies Stakeholder theory to propose the hypothesis that positive ESG news has a positive effect on stock prices because it is supported by investors and believes that the value of the business will increase when it is noticed that managers focus on ESG activities as well as actively disclose ESG news.

Therefore, this theory is in contrast to Agency theory because of some studies (Burke, 2021; Yu et al., 2023) found that when ESG performance is included in management's performance evaluation, if performance is poor, management is questioned and pressured by shareholders, affecting their career development and even forced to leave, this will cause management to focus excessively on ESG performance and engage in short-sighted behavior that will harm the overall interests of the business, which will lead to undervalued corporate value.

2.2. Review of Previous Studies

Some studies have been conducted on the impact of ESG news on enterprise value, often reporting varying results. Scholars have employed various econometric methods to examine whether the stock market reacts to ESG news. More recently, some scholars have utilized event study analysis, indicating that investor sentiment only responds to positive ESG sentiment, while negative ESG news does not significantly affect shareholders, suggesting that shareholders reward but do not punish behaviors related to sustainable development (Nyakurukwa & Seetharam, 2023). Supporting this finding, Zanatto et al. (2023) discovered that positive ESG actions, and thus news, can serve as a buffer against market volatility. However, during recession periods, focusing solely on ESG to build a good reputation is insufficient to counteract the adverse effects of market fluctuations. Furthermore, research has been conducted on the stocks of multinational enterprises in emerging markets, whereas most prior studies have concentrated on developed markets; specifically, scholars have identified the negative impact of all enterprise ESG factors on stock price crashes, which may be due to their high correlation with environmental (E) and social (S) factors (Lee et al., 2022).

The most recent literature suggests that the relationship between ESG news and stock returns depends on investors' perceptions of ESG (Pedersen et al., 2021). Furthermore, due to the growing public concern about sustainability, the market's reaction to ESG news may vary in different periods. As a result, some scholars have divided the entire sample of observational data by month into three sub-periods: 2012–2015, 2016–2019, and 2020–2023 (Vu et al., 2924). Moreover, in Vietnam, the impact of ESG news was mainly driven by information related to topics S and G, and news related to the environment did not significantly affect abnormal stock returns, as the market's reaction to E news was negligible in all sub-samples (Vu et al., 2024). Notably, the benefits of positive news over negative news decline faster over time, and they are strongest in 2011–2015 and weakest in 2020–2023. According to Vu et al (2024) the initial price pressure caused by ESG news persisted up to twelve months after the news in the period 2011-2015, but it took less than two months to fully reverse in the latest sub-pattern. As ESG becomes a recognized criterion with a significant amount of data sources available, the market does not seem to see ESG news as a source of unexpected information about companies. ESG news is mostly in the spotlight, causing only short-term price

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fluctuations rather than long-term impacts on company valuations (Vu et al., 2024).

Similar to the research orientation, Serafeim and Yoon (2022) report a positive association between ESG news and price volatility. The author also found that the stock price reacted to an unexpected piece of ESG news. In general, Bolton and Kacperczyk (2021,2023) also concluded that carbon risk is priced by the market. Furthermore, Serafeimand Yoon (2022) documents the mitigating role of disagreement. They found that ESG shocks had an impact on future returns, but the impact was stronger when evaluators were unanimous. Our article adds another layer to the discussion. We argue that the reaction of stock prices to ESG news depends not only on ESG news or just ESG ratings, but possibly both. The role of media and investor attention in spreading sustainability shocks is analyzed in Wong and Zhang (2022) and Zhang et al. (2021).

2.3. Hypothesis Development and Research Model

2.3.1 ESG News and Stock Price

ESG news sentiment can reduce these dynamics through two distinct mechanisms. From the perspective of attracting capital, positive ESG-related news coverage sends favorable signals to the market, showing that the business has solid internal governance and a strong commitment to sustainable development. In capital markets characterized by information asymmetry, these signals imply that the business faces lower traditional financial risks, such as representative conflicts and stock price collapse risks, as well as emerging ESG-related risks such as regulatory sanctions or boycotts from consumers due to negative ESG publicity (Chasiotis et al., 2024). As a result, investors and creditors, especially those in the ESG investment space, tend to assume that companies with a strong positive ESG reputation have better repayments and long-term growth prospects. This perception increases the likelihood that such companies will gain access to external funding, reducing the need to hold financial assets as a liquidity risk hedge.

From a capital utilization perspective, favorable ESG communication sentiment can enhance a company's reputational capital while increasing the likelihood that actions that harm the interests of stakeholders will be exposed publicly. To protect reputation and maintain consistency with published ESG strategies (Yu et al., 2023), business managers are more likely to align financial practices that conflict with ESG goals. Specifically, they can reduce investments in financial assets geared towards short-term returns and instead allocate more resources to core business activities and long-term projects that align with the interests of a broader group of stakeholders, thereby significantly limiting the trend of financialization due to speculative motives (Tan et al., 2025).

There is a rich volume of literature in the field of accounting and finance that studies the market's reaction to news. The general results show that the emergence of new information causes the market to react (Beaver 1968), reducing information asymmetry (Kim and Verrecchia 1994; Tetlock 2010), and increased trading volume (Berry and Howe 1994). Barber and Odean (2008) found that companies that received media coverage were more likely to attract investor attention than those that were not, and Dellavigna and Pollet (2009) along with Hirshleifer, Lim and Teoh (2009) found that investor attention affected stock returns. More recently, articles have looked at how markets react to ESG-related events. For example, Grewal et al. (2019) studied the market reaction around the announcement of ESG disclosure regulation in the European Union and noted a less negative market reaction for companies with high levels of ESG disclosure.

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Naughton et al. (2019) found that ESG performance announcements generate positive anomalous returns during periods when investors overvalue ESG performance. Flammer (2013) found that the market responded positively to the announcement of eco-friendly initiatives, and Dimson et al. (2015) noted unusually positive returns from successful investor ESG commitments. Capelle-Blancard and Petit (2019) found a negative market reaction to negative ESG news.

This line of documents shows that ESG news can be related to shareholder value. The argument is that better ESG performance can translate into value thanks to operational efficiency, stronger brands, and customer loyalty, as well as employee engagement (Fombrun and Shanley 1990; Turban and Greening 1997; Freeman, Harrison and Wicks 2007; Edmans 2011; Eccles, Ioannou and Serafeim 2014; Lins, Servaes and Tamayo 2017). However, it is noted that another line of literature argues that a company's ESG efforts are related to representative costs. In this case, ESG primarily enhances the reputation of managers at the expense of shareholders (Cheng, Hong and Shue 2013; Krueger 2015). This will lead to an increase in the company's costs, which is also a disadvantage in the competitive market (Jensen 2002) and leads to a negative market reaction to positive ESG news (Krueger 2015; Capelle-Blancard and Petit 2019).

As a review of the literature has indicated, there exists a link between ESG news and a company's stock price, which has been established in a number of empirical studies (Murray et al., 2006; Geczy et al., 2021). Therefore, the following general hypothesis is proposed that there is a significant connection between the psychology of the ESG news published and the stock price of a company.

Assuming that the ESG composite index is separated, we have focused on each component of ESG. As previous studies have suggested, each component of ESG has its own impact on a company's valuation, such as the environment (Clarkson et al., 2013; Serafeim, 2020), society (Hohnen & Potts, 2007), and governance (Miller & Serafeim, 2014). Therefore, we propose the hypotheses H1a, H1b, H1c, and H1d as components of H1:

H1a: There is a significant link between the stock price and the sentiment of the Environmental news released for a company.

H1b: There is a significant connection between the stock price and the sentiment of Social news released for a company.

H1c: There is a significant link between the stock price and the sentiment of the Governance news released for a company.

H1d: There is a significant link between the stock price and the sentiment of the general ESG news released for a company.

2.3.2. ESG News and Stock Price in Various Industries

A review of the literature also reveals a higher sensitivity of companies belonging to certain industrial sectors, such as oil and gas, chemicals, mining, steelmaking, paper, pulp, etc., to ESG news sentiment (Garcia et al., 2017). Similarly, there are empirical studies that show that investors have effectively differentiated across industrial sectors (Uyguretal., 2014). In fact, there are studies that show that fluctuations in stock prices are markedly different between industries, because the characteristics of each industry are affected by ESG effectiveness are different (Ashwin Kumar et al., 2016). In the study by Serafeim & Yoon (2023), it also studies by different industries such as "Energy; material; Industrials;

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Financials; Health Care; Communication Services; …". The industries collected by this study are based on the list of top 100 ESG businesses including industries such as: "Retail; Insurance; Real Estate & Construction; Processing & Manufacturing; Information Technology & Telecommunications; Tourism; Pharmaceuticals & Medical Equipment; Conglomerate; Logistics; Energy & Oil and Gas; Banking; Other Finance; High-Tech Agriculture; Finance & Securities; Food & Beverage; Conglomerate". All these industries are reconfirmed according to 3 main groups such as: Finance, manufacturing and services. Therefore, the following hypothesis is proposed.

H2: There is a significant difference in the degree of association between ESG news sentiment and stock price of business across industry

2.3.3 Research Model

Based on the research of (Serafeim, G., & Yoon, A., 2022) evaluating the relationship between stock price and ESG news with the dependent variable MAR calculated the profit from stock returns minus market returns, it was determined to help measure short-term price reactions to ESG news on a daily basis. In particular, this study also uses the Compustat methodology to look at the following dates for ESG news: The ESG news independent variable is defined as a dummy variable equal to 1 for pos and pre variable respectively 30 days around the ESG announced date, the remaining days are defined as a dummy variable equal to 0. From there, the research model i,t is shown below.

$R_{i,t} = \alpha + \beta_0 \text{ESG news} + \beta_1 \text{Date FE}_{i,t} + \beta_2 \text{Industry FE} + \epsilon_{i,t}$

3. Methodology

3.1. Research Design

To clarify the relationship between ESG news and the influence of market reactions reflected in stock prices, this study opted for a qualitative research methodology, with ESG news obtained from the main websites of businesses and on social platforms through their main accounts between 2019 and October 2025. The enterprises selected to obtain data have been listed on the stock exchange in 3 Southeast Asian countries including Vietnam expected to observe from 100 businesses. Businesses that do not meet standards such as not disclosing information related to ESG; No public activity will be removed from the dataset.

3.1.1. Sample, Sampling Technique and Data Collection

ESG news are collected from prestigious newspapers such as Vietnam plus, Hanoi times; VnExpress; … and from the main website of each business to get ESG reports. The sampling period is from 2019 to October 2025. The 100 selected enterprises for observation are taken from the top 100 enterprises recognized for sustainable development by the Ministry of Planning and Investment and published through the Finance and Investment Newspaper. It is expected that the sample size data collected for nearly 100 businesses is about 2000 ESG news or more and is divided into 3 main aspects such as: Environment; Social; and Governance. The industries collected by this study are based on the list of top 100 ESG businesses including industries such as: Retail; Insurance; Real Estate & Construction; Processing & Manufacturing; Information Technology & Telecommunications; Tourism; Pharmaceuticals & Medical Equipment; Conglomerate; Logistics; Energy & Oil and Gas; Banking; Other Finance; High-Tech Agriculture; Finance & Securities; Food & Beverage; Conglomerate. All these industries are reconfirmed according to 3 main groups such as:

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Finance, manufacturing and services.

The studyuses the daily stock price of each company from HOSE, the largest and most prestigious stock exchange in Vietnam and the stock price data that closes every day from the beginning of 2019 to October 2025 to measure the daily change or impact of each ESG news released. The industry of businesses has also been noted to test the 2nd hypothesis in the study. Before looking for ESG news in the list of top 100 recognized companies for sustainable development, the study organizes a re-screening of which businesses are listed on the HOSE stock exchange. To examine ESG news related to businesses, the study uses keywords related to sustainability such as: "ESG; sustainable development; sustainability; evironment; social; governance; …) to the newspaper page; The magazine gives a list of corresponding results. The study then observes the date on which those ESGs are announced and then convert to a Dummy variable equal to 1.

3.2. Variable Measurement

ESG News

This study also uses the Compustat methodology to look at the following dates for ESG news. We define the ESG news variable, in the form of a dummy variable with 1 for the date of public the news. According to a study by Choi et al (2025), ESG news was observed during the 30 days before and after the ESG news was provided. This helps to measure whether ESG information is leaked out before it is announced, in addition to measuring how fast or slow ESG information is processed after publication.

Stock Return

We measure price movements by calculating the change between the closing price of the stock on day i and day i -1

$$R_i = \left(\frac{\text{Index close}_i}{\text{Index close}_{i-1}} - 1\right) \times 100\%$$

Index close i: Stock price at the end of the day i

Index close i-1: Stock price at the end of the day i-1

4. Conclusion

The key purpose of the study is to develop a research framework for investigating the association between ESG news on the stock market in an emerging market, Vietnam. The study findings are expected to have important academic and practical implications in both testing and developing theory and practical applications in the context of ESG, which is gaining increasing attention. While previous studies have not clearly discussed the theoretical contradictions; focusing a lot on ESG score ranking to represent ESG news, this misses the information element; news; reports are actively disclosed from businesses. The study is expected to reveal that the ESG news of Vietnamese businesses when released is supported by investors through a positive influence on stock prices. At the same time, check whether Agency theory and Stakeholder theory, which hypothesis is suitable in the context in Vietnam. From the use of the OLS (Ordinary Least Squares) analysis model.

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ISSN 2076-9202

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