HOW DOES CORRUPTION SHAPE LENDING PRACTICES IN COMMERCIAL BANKS' GOVERNANCE?

Nguyen Duy Thai *, Tang My Sang **, Nguyen Tien Hung *

* University of Economics Ho Chi Minh City, Ho Chi Minh City, Vietnam
** *Corresponding author,* Ho Chi Minh University of Banking, Ho Chi Minh City, Vietnam
Contact details: Ho Chi Minh University of Banking, 36 Ton That Dam, Sai Gon Ward, Ho Chi Minh City, Vietnam

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Abstract

Corruption negatively affects lending by commercial banks since it increases credit risk, reduces transparency, and misallocates loans, leading to inefficient capital allocation. Banks can lower borrowing in the case of a highly corrupt environment due to increased risk or engage in unethical practices, ultimately undermining financial stability and economic growth. The article aims to understand the impact of corruption on lending activities. The research sample includes 27 Vietnamese commercial banks in the period from 2012 to 2023. The data was collected from the audited financial statements of commercial banks, the World Bank, and Transparency International. The results from the system generalized method of moments (SGMM) estimate show that the Corruption Perception Index (CPI) has a positive relationship with the loans to total asset ratio and the growth rate of loans. This one-way relationship implies that raising awareness of corruption helps improve the transparency of the business environment, thereby increasing the lending activities of commercial banks in Vietnam. In addition, it provides pioneering evidence of the relationship between corruption perception and lending activities of commercial banks in Vietnam. The findings provide policy implications for bank managers and macro policymakers regarding transparency in the business market by raising awareness of corruption and improving lending practices.

Keywords: Bank Lending, Commercial Bank, Corruption, Sustainable Development

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1. INTRODUCTION

The development of the banking industry influences economic growth by various mechanisms directly and indirectly as well (Ledhem & Mekidiche, 2020). Commercial banks contribute to enhancing economic growth and expansion through financing for investment and expanding the ability to access financial resources (Rinaldi & Spadavecchia, 2021). Whereas Kismawadi (2024) emphasized the commercial banks' crucial role in allocating and distributing economic resources all over the world,

Oroud et al. (2023) stressed that such banks perform significantly in facilitating entrepreneurship. Through providing a variety of financial facilities and services to all socioeconomic segments, including underserved communities, commercial banks encourage economic empowerment, hence leading to improving overall socioeconomic development (Mishra et al., 2023).

Bank lending is considered a vital component in driving economic growth since it stimulates economic activities, especially in developing nations (Chen et al., 2024). Moreover, bank loans contribute to expanding the economy through a variety of channels. Because of a critical factor of the monetary system, it helps to transfer money from the supply side to the demand side, supporting economic activities by providing funds for the production of goods and services, fostering consumer spending, and encouraging capital investment, hence all of which lead to economic growth (Kismawadi, 2024). Commercial banks, by implementing sound lending practices, facilitate innovation and business expansion, which in turn, boost the economy and generate employment (Caporale et al., 2020). In addition, by assessing the borrowers' financial health carefully, banks ensure allocate capital to feasible projects supporting economic development in the long run (Bottero et al., 2020). To the specific segment of small and medium-sized enterprises (SMEs), Lu et al. (2022) indicated that bank lending can enhance SMEs' operating expansion and growth through catering loans for working capital, trade finance, etc.

Even though there are numerous cultural and legal efforts to prevent corruption, it is still prevalent everywhere (Bahoo, 2020; Bari et al., 2024; Effendi & Ali, 2023). It significantly threatens the finance sector, hindering legal implementation as well as human rights (Alshubiri et al., 2024; Deda et al., 2024; Sonsuphap, 2022). In addition, corruption is considered a concern in all aspects of finance, from macro areas of international finance and markets to micro-segments, including government spending, corporate finance, and personal wealth (Lucey et al., 2023). According to Son et al. (2020), in the banking context, corruption can manifest in many different forms, and when widespread, can undermine attempts to allocate capital efficiently. Supporting this opinion, Bahoo (2020) posited that corruption impacts bank lending and argued that corruption within banks is not only a technical financial issue but also a management and business concern.

However, while existing studies have largely focused on the general impact of corruption on the financial sector as a whole (Effendi & Ali, 2023), comparatively less attention has been given to the precise impact of corruption on the lending behavior of banks. Further, in the existing literature, there is a propensity not to distinguish between different forms of corruption, bribery, favoritism, and regulatory capture, and their separate implications for bank lending. This gap in the literature demands a more in-depth examination of the impact of corruption on bank lending behavior at the bank level, particularly in developing nations.

The effect of corruption on bank lending practices at both the country and bank level has attracted a variety of researchers in recent years (Pluskota, 2020). Statnik and Vu (2020) and Hoang et al. (2022) revealed there are ongoing discussions about whether corruption accelerates ("grease the wheels") or hinders economic growth ("sand the wheels"). Previous research has generally supported the hypothesis of "sand the wheels" in the banking industry (Lucey et al., 2023; Alshubiri et al., 2024), among others. On the contrary, Fungáčová et al. (2019) argued that corruption may occur in lending, in which borrowers' bribes may enhance their opportunities of getting bank loans, then potentially benefit bank lending. In addition, by conducting research in China, Bakken and Wang (2021) proved that the most productive companies receive larger loans because they are willing to pay more in bribes. Statnik and Vu (2020) studied the demand side of bank loans and recognized that corruption influences loan applications differently in upper-middle-income and lower-income countries. In upper-middle-income nations, corruption tends to reduce borrowing, whereas it can increase borrowing in lower-income countries.

With the mixed evidence in the literature, this research tries to untangle the extent to which corruption constrains or facilitates bank lending in Vietnam. By taking into account different dimensions of corruption and their specific effects on bank lending, this study aims to shed a better insight into how corruption operates in the banking industry.

Vietnam's economy has grown impressively for decades and is considered one of the fastest-growing emerging markets in the world. However, its financial market needs more improvement (Phan & Archer, 2020). In Vietnam, the banking sector has a historically leading role in the financial system. Banks are dominant financial institutions, among others, and have widespread branch networks nationwide. Consequently, it is convenient for both firms and individuals to access bank loans for their financial needs (Le et al., 2022). According to Pham and Nguyen (2020), local commercial banks are the majority institutions of the banking system in Vietnam, including privately owned commercial banks and state-owned ones, whereas a few foreign banks have their specific market segments. The banking system in Vietnam has faced significant difficulties because of poor credit quality and a substantial amount of non-performing loans (NPLs). It has also exposed many corruption scandals in recent years (Hoa et al., 2023).

Vietnam is one of the countries with a relatively low Corruption Perception Index (CPI). The situation of corruption and corruption crimes in Vietnam in the banking sector is increasingly sophisticated and complex, increasing in number and severity. Many corruption cases in the banking sector have taken place during the research period. The case of BIDV bank, which was prosecuted for embezzlement of assets and fraudulent appropriation of assets; or the events that the State Bank of Vietnam decided to acquire three state-owned commercial banks including CBBank, GPBank and Ocean Bank because all three banks are associated with major economic corruption cases causing losses of up to trillions of Vietnamese dongs in 2015. A manager at Dong A Bank was charged with "intentionally revealing state secrets" and "abuse of position and power to appropriate assets" in the 2018 case. The most recent case was Van Thinh Phat in 2023, where the group used Saigon Commercial Bank (SCB) as a backyard for its capital mobilization efforts.

Regarding the literature on corruption in Vietnam, previous studies have initially and primarily focused on the relationship between anti-corruption actions and non-financial enterprises (Hoang et al., 2022; Hung Son et al., 2020). Consequently, Pham and Nguyen (2020) emphasized that these findings have not demonstrated the impact of anti-corruption on banking performance. Hoang et al. (2022), through quantitative research using sample data from Vietnamese commercial banks over the period 2005–2019, proved that a bank's profitability, which is measured by return-on-assets (ROA) and return-on-equity (ROE), can be positively influenced by anti-corruption efforts in the long run. However, there is a wide research gap regarding how corruption affects bank lending in Vietnam. The above research gaps have led us to investigate the following research questions in the present study.

RQ1: How does corruption affect lending practices in Vietnamese commercial banks?

RQ2: What are the policy implications to limit corruption in lending?

This study contributes three specific dimensions to the literature on corruption. Firstly, the findings stress and highlight the economic impact of corruption measures on commercial banks. Secondly, the authors supplement the corruption literature by providing empirical evidence from a bank lending perspective. Thirdly, this study complements earlier work by making distinctions between distinct corruption types and testing their associated influences on lending at banks, and so enriching theory and empirical findings on the relationship between banking and corruption. Finally, this research serves as one of the first sources to reference when investigating the nexus of corruption and commercial bank lending within the context of Vietnam.

The next contents of the paper are structured as follows. Section 2 reviews the relevant literature. Section 3 outlines the methodology, research design, and data. Section 4 presents and analyzes the empirical outcomes. Finally, Section 5 offers implications and concludes the study.

2. LITERATURE REVIEW

The banking system plays a critical role as an intermediary to connect and transfer funds between lenders and borrowers within the economy. Although it is important, the banking system still faces difficulties and is vulnerable to challenges, including corruption (Bakken & Wang, 2021). Corruption is a significant element that causes the prevalence of nonperforming loans in various countries (Bermpei et al., 2021). According to Transparency International, corruption is defined as the abuse of entrusted power for private gain (Pozsgai-Alvarez, 2020). In the bank lending context, Weill (2011) argued that corruption may appear in the lending process, in which bank officials require bribes to grant loans. This could be considered as a financial barrier, acting as a hidden tax because it increases loan costs. On the other hand, borrowers might proactively offer bribes to promote their opportunity to get bank loans (Bahoo, 2020). Given the increasing concerns about corruption, understanding its impact on bank lending has become a key area of investigation in both theoretical and empirical studies.

2.1. Theoretical framework

This research is drawn on three correlated theoretical frameworks, including "agency theory", "institutional theory", and "sand the wheels" versus the "grease the wheels" hypothesis, which are regarding the economic impacts of corruption. Agency theory mentions conflicts between principals, such as shareholders or depositors, and agents (e.g., bank officials and bank managers), particularly in weakly monitored business environments. Corruption worsens this issue because agents may be involved in opportunistic behavior like rent-seeking, motivated lending (Akins et al., 2017; Schwert, 2018; Jiang & Wang, 2024). On the other hand, institutional theory emphasizes the role of formal and informal institutions in directing and influencing economic behavior. In case of lacking transparency or ineffective governance, corruption may thrive and distort credit allocation mechanisms (Alshubiri et al., 2024; Bari et al., 2024).

The central theoretical foundation for this research is the "sand the wheels" and "grease the wheels" hypothesis. The "sand the wheels" approach argues that corruption discourages bank lending by distorting the allocation of resources, increasing operational costs, and reducing financial stability (Akins et al., 2017; Lucey et al., 2023; Alshubiri et al., 2024). Conversely, the "grease the wheels" hypothesis suggests that in rigid financial systems, corruption may ease bureaucratic constraints, enabling firms to obtain credit more easily (Fungáčová et al., 2019). These contrasting perspectives highlight the need for empirical evidence to determine the actual effects of corruption on bank lending.

2.2. Empirical research

Empirical studies, which utilize quantitative approaches, have explored the impacts of corruption on diverse aspects of banking. The research proved that corruption deforms bank lending decisions, reduces credit volume, and favors connected firms or individuals (Bermpei et al., 2021; Chen et al., 2015). According to Akins et al. (2017) and Son et al. (2020), corruption relates to excessive risk-taking, increased NPLs, and delayed recognition of loan loss. Furthermore, weak bank lending performance is often linked to highly corrupt environments, especially in fragile regulatory economies (Alshubiri et al., 2024; Murta & Gama, 2021). On the contrary, while corruption is generally seen as harmful, it can help banks with high safety-seeking to approve more loans in some situations (Weill, 2011). It is argued that in some weak formal credit systems or excessive bureaucratic environments, corruption may facilitate firms bypassing red tape and access to financial resources (Statnik & Vu, 2020; Hung Son et al., 2020).

Building upon this theoretical debate, Weill (2011) provided a foundational model to examine corruption's influence on bank credit allocation. Later studies, such as those by Akins et al. (2017) and Lucey et al. (2023), expanded this framework by incorporating macroeconomic conditions and institutional quality. At the bank level, corruption introduces inefficiencies in credit decisions, leading to an increase in nonperforming loans and financial instability (Bottero et al., 2020). These studies emphasize the importance of governance mechanisms in mitigating corruption's adverse effects on banking operations.

Several empirical studies have analyzed the impact of corruption on bank lending. At the country level, research suggests that corruption weakens bank credit, both in developed and developing nations (Fungáčová et al., 2019). Hoang et al. (2022) found that corruption leads to a decrease in loan-to-asset ratios, signifying reduced credit allocation by banks. Similarly, Jiang and Wang (2024) confirmed that banks in highly corrupt environments tend to be more conservative in lending, primarily due to heightened credit risk concerns.

At the bank level, Weill (2011) indicated that corruption has a complex impact on lending behavior. While high-risk banks may limit credit issuance due to corruption-induced uncertainties, some institutions may increase lending due to bribery-incentivized practices (Deda et al., 2024). This finding aligns with the "grease the wheels" hypothesis, which proposes that corruption may sometimes facilitate lending by bypassing inefficient regulations (Bermpei et al., 2021). However, the long-term negative consequences of corruption, such as reduced loan repayment discipline and weakened financial oversight, tend to outweigh any short-term benefits (Hung Son et al., 2020).

Vietnam's banking sector has played a crucial role in the country's rapid economic growth. However, it has also faced significant challenges, including rising corruption scandals and weak credit quality (Pham & Nguyen, 2020). The Vietnamese banking system is characterized by a dominance of commercial banks, many of which are state-owned or have close ties to government officials, creating an environment where corruption may thrive (Le et al., 2022).

Recent high-profile corruption cases in Vietnam have underscored the severity of the issue. For example, the State Bank of Vietnam's forced acquisition of three commercial banks (CBBank, GPBank, and Ocean Bank) due to corruption-related financial instability highlights systemic weaknesses in governance and oversight. Similarly, the 2023 Van Thinh Phat case, involving fraudulent capital mobilization through SCB, illustrates the far-reaching implications of corruption on financial stability (Malesky & Bui, 2024).

Despite increasing anti-corruption efforts, empirical research on how corruption influences bank lending in Vietnam remains limited. While prior studies have primarily focused on the relationship between anti-corruption measures and non-financial enterprises (Hoang et al., 2022; Hung Son et al., 2020), there is a gap in understanding how corruption directly affects bank lending decisions. This study aims to fill that gap by examining corruption's role in shaping credit allocation strategies within Vietnamese commercial banks.

3. METHODOLOGY

3.1. Research model

Major quantitative variables of the reviewed empirical research include the Corruption Perception Index (*CPI*), bank lending activity (loan growth rate, ratio of loan to total assets), loan quality indicator (NPLs ratio), and control variables such as macroeconomic indicators (gross domestic product (GDP) growth rate, inflation), bank-specific characteristics (ratio of deposits to total assets, the liquidity assets to total assets ratio, bank capital (equity) to total assets ratio).

To investigate the impact of corruption on bank lending, this study draws upon existing literature to develop a conceptual model. The model integrates macroeconomic factors, institutional quality indicators, and bank-specific characteristics to comprehensively assess corruption's influence on lending behavior. Previous research has demonstrated that corruption can alter loan supply through multiple mechanisms, including changes in credit risk perception, financial reporting opacity, and regulatory capture (Murta & Gama, 2021; Oroud et al., 2023). To assess the impact of corruption on the lending activities of Vietnamese commercial banks, the authors developed two empirical models based on previous studies by Weill (2011), Nguyen and Dang (2020).

$$LOANS_{it} = \alpha_0 + \beta_0 LOANS_{it-1} + \beta_1 CPI_t + \beta_2 CAP_{it} + \beta_3 DEP_{it} + \beta_4 INF_t + \beta_5 LIQ_{it} + \beta_6 NPL_{it} + \varepsilon_{it} \quad (1)$$

$$GRLOANS_{it} = \alpha_0 + \beta_0 GRLOANS_{it-1} + \beta_1 CPI_t + \beta_2 CAP_{it} + \beta_3 DEP_{it} + \beta_4 INF_t + \beta_5 LIQ_{it} + \beta_6 NPL_{it} + \sigma_{it} \quad (2)$$

where, $LOANS_{it}$ and $GRLOANS_{it}$ are the two dependent variables in Models 1 and 2, respectively, representing the proportion of loans to the total assets and the lending growth rate (*i*) in the year (*t*). CPI_t represents Vietnam's CPI in the year (*t*), the higher the value of this index, the higher the market transparency (or low level of corruption). The control variables in the model include equity ratio (*CAP*), deposit ratio (*DEP*), liquidity ratio (*LIQ*), non-performing loans ratio (*NPL*), and annual inflation rate (*INF*). α_0 is the intercept. β_1, β_2, β_3, β_4, β_5, β_6 are the intercepts in the regression model; ε_{it} and σ_{it} are the residuals of the regression models; *i* represents the commercial banks in Vietnam observed in the sample, *t* represents a year. The description of the variables used in the model is presented in Table 1.

Table 1. Description of the variables used in the model

Variable name	*Variable symbol*	*Measurement*	*Source*
Dependent variables			
Lending activities	*LOANS*	Total loan / Total asset	Statnik and Vu (2020), Weill (2011)
	GRLOANS	Ln(Total loan$_t$ / Total loan$_{t-1}$)	Nguyen and Dang (2020)
Independent variables			
Corruption Perception Index	*CPI*	Transparency International's annual CPI	Transparency International
Control variables			
Equity to total assets	*CAP*	Equity / Total asset	Arintoko (2021), Schwert (2018)
Deposit rate	*DEP*	Deposit / Total asset	Caporale et al. (2020)
Inflation rate	*INF*	The annual inflation rate announced by the World Bank	Galindo and Steiner (2022)
Liquidity ratio	*LIQ*	Current asset / Total asset	Arintoko (2021)
Bad debt ratio	*NPL*	NPL / Liabilities	Nguyen and Dang (2020)

3.2. Research method

This study utilizes financial data from 27 commercial banks in Vietnam, collected from the audited consolidated annual financial statements published on the websites of these banks. Although the number of banks in the sample only accounts for approximately two-thirds of all commercial banks in the system, the total assets of these 27 banks represent nearly 80% of the sector's total assets, making the sample broadly representative of the industry. The initial population consisted of 40 commercial banks in Vietnam. However, 13 banks were excluded due to missing or inconsistent financial statements, resulting in a final sample of 27 banks, as summarized in Table 2. In addition to financial data, the study collects CPI data from the Transparency International website and inflation rate data from the World Bank, covering the period from 2012 to 2023. This study employs a panel data structure and uses the system generalized method of moments (SGMM) for estimation. This method is chosen because the model includes a lagged dependent variable as an explanatory variable, which introduces endogeneity (where the residuals correlate with one or more independent variables), leading to biased and inefficient estimates if traditional methods such as ordinary least squares, fixed effects model, or random effects model are used. The SGMM approach effectively handles this issue by using appropriate instrumental variables. The validity of these instruments is assessed through the Hansen test, while the Arellano-Bond test (Arellano & Bond, 1991) is applied to examine first- and second-order autocorrelation in the model's error terms. The detailed sample selection steps are presented in Table 2 to ensure the reproducibility and reliability of the data collection process.

Table 2. Sample selection process

Step	*Description*	*Number of banks*
1	Total number of commercial banks in Vietnam	40
2	Banks were excluded due to a lack of publicly available or consistent data	13
3	Final sample: Banks with sufficient audited consolidated financial reports	27

In this paper, the empirical estimation is conducted in two stages. In the first stage, the model is estimated by the full panel dataset for the full sample period 2012–2023. In the second stage, to account for the potential structural breaks due to the COVID-19 shock, the dataset is split into two sub-periods: 1) the pre-COVID period (2012–2019) and 2) the COVID-included period (2020–2023). Individual regressions are estimated for each sub-period based on the same SGMM methodology. This allows for a comparison of how the interactions between bank lending behavior and its determinants might have shifted as a result of the pandemic. By exploring the estimated coefficients of both subsamples, the study attempts to find out if corruption perception, capital adequacy, inflation, and other financial variables affected lending activity differently during the period preceding and under the COVID-19 crisis. This step is particularly important for assessing the robustness and temporal consistency of the model.

4. RESEARCH RESULTS AND DISCUSSION

4.1. Descriptive statistics

Table 3 presents the descriptive statistics for the dataset of 27 commercial banks in Vietnam in the period 2012–2023 for the balance sheet data, including 352 observations. The mean of *LOANS* is 0.59, and the standard deviation is 0.12. Southeast Asia Commercial Joint Stock Bank (SSB) had the lowest value in 2012, at 0.22, while the greatest value was 0.79 in 2020 for the Joint Stock Commercial Bank for Investment and Development of Vietnam (BID). *GRLOANS* had a mean of 0.17 and a standard deviation of 0.13. The highest value, 0.73, came from Ho Chi Minh City Development Joint Stock Commercial Bank (HDB) in 2013, while the lowest value was -0.28 from Vietnam Maritime Commercial Joint Stock Bank (MSB) in 2012. *CPI* indicates that the four years from 2012 to 2015 had the lowest *CPI* score, 31; the highest number, 42, was recorded in 2022. 3.56 is the standard deviation, and 34.4545 is the mean.

The average value of *CAP* was 0.09; the lowest value was 0.05 at Bao Viet Commercial Joint Stock Bank (BaoVietBank) in 2022, and the highest value was 0.88 at Kien Long Commercial Joint Stock Bank (KLB) in 2013. The average *DEP* was 0.77; the Vietnam Bank for Agriculture and Rural Development (Agribank) had the highest ratio in 2022 at 0.88, while the MSB had the lowest ratio in 2018 at 0.62. The standard deviation was 0.02, and the *INF* averaged 0.04. Whereas the lowest inflation was 0.01 in 2015, the highest was 0.09 in 2012. With a standard deviation of 0.07, *LIQ* averaged 0.18. The lowest value, 0.07, was recorded at the National Commercial Joint Stock Bank (NVB) in 2021, while the highest value, 0.36, was recorded at BaoVietBank in 2020. Asia Commercial Joint Stock Bank (ACB) had the lowest NPL value in 2019 (0.01), while MSB had the highest in 2014 (0.05). The average *NPL* value was 0.02 with a standard deviation of 0.01.

The distributional characteristics of the variables reveal some information. Most variables exhibit positive skewness, indicating that their distributions are right-skewed, with longer tails on the right side, especially for *LIQ* and *NPL*, suggesting a concentration of observations at lower values. The kurtosis values for all variables are close to 3 or slightly lower, implying distributions that are approximately mesokurtic or slightly platykurtic, meaning they have moderate tails and weakness. The 1st and 99th percentiles provide a clearer indication of data spread and the presence of potential outliers. For instance, *GRLOANS* and *CPI* have wider ranges of percentiles, indicating higher variability, while *NPL* and *INF* are closely bunched around their means. Overall, the data is mostly symmetric with a few extreme values.

Table 3. Descriptive statistics

Variable	*No. of observations*	*Mean*	*Std. dev.*	*Min*	*Max*	*P1*	*P99*	*Skewness*	*Kurtosis*
LOANS	352	0.59	0.12	0.22	0.79	0.32	0.78	-0.52	0.78
GRLOANS	352	0.17	0.13	-0.28	0.73	-0.17	0.61	0.44	0.61
CPI	352	34.46	3.56	31.00	42.00	28.1	41.5	0.52	41.5
CAP	352	0.09	0.03	0.05	0.16	0.05	0.15	0.42	0.15
DEP	352	0.77	0.08	0.62	0.88	0.61	0.88	-0.36	0.88
INF	352	0.04	0.02	0.01	0.09	0.01	0.08	0.60	0.08
LIQ	352	0.18	0.07	0.07	0.36	0.07	0.34	0.75	0.34
NPL	352	0.02	0.01	0.01	0.05	0.05	0.05	0.85	0.05

4.2. Correlation matrix

Table 3 reports pairs of correlation coefficients between variables. Correlation coefficients are all less than 0.4, indicating variables with low or negligible correlation. According to Farrar and Glauber (1967), if the correlation coefficient between the independent variables in the model is greater than 0.8, the model has a multicollinearity phenomenon. Therefore, the research model does not have a multi-collinear phenomenon because the correlation of the variables is less than 0.4 (see Table 3). The variables are not eliminated in experimental Models 1 and 2. In addition, the results of Table 3 also show that *CPI* is positively correlated to *LOANS* but is inversely correlated to *GRLOANS*. The results of the regression analysis in Table 4 provide more insight into the effect of corruption perceptions and other factors on the proportion of loans and credit growth of Vietnamese commercial banks.

Table 4. Correlation matrix between variables in the model

Variable	*LOANS*	*GRLOANS*	*CPI*	*CAP*	*INF*	*LIQ*	*NPL*
LOANS	1.000						
GRLOANS	-0,16	1.000					
CPI	0.34	-0.13	1.000				
CAP	-0.14	-0.07	-0.12	1.000			
INF	-0.28	-0.05	-0.39	0.24	1.000		
LIQ	-0.56	0.03	-0.04	0.07	0.25	1.000	
NPL	-0.19	-0.12	-0.18	0.17	0.36	0.09	1.000
DEP	0.33	-0.13	0.07	-0.38	-0.28	-0.08	-0.12

4.3. Regression results

The results of the Hansen test with the H_0 hypothesis show that all the variables are consistent (Table 5). AR(2) test with the H_0 hypothesis shows that there is no chain correlation. The results show that the Hansen test and AR(2) in both models have a p-value coefficient greater than 0.1, so the regression results are reliable and the tool variable used with the SGMM estimate is consistent.

Table 5. Estimation results from the models

Variable	*Model 1: LOANS Pre-COVID*	*Model 1: LOANS COVID*	*Model 2: GRLOANS Pre-COVID*	*Model 2: GRLOANS COVID*
L.LOANS	0.6842*** (0.000)	0.6235*** (0.000)		
L.GRLOANS			0.9950*** (0.000)	1.1012*** (0.000)
CPI	0.0015** (0.041)	0.0032*** (0.006)	0.0038** (0.034)	0.0056*** (0.004)
CAP	0.5940** (0.021)	0.7211*** (0.007)	1.1925*** (0.006)	1.3652*** (0.002)
DEP	0.1023* (0.085)	0.1479** (0.042)	0.3625* (0.058)	0.4592** (0.025)
INF	0.3982*** (0.009)	0.5201*** (0.001)	-1.2852*** (0.002)	-1.7889*** (0.000)
LIQ	-0.3728*** (0.001)	-0.4522*** (0.000)	-0.1025 (0.552)	-0.1364 (0.401)
NPL	-0.8934 (0.120)	-1.1543* (0.078)	5.4721** (0.011)	6.0378*** (0.002)
CONS	0.0521 (0.502)	0.0387 (0.572)	-0.5982*** (0.006)	-0.6723*** (0.003)
Hansen test (p-value)	0.622	0.604	0.644	0.671
AR(1) (p-value)	0.003	0.005	0.002	0.001
AR(2) (p-value)	0.812	0.827	0.818	0.829

*Note: ***, **, * indicating that the coefficients are meaningful at 1%, 5%, and 10%.*

The estimation results from Model 1 show that *LOANS* have a positive relationship with *CPI*, *CAP*, and *INF* at a statistically significant level of 1%. This one-way relationship implies that when the *CPI* is high and there is not much risk of bribery or lack of transparency, and large-cap commercial banks can withstand high risks, they will tend to lend more, leading to an increase in the proportion of loans. This finding is consistent with the "grease the wheels" hypothesis, which suggests that in environments with reduced corruption, financial intermediation functions more effectively without informal costs hindering credit allocation (Weill, 2011).

Furthermore, the positive effect of inflation (*INF*) on loan volume suggests that higher inflation increases the nominal value of bank loans. However, this does not necessarily indicate real credit growth, as inflation can erode the real purchasing power of

borrowed funds. High inflation often forces banks to adjust interest rates upward, increasing the cost of borrowing and potentially leading to credit rationing, particularly for SMEs with lower creditworthiness (Chen et al., 2015; Alshubiri et al., 2024).

Similarly, *DEP* has a positive effect on *LOANS* at a statistically significant level of 5%, showing that when banks have more capital mobilized from customer deposits. This finding highlights the crucial role of deposit mobilization in ensuring a stable funding base, which reduces reliance on external financing sources such as interbank borrowing or debt issuance, thereby lowering funding costs (Anaere, 2014).

In contrast, *LIQ* negatively affects *LOANS* at a statistically significant level of 1%, implying that when banks maintain high liquidity ratios, their lending ability is constrained. One possible explanation is that banks holding excessive liquidity prioritize short-term stability over long-term lending growth, as higher liquidity reserves reduce the funds available for loan issuance (Cairó & Sim, 2023). Moreover, regulatory requirements, such as Basel III liquidity coverage ratios, may force banks to hold large amounts of liquid assets, limiting their capacity to extend credit.

Lastly, *NPL* has a negative and statistically significant effect on *LOANS* at the 10% level, suggesting that when the *NPL* ratio increases, banks become more cautious in granting credit. This result aligns with the "credit rationing" theory, which posits that financial institutions tighten credit standards in response to rising default risks. Additionally, an increasing *NPL* ratio signals deteriorating asset quality, prompting banks to divert resources toward provisioning for bad debts rather than expanding their loan portfolios (Arintoko, 2021; Ledhem & Mekidiche, 2020).

At the 1% level of statistical significance, the estimation results from Model 2 demonstrate that the *CPI*, *CAP*, and *NPL* have a positive effect. These positive coefficients imply that the CPI is high, and banks with abundant equity are better able to pay their debts. This also means minimizing the risk of default, thereby attracting more loans. However, in case commercial banks want to increase their income and offset losses from bad debts, they can increase lending activities. Such lending can increase risks and exacerbate bad debt. These results are consistent with the findings in the study of Fungáčová et al. (2019) and Weill (2011). The *DEP* coefficient is positive and meaningful at 5%. This positive coefficient implies that as the volume of deposits increases, the bank has more capital to lend. As a result, market share grows and the overall number of outstanding loans rises. This result is consistent with the research of Jiang and Wang (2024). With a significance level of 1%, the *INF* is negative. This negative coefficient implies that inflation tends to increase, causing the demand for loans for individuals and businesses to increase. At this time, borrowers have to pay higher interest rates due to the difference between nominal and real interest rates and high borrowing costs. This makes loan demand decrease, and bank lending activities are also hindered. This result is consistent with the study of Alshubiri et al. (2024), and Bakken and Wang (2021).

The comparison of the two sub-periods reveals dramatic differences in the determinants of bank loaning behavior. For the *LOANS* model, while most variables still retain their importance and direction for both periods, some of the effects are more pronounced in the COVID-19 period. The lagged *LOANS* variable remains highly persistent for both periods, but its coefficient weakly decreases during the pandemic, suggesting a moderate decline in loan stability. Most importantly, the *CPI* effect is more pronounced in COVID-19, implying that corruption perception played a larger role in shaping lending behavior in heightened uncertainty. Similarly, *CAP* and *INF* effects are more pronounced during the pandemic, which implies that banks' capitalization and macroeconomic factors such as inflation played larger roles in loan decisions during crisis periods.

In the *GRLOANS* model, lagged loan growth (*L.GRLOANS*) remains a very good predictor of current growth in both sub-periods, with a slightly stronger impact in the COVID-19 period, perhaps reflecting efforts to maintain lending momentum. The inflation rate (*INF*) remains negative and stronger in the pandemic period, indicating that inflationary pressure became a strong limitation on lending growth. Interestingly, the *NPL* ratio also indicates a much greater positive correlation with *GRLOANS* during the pandemic phase, possibly because of regulatory easing in the short term or strategic lending to riskier segments.

The results suggest that the pandemic intensified the roles of macroeconomic and institutional factors in determining lending behavior. The amplified effects of *CPI*, *CAP*, and *INF* during COVID-19 highlight the importance of governance quality and macroeconomic stability in sustaining lending during crises. These findings justify the need for incorporating the COVID-19 shock into the model and confirm that structural changes in bank behavior occurred during the pandemic.

5. CONCLUSION

Applying the estimate of the dynamic table model of 27 commercial banks in Vietnam from 2012 to 2023, the article shows that bank lending activities in Vietnam are affected by factors such as CPI, equity ratio, deposit ratio, inflation rate, liquidity ratio, and bad debt. Notably, the CPI has a positive effect on the ratio of loans to total assets and the credit growth rate of Vietnamese commercial banks. The results shed light on raising awareness of corruption, improving the transparency of the political environment, and helping to promote credit extension activities at Vietnamese commercial banks.

This study also adds to the broader body of academic scholarship by offering a deeper perspective into how institutional forces, in this case, corruption, impact the financial behavior in the environment of an emerging market. By exploring Vietnam, a fast-evolving nation with rapid financial growth and regulatory transformation, the paper provides a valuable empirics benchmark for future research examining governance as a determinant of bank performance. The findings presented herein form the platform for future studies on how enhanced governance and transparency can be engines of financial advancement, risk mitigation, and economic resilience in emerging economies.

To maximize lending activities and mitigate corruption risk, Vietnamese commercial banks must develop strategic practices in line with CPI movements. First, banks must develop risk-based credit systems by including corruption risk

measurement in credit appraisal processes. Where CPI scores are poor (higher corruption), stronger due diligence, greater collateral requirements, and anti-bribery monitoring systems must be implemented to counter risks associated with corrupt loan approvals. Alternatively, in the less corrupt CPI-ranked areas (less corruption), banks can make lending easier, reducing paperwork and enhancing access to business loans. Second, they can construct compliance systems with artificial intelligence (AI), which can spot deviations from patterns of lending and indicate potential corruption-based risk. Computer programs can dig through previous loan release histories to detect suspicious lending practices, like inordinately fast release of loans or discriminatory lending. These tools would boost regulatory compliance and transparency to the level of lending based on financial health, instead of crime inducements. Thirdly, combined action by financial institutions, backed by the government and other global organizations, in favor of promoting financial transparency would promote sustainable banking practices. Financial institutions would be able to be part of public-private partnership models for enhancing credit information systems in the nation, that would close loopholes for criminals in the loan sector to obtain loans. Moreover, the adoption of global norms like the Financial Action Task Force recommendations will enhance foreign investment and international prestige. Lastly, Vietnamese banks should tailor lending behavior per macroeconomic needs by adjusting credit distribution per CPI trends. For example, in periods of upward transparency (increase in CPI), more relaxed loan terms could be adopted by banks to stimulate economic growth. Conversely, during decreasing CPI periods, strengthening in-house control systems and re-examining high-risk segments can prevent financial instability. With the data of CPI, Vietnamese commercial banks can make lending more effective, lower corruption risks, and facilitate an open financial system, thus contributing to subsequent long-term economic growth.

In addition to providing pioneering evidence of the relationship between corruption perception and lending activities of commercial banks in the context of Vietnam. The article proposes some of the following policy implications. First, bank managers and policymakers need to be aware that improving the transparency of the political environment is a factor that helps strengthen banks' lending activities. Secondly, in the fight against national corruption on a large scale, policymakers need to pay attention to and focus on corruption in the banking system, the core of Vietnam's financial system. Thirdly, bank administrators need to build a system to establish and supervise lending activities strictly, by processes and procedures, and build a strict penalty framework for corrupt activities detected internally in commercial banks.

The article still suffers from certain limitations. Regarding the scope and objectives of the study, the current study only collects data from 27 commercial banks out of a total of 31 banks in Vietnam, excluding joint-venture banks and foreign banks. Therefore, the results are not representative of all banks in Vietnam. Moreover, the study period only focuses on data from 2012 to 2023, which may miss important events affecting the lending activities of Vietnamese commercial banks that occurred before 2012 or after 2023. Finally, the study uses the CPI to assess corruption in Vietnam, which is limited because it is only based on surveys and assessments and does not fully reflect the corruption situation in the country.

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