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# MOBILIZING FINANCIAL RESOURCES TO CONTRIBUTE TO HO CHI MINH CITY'S ECONOMIC GROWTH

**Assoc.Prof.PhD. Tran Van Hung* - Assoc.Prof.PhD. Le Thi Mai Huong****

**Abstract:** ***The article uses secondary data collected from the Ho Chi Minh City Statistical Yearbook in the period 2010-2023 to assess the current situation of financial resource mobilization contributing to economic growth in Ho Chi Minh City. The research results show that since 2010, the city has mobilized a variety of financial resources with an increasing scale and a more sustainable structure of financial resource mobilization, contributing to ensuring resources for the implementation of the city's socio-economic development goals. However, the process of mobilizing financial resources of the city still faces some limitations and difficulties. On that basis, the article presents a number of recommendations to contribute to increasing the mobilization of financial resources for economic growth of Ho Chi Minh City.***

• Keywords: *mobilization, financial resources, economic growth, Ho Chi Minh City.*

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## 1. Introduction

Among the resources for socio-economic development, financial resources play an important role: providing investment capital for all production, business or social activities. Financial resources are monetary resources (or assets that can be quickly converted into money) in the economy that can be mobilized to form monetary funds to serve the socio-economic development goals of the country (Ha Thi Thuan & Associates, 2014). Along with the process of innovation and development of the country, Ho Chi Minh City implemented economic innovation in 1986 and to date the city has been and is one of the leading economic development centers of the country. The Resolution of the 11th City Party Congress has set out medium and long-term goals such as "by 2025, it will be a smart city, a modern service and industrial city, maintaining its role as an economic locomotive and growth engine of the Southern Key Economic Zone and the whole country…". Ho Chi Minh City is the economic and cultural center of the country. With its geographical location and certain favorable conditions, along with the right and favorable policy mechanisms from the Government and the City, the city has achieved certain results in the process of socio-economic development since Vietnam implemented comprehensive economic reform up to now. Therefore, in order to continue to effectively implement the orientations and achieve the above goals, Ho Chi Minh City needs many breakthrough solutions to build and develop the city in the new context, in which the solution on financial resources is identified as playing an important role in the process of socio-economic development of the city. On that basis, the article assesses the current situation of financial resource mobilization in the period of 2010-2023 to serve as a basis for proposing some recommendations to contribute to the economic growth of the city in the coming time.

## 2. Theoretical basis for financial resource mobilization and economic growth

### *2.1. Concept of financial resources and financial resource mobilization*

Su Dinh Thanh, Vu Thi Minh Hang (2008) stated "In a narrow sense, financial resources are the amount of highly liquid currency that entities have. In a broad sense, in addition to highly liquid currency, financial resources are also expressed in the form of financial assets or securities. In addition, financial resources also include assets such as real estate, intellectual property and other intangible assets that can be monetized. Financial resources include domestic financial resources and foreign financial resources".

Tran The Lu (2018) stated "Financial resources are the actual amount of capital in the form of

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currency and converted into currency that has been and is being mobilized to serve the socio-economic development of a country. In a broad sense, financial resources are the allocation of economic relations arising from those financial resources. In a narrow sense, talking about financial resources means talking about capital sources. Those capital sources come from the state budget, private sector, foreign investment, investment funds, trust funds, etc."

Su Dinh Thanh (2008) stated the concept: "mobilizing financial resources, also known as the capital mobilization function, demonstrates the ability to organize and exploit financial resources to create resources to meet the development needs of the economy".

***2.2. Content of financial resource mobilization***

Tran The Lu (2018) stated: "Financial resource mobilization includes the aspect of mobilizing the value of assets of the State, organizations, individuals, domestic and foreign enterprises to invest in public facilities and the aspect of exploiting the value of existing assets of public facilities".

Tran Phuong Anh (2020): Financial resources can be mobilized within a country (such as from the state sector and from the domestic private sector) and can also be mobilized from other countries in the world (in the form of official development assistance (ODA) capital, foreign direct investment (FDI), capital from non-governmental organizations (NGOs), capital from foreign individuals...)

Thus, the content of financial resource mobilization includes:

- Mobilizing capital from the state budget through state budget revenue
- Mobilizing from the private economy
- Mobilizing from foreign investment capital
- Mobilizing from investment funds, trust funds
- Mobilizing capital from aid sources, from non-governmental organizations, from foreign individuals.

***2.3. The role of financial resources for economic growth***

Financial resources play a huge role in promoting economic growth of countries. This has been demonstrated through many studies by domestic and foreign scholars.

According to the perspective of the new economic school (endogenous economic growth theory), Mankiw (1992), King and Levine (1993) emphasized that a strong financial sector can promote long-term economic growth, technological innovation (TFP), research and development (R&D) through financial channels for businesses and households. Moreover, a strong financial sector is not only limited to the function of mobilizing domestic capital sources but also has a great function in attracting and improving the efficiency of using capital sources outside the economy such as foreign direct investment (FDI) and indirect investment (FPI). The law and finance theory emphasizes the role and management function of the financial market. According to researchers with this perspective [for example: Levine (1999); Rajan and Zingales (1998)], the financial sector is an important factor to promote the formation of new enterprises entering the market, promoting the industrialization process and economic growth. Typical empirical studies such as Hassan, Sanchez and Yu (2011) have also confirmed the role of finance in economic growth, Kumar and Paramanik (2020) indicated that long-term financial development has a positive impact on economic growth; Zaheer Abbar, Gul Afshan & Ghulam Mustifa (2022) affirmed that financial development has a positive impact on economic growth and income distribution in low- and upper-middle-income countries. Domestically, many empirical studies have also affirmed that financial resources have a positive impact on economic growth, typically the study of Nguyen Van Chien (2023) affirmed that financial development has a positive impact on economic growth; Le Thanh Tam & Tran Thi Thuy An (2023) affirmed that financial development contributes to Vietnam's economic growth

**3. Data and research methods**

Data collection: The article uses secondary data sources collected from the Ho Chi Minh City Statistical Yearbook. Specifically, secondary data sources on state budget revenue for the period 2010 - 2023; Investment capital implemented at current prices in Ho Chi Minh City classified by capital source for the period 2010 - 2023; Capital mobilization balance of credit institutions, foreign bank branches as of December 31 each year for the period 2010 - 2023; Foreign direct investment in Ho Chi Minh City for the period 2010 - 2023.

In addition, the article also uses secondary data sources related to financial resource mobilization activities from articles in specialized magazines, reports, resolutions, and socio-economic development strategies of the city.

Research method: The article uses descriptive statistics, evaluation and analysis methods to analyze and evaluate the current situation of financial resource mobilization of Ho Chi Minh City in the period 2010 - 2023.

## 4. Status of mobilizing financial resources to contribute to economic growth in Ho Chi Minh City

### *4.1. Mobilizing capital from the state budget through state budget collection*

The city collects state budget based on the State Budget Law and other state regulations.

State budget collection is the mobilization of financial resources to ensure the spending needs of the state, through tax collection and other sources of revenue, the city's state budget ensures sufficient resources to implement policies and important projects. Financial resources from the state budget are the resources that play a leading role in the financial system and determine socio-economic development. Since 2010, the city's state budget revenue has been increasing. In 2010, the city's state budget revenue reached 169,317 billion VND, and by 2023, the city's state budget revenue increased to 448,850 billion VND, an increase of 2.65 times compared to 2010, equivalent to an increase of 279,533 billion VND. The state budget revenue structure is increasingly sustainable, contributing to ensuring resources for the implementation of the city's socio-economic development goals. Domestic revenue accounts for an increasingly high proportion of the city's total budget revenue. In 2010, the city's domestic revenue reached VND 86,646 billion, accounting for 51.17% of the total state budget revenue. By 2023, the city's domestic revenue increased and reached VND 302,419 billion, accounting for 67.37% of the total state budget revenue. The city's budget revenue in 2023 accounted for 26.45% of the total state budget revenue of the whole country and on average, in the period of 2020-2023, the city's state budget mobilization rate reached 29%/ GDP. Particularly in the period from the end of 2019, the whole country faced many difficulties and challenges due to the Covid-19 pandemic and the production situation of enterprises and units encountered many difficulties, but the results of the city's state budget revenue still grew over the years in this period. Total state budget revenue in 2021 reached VND 389,196 billion, exceeding the estimate by 4.56% and increasing by 4.46% compared to 2020.

**Table 1. State budget revenue for the period 2010 - 2023 (Unit: billion VND)**

| Years | 2010 | 2015 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| State budget revenue, of which: | 169,317 | 277,689 | 372,560 | 389,196 | 480,289 | 448,850 |
| Domestic revenue | 86,646 | 159,112 | 255,325 | 255,924 | 308,625 | 302,419 |
| Revenue from crude oil | 17,235 | 22,983 | 11,112 | 15,563 | 28,728 | 25,123 |
| Budget balance revenue from export activities | 60,221 | 93,903 | 106,049 | 117,667 | 142,919 | 121,161 |
| Aid Revenue | 921 | 838 | 74 | 42 | 17 | 147 |
| Economic Growth (%) | 12 | 7.88 | 1.16 | -4.01 | 9.26 | 5.81 |

*Source: Ho Chi Minh City Statistical Yearbook 2010, 2018 and 2023*

In addition, issuing government bonds is one of the effective channels for mobilizing domestic capital, especially medium and long-term capital for the state budget. Ho Chi Minh City is the first locality in Vietnam to issue local government bonds. Issuing local government bonds is one of the effective capital mobilization channels of Ho Chi Minh City in recent years to balance capital sources for investment needs in developing technical infrastructure and social infrastructure of the city.

### *4.2. Mobilizing financial resources from the private economy*

Mobilizing financial resources from the non-state enterprise sector:

The 6th Party Congress identified the private economy as a part of the multi-sector economy.

Currently, the private economy is increasingly contributing to the socio-economic development of the country in general. According to data published by the Ho Chi Minh City Statistics Office by the end of 2023, Ho Chi Minh City had 212,078 enterprises in the private economic sector, accounting for 96.44% of the total number of enterprises in the city, this sector contributed 49.98% of the city's GDP and created jobs for 2,105,390 workers. In addition, the private economic sector has made a large contribution to investment sources for the city's socio-economic development. Data published from the Ho Chi Minh City Statistical Yearbook shows that the investment capital in the city from the private economic sector has increased over the years, from VND 85,287 billion in 2010 to VND 248,115 billion in 2023 and accounts for a relatively high proportion of the total investment capital of the whole city, from 50.14% in 2010 to 66.93% in 2023.

**Table 2. Investment capital implemented at current prices in Ho Chi Minh City by capital source in the period 2010-2023 (Billion VND)**

| Years | 2010 | 2015 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| Total (VND billion) | **170,098** | **284,210** | **407,812** | **302,008** | **334,407** | **370,700** |
| State sector | 52,406 | 56,533 | 75,911 | 59,661 | 64,788 | 86,324 |
| Non-state sector | 85,287 | 185,099 | 289,321 | 212,757 | 238,472 | 248,115 |
| Foreign direct investment sector | 32,405 | *42,578* | 42,580 | 29,590 | 31,147 | 36,261 |
| **Proportion (%)** | **100** | **100** | **100** | **100** | **100** | **100** |
| State sector | 30.81 | 19.89 | 18.61 | 19.75 | 19.37 | 23.29 |
| Non-state sector | 50.14 | 65.13 | 70.94 | 70.45 | 71.31 | 66.93 |
| Foreign direct investment sector | 19.05 | 14.98 | 10.44 | 9.80 | 9.31 | 9.78 |

*Source: Ho Chi Minh City Statistical Yearbook 2010, 2018 and 2023*

**Mobilizing financial resources from residents' savings deposits:**

The increasingly developing economy will create conditions for people to increase their income and people will increase their financial accumulation, including the form of bank savings. This is also one of the financial resources that contributes significantly to the socio-economic development of the city. Specifically, this is a source of capital from market 1 that helps stabilize and ensure the liquidity of the banking system. With this resource, commercial banks continue to allocate investment to important projects of the country such as industrial development, agriculture, hydropower, etc. This is also an important domestic counterpart capital source for ODA projects to develop infrastructure and key economic zones of the country. In particular, from the source of savings deposits of residents, this capital has been lent by banks to serve agricultural and rural development, poverty reduction, new rural construction, contributing to improving the living standards of the people. The published data of the Ho Chi Minh City Statistical Yearbook presented in Table 3 shows that residents' savings deposits in VND and foreign currencies are increasing and accounting for a high proportion of the total mobilized capital of credit institutions and bank branches. The balance of residents' VND deposits in 2010 reached 722,445 billion VND, by 2023 the balance of VND deposits increased and reached 1,301,922 billion VND; The balance of residents' savings deposits in foreign currencies in 2010 reached 63,710 billion VND, by 2023 this balance reached 41,723 billion VND. The balance of residents' savings deposits accounted for:

**Table 3. Capital mobilization balance of credit institutions and foreign bank branches as of December 31 each year in the period 2010 - 2023 (Billion VND)**

| Years | 2010 | 2015 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| Total balance | 1,343,835 | 1,567,139 | 2,908,088 | 3,143,581 | 3,287,833 | 3,540,550 |
| Deposits in VND, of which: | 1,132,138 | 1,324,062 | 2,542,695 | 2,797,556 | 2,949,969 | 3,266,982 |
| Savings deposits of residents | 722,445 | 819,112 | 1,069,453 | 1,093,551 | 1,204,535 | 1,301,922 |
| Deposits in foreign currencies, of which: | 211,697 | 243,077 | 365,393 | 346,025 | 337,864 | 273,428 |
| Residents' savings deposits | 63,710 | 75,666 | 45,009 | 41,983 | 41,973 | 41,723 |

*Source: Statistical Yearbook of Ho Chi Minh City in 2010, 2018 and 2023*

In addition, remittances are also one of the financial resources of the private sector and have made a great contribution to the economic development of the city.

The amount of remittances transferred to Ho Chi Minh City every year always accounts for a high proportion of the total remittances of the whole country. In 2023, remittances transferred to Ho Chi Minh City reached 9.46 billion USD, an increase of 43.3% compared to 2022 and accounted for 59.12% of the total remittances of the whole country.

***4.3. Mobilizing financial resources from foreign investment capital***

**Table 4. Foreign direct investment in Ho Chi Minh City in the period of 2010-2023 (Million USD)**

| Years | Total registered capital | Total implemented capital | Number of licensed projects |
|---|---|---|---|
| 2010 | 2,118 | 1,885 | 337 |
| 2011 | 3,145 | 2,845 | 359 |
| 2012 | 1,340 | 640 | 436 |
| 2013 | 1,983 | 1,015 | 491 |
| 2014 | 3,269 | 2,884 | 457 |
| 2015 | 4,101 | 2,983 | 606 |
| 2016 | 3,896 | 1,322 | 853 |
| 2017 | 6,745 | 2,426 | 963 |
| 2018 | 6,238 | 812 | 1,060 |
| 2019 | 8,338 | 1,891 | 1,365 |
| 2020 | 5,221 | 654 | 985 |
| 2021 | 7,183 | 942 | 665 |
| 2022 | 4,469 | 743 | 986 |
| 2023 | 5,985 | 631 | 1,234 |

*Source: Ho Chi Minh City Statistical Yearbook 2023*

Ho Chi Minh City is one of the localities attracting the largest foreign direct investment capital in the country. In recent years, foreign direct investment capital has been an important additional financial resource for the city's economic growth promotion strategy through investment activities in many key industries of the city. Statistics in Table 4 show that foreign direct investment capital in the city has increased over the years. In 2010, the total registered foreign direct investment capital in the city reached 2,118 million USD, by 2023, the total registered foreign direct investment capital in the city increased and reached 5,985 million USD with 1,234 licensed projects, accounting for 15.26% of the total registered foreign direct investment capital of the whole country.

***4.4. Mobilizing from investment funds***

In addition to the above financial sources, Ho Chi Minh City mobilizes financial resources from development investment funds, including local development investment funds. The local development investment fund is a local state financial institution that performs the function of financial investment and development investment, helping local authorities overcome difficulties in providing long-term capital, developing markets and non-bank financial institutions, thereby creating incentives for investors from all economic sectors to invest in infrastructure development projects. At the same time, effectively operating funds will help local authorities increase their initiative in investment activities when decisions are made on the basis of closely following the actual situation, orienting specific socio-economic development strategies and goals in the locality in each period. In September 1996, the local development investment fund was piloted in Ho Chi Minh City under Decision No. 644/TTg of the Prime Minister to build an effective capital mobilization mechanism for investment in infrastructure development projects and some key industrial sectors for Ho Chi Minh City. Up to now, the local development investment fund of Ho Chi Minh City has been renamed the Ho Chi Minh City State Financial Investment Company. The company's reporting data shows that by the end of 2023, the company had invested VND 6,399,279 million in public construction investment projects of the city. From the above analysis results, it can be seen that in recent times, financial resources have been increasingly mobilized to contribute to the city's economic growth. However, in the process of mobilizing financial resources, there are still certain limitations, specifically as follows:

Regarding state budget revenue: in the context that the city and the country in general are still facing many fluctuations and difficulties in the macro-economy, production, business, import and export activities of enterprises are facing many difficulties, which has negatively affected the city's state budget revenue. In addition, the problem of arrears, tax evasion, and tax losses is still quite common.Tax evasion and tax fraud are becoming more and more complicated with increasingly sophisticated and difficult-to-detect behaviors, causing significant losses to the state budget. Regarding the private economic sector: currently, most private enterprises in our country are small and medium-sized, lacking capital, technology and management skills. Large-scale, branded enterprises are still few. Although developing rapidly, we have not yet fully exploited the potential and resources of the private economic sector. The cause of this problem is that there are still barriers for this sector, such as: difficulties in accessing land and capital; complicated administrative procedures for investment; corruption, bribery, power abuse, harassment. In addition, the private economy itself also has limitations such as small-scale farming mindset, fragmented business, opportunism, and lack of long-term strategy. For the household sector: although the financial savings of the people are quite large and it is difficult to accurately assess the scale and quantity of this financial source. This is a very difficult financial source to mobilize because the mentality and habit of saving assets, especially gold reserves, still exists very strongly among the population. For the foreign direct investment sector: although there have been many achievements in attracting foreign direct investment into Vietnam, there are still certain limitations in the activities. That is, Vietnam's infrastructure and service quality have not yet met international standards; Vietnam applies a relatively strict and stringent management policy for foreign workers working in Vietnam. Section 3 of the Labor Code No. 45/2019/QH14 stipulates many conditions for foreign workers working in Vietnam that are relatively strict, affecting the development of enterprises and production and business activities. In addition, there are many other difficulties such as complicated tax procedures, administrative procedures, limitations in the supply chain... These difficulties and limitations will reduce the attraction of foreign direct investment into Vietnam in the recent past and in the future. Regarding local investment funds: The fund's operating capital is mainly from the State budget, not much has been mobilized from outside; The high bad debt ratio of some funds has not been completely resolved, direct investment activities have not been promoted, the mechanism for setting aside provisions for loan and investment risks has revealed shortcomings (Pham Tien Dat, 2020).

**5. Conclusion**

The Resolution of the Politburo sets the goal of turning Ho Chi Minh City into a modern service and industrial city by 2045. The city has been mobilizing all financial resources to serve the development of industries and sectors for socio-economic development. Currently, the city's financial resources are mobilized in a very diverse manner, both domestically and internationally, from state budget capital, private sector investment capital, capital mobilization from funds and foreign direct investment capital. However, the process of mobilizing financial resources of the city still faces certain limitations and difficulties. On that basis, the study proposes a number of recommendations to contribute to increasing the mobilization of financial resources for economic growth of Ho Chi Minh City in the coming time. However, the city's financial resource mobilization process still faces certain difficulties and limitations. On that basis, the study proposes a number of recommendations to contribute to increasing the mobilization of financial resources for Ho Chi Minh City's economic growth in the coming time.

Regarding state budget revenue: the city needs to strengthen the inspection and control of tax declaration records, closely monitor tax declarations of taxpayers, handle, urge and promptly ensure that taxpayers properly and fully fulfill their tax obligations to the state budget; Strictly handle cases of violations and tax evasion to ensure stable state budget revenue over the years.

Regarding financial resources from the private economic sector: the city creates all favorable conditions for the private economic sector to participate in investment and expand production and business through perfecting land policies, administrative procedures, and improving infrastructure.

For financial resources saved from households: credit institutions in the city need to continue to pay special attention to this form of deposit, develop diverse and rich products, and do a good job of customer care, consulting, and guidance so that people can continue to feel secure in depositing money. At the same time, encourage and create favorable conditions to attract remittances from abroad. For foreign direct investment capital sources: the city needs to continue to invest in infrastructure and service quality, improve administrative procedures and economic environment, train high-quality human resources to create a favorable investment environment to attract financial resources from foreign direct investors.

To attract financial resources from investment funds, the city needs to improve the operational efficiency and management of fund management companies, ensure the capacity and financial safety of enterprises to create confidence for investors.

Overall, Vietnam continues to implement measures to develop the economy on the basis of support, creating favorable conditions for all economic sectors to develop, improving the investment environment and supporting industries and domestic and foreign enterprises to develop in order to build, stabilize and attract financial resources for economic growth.

## References:

*Abbar, Z., Afshan, G., & Mustifa, G. (2022). The effect of financial development on economic growth and income distribution: Empirical evidence from lower-middle and upper-middle-income countries. Development Studies Research, 9(1), 117-128. https://doi.org/10.1080/21665095.2022.2065325*

*Ha, T. T., Hoang, V. H., & Pham, T. T. H. (2014). Mobilizing financial resources from the private economic sector in responding to climate change in Vietnam. Journal of Meteorology and Hydrology, (7), 57-61.*

*Hassan, M. K., Sanchez, B., & Yu, J. S. (2011). Financial development and economic growth: New evidence from panel data. The Quarterly Review of Economics and Finance, 51(1), 88-104.*

*Kumar, K., & Paramanik, R. N. (2020). Nexus between Indian economic growth and financial development: A non-linear ARDL approach. The Journal of Asian Finance, Economics, and Business, 7(6), 109-116.*

*Le, T. T., & Tran, T. T. A. (2023). Financial development promotes economic growth in Vietnam. Communist Review. URL: https://www.tapchicongsan.org.vn/web/guest/kinh-te/-/2018/828930/phat-trien-tai-chinh-thuc-day-tang-truong-kinh-te-tai-viet-nam.aspx*

*Le, V. T. (2021). Mobilizing financial resources from the private economy for socio-economic development. Journal of Theory, No. 4/2021. URL: https://lyluanchinhtrivatruyenthong.vn/huy-dong-nguon-luc-tai-chinh-tu-kinh-te-tu-nhan-de-phat-trien-kinh-te-xa-hoi-p25100.html*

*Nguyen, V. C. (2023). Research on the relationship between financial development and economic growth: Proposed model for Vietnam. Finance Magazine, (2). URL: https://tapchitaichinh.vn/nghien-cuu-moi-quan-he-giua-phat-trien-tai-chinh-va-tang-truong-kinh-te-mo-hinh-de-xuat-cho-viet-nam.html*

*Pham, T. D. (2020). Improving the operational efficiency of local development investment funds in Vietnam. Ministry of Finance. URL: https://www.mof.gov.vn/webcenter/portal/ttpltc/pages_r/l/chi-tiet-tin-ttpltc?dDocName=MOFUCM227637*

*Tran, P. A. (2020). Mobilizing financial resources for transport infrastructure development in Vietnam. Journal of Finance, Issue 1, November 2020. URL: https://tapchitaichinh.vn/huy-dong-nguon-luc-tai-chinh-phat-trien-co-so-ha-tang-giao-thong-o-viet-nam.html*

# IMPACT OF GEOPOLITICAL RISK AND ECONOMIC POLICY UNCERTAINTY ON OIL PRICE

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**Abstract:** ***Geopolitical events and economic uncertainty, such as war, civil turmoil, massive terrorist acts, can cause significant fluctuations and swings in oil prices, which contributed to increased volatility of the international oil prices. We use the GARCH and MGARCH model to assess the impact of geopolitical risk and economic policy uncertainty on volatility of oil prices, and the spillover effects between oil prices, with the Geopolitical Risk and Economic Policy Uncertainty as exogenous shock. We exploit an unique time series data set of Geopolitical Risk index recording monthly intervals of oil prices from January 2002 to December 2022. Our findings have two-folds. First, both geopolitical risk and economic policy uncertainty affect oil price's volatility. Second, there exists stronger short-persistent spillover effect between different returns of different oil prices in monthly scope.***

• Keywords: *geopolitics, geopolitical risk, economic policy uncertainty, oil prices.*

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## 1. Introduction

In an increasingly integrated world economy, globalized markets are strongly influenced by major political events such as elections, coups, civil strife, as well as intra and interstate conflict and war, mega terrorist attacks etc. Among other economic effects, political conflicts can bring about noteworthy changes and shifts in oil as well as other energy's prices, especially when the country is one of major players in the market. This caused the oil prices to fluctuated, which is caused a disruption in supply or a rise in preventive demand. Further conflict leads to increased uncertainty and instability that deeply affect the market.

Recently global markets witnessed the Russo - Ukrainian conflict, in which Russia, one of the world's leading crude oil and natural gas producers was involved. On the 24th of February 2022, Russia openly sent troops into Ukraine's separatist-controlled territories and announced the beginning of a "special military operation" (UN, 2022) in Ukraine three days later. This geopolitical tension led to sanctions imposed on Russia by the Western countries, which was consequen in bans on weapons exports, oil extraction technology exports and access to financial markets (Nitsevich, V.F, 2020). Economic data shows some movements in global oil price data, however, the complete economic consequences of Russo - Ukrainian conflict on the oil price may not be fully known until the crisis ends.

Therefore, the aim of this paper is to investigate the causal effects of Geopolitical Risk (GPR) and Economic Policy Uncertainty (EPU) on the volatility of crude oil prices. Geopolitical risk (GPR) would identify situations in which power struggles over territories cannot be resolved peacefully. Thus, GPR would be defined as the risks associated with geopolitical events that possess detrimental impacts on the global context and peaceful course of international relations, such as wars, terrorist assault, political tension between states (Caldara, Dario, and Matteo Iacoviello (2018)). For example, the terrorist attack on 9/11, or the Russo-Ukrainian conflicts that would be discussed later, would fall into this definition. The economic policy uncertainty index (EPU) measures the degree of economic uncertainty resulting from changes in economic policies (Baker et al., 2013) we can understand that EPU would capture events related to business and financial cycle, and uplift greatly during time of financial volatility and policy uncertainty. Last, we would establish the dynamics between different crude oil prices and how geopolitical events and economic policy affect those dynamics.

To do that, we use the monthly price of Western Texas Intermediate (WTI), and OPEC basket price, as well as the international crude oil price. Our main empirics are as follows. First, both geopolitical risk and economic policy uncertainty affect oil price's volatility. Second, there exists stronger short-persistent spillover effect between different returns of different oil prices in monthly scope. We contribute to the literature a more insightful analysis of the causal effects of Geopolitical risk and economic uncertainty on oil prices.

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**2. Literature review**

In general, most empirical research shows that geopolitical uncertainty has a mixed impact on energy prices due to several reasons. The research of Smales, L. A (2021), which employing daily data of Geopolitical risk Index (GPR) Geopolitical Risk Act Index ( GPRA), Geopolitical Risk Threat Index (GPRT), Economic Policy Uncertainty (EPU), CBOE Implied Volatility Index (VIX), Western Texas Intermediate Crude oil price (WTI) and SP500 oil price from Jan 1986 - May 2018, shows that geopolitical risk has a key role in determining both oil price and stock market volatility. The increase in geopolitical risk is associated with positive oil returns and negative stock returns, which is consistent with geopolitical risk being more intricately linked to supply disruption. The impact of geopolitical risk is greater for oil prices because some geopolitical events may have a direct effect on oil production but may not receive much global media coverage. The study uses a dynamic conditional correlation (DCC) model to analyse the magnitude of the effect of geopolitical risk on oil-stock return correlation and short- and long-term volatility persistence for oil and stock prices, together with spillover effects that run from oil to stock returns.

In contrast, Zhang et al., (2020) used the DCC-GARCH model to measure the dynamic conditional correlation between US EPU and West Texas Intermediate (WTI) crude oil returns based on historical data from February 1985 to May 2019, and then used the network connectedness method to analyze the impact of various US EPU indices on WTI returns over time and frequency. The empirical findings reveal, first, that during the sample period, all US EPU indices and WTI returns are negatively correlated. Second, at the frequency bands of 1-6 months and 6-12 months, all EPU indices can have a significant impact on WTI returns, whereas at the frequency band of 12-24 months, only monetary policy uncertainty, regulation policy uncertainty, and national security policy uncertainty can have a significant impact on WTI returns. Lastly, it appears that the impact of US EPU indices on WTI returns is amplified by significant international events, such as the global fiscal crisis.

Kannadhasan, M. and Das, D. (2019) explores the extent to which Asian emerging stock markets respond to international economic policy uncertainty and geopolitical risk. The author used quantile regression analysis to study the impact of economic policy uncertainty and geopolitical risk on the stock markets of nine Asian countries. The study found that the response of stock markets to both economic policy uncertainty and geopolitical risk is significant and negative, but the magnitude of the impact varies across different quantiles. The results indicate that lower quantiles are more sensitive to economic policy uncertainty and geopolitical risk than higher quantiles.

Caldara, D. and Iacoviello, M. (2018) have used geopolitical risk as a factor for the vector autoregressive model (VAR) to measure the relationship between geopolitical risk and stock returns, capital movement and real activities on the market. From the result of their research, the author concluded that high geopolitical risk leads to a decline in real activity, lower stock returns, and movements in capital flows away from emerging economies and towards advanced economies, with threat of adverse geopolitical events mostly drives the adverse effects of geopolitical risk (Noguera-Santaella, J., 2016).

Futhermore, There are several studies suggest that geopolitical events as well as economic uncertainty would play a key role in increasing the prices of crude oils, or its volatility (Yong Jiang et al., 2022, Selmi et al., 2020).

Regarding the use of oil prices as a factor to consider for businesses and policymakers, Trung Q. and Trang T.(2020) has pointed out that increased oil prices would lead to increased production cost, as well as increasing negative macroeconomics conditions, which would lead to detrimental impact on firms' performance. As a result, as aforementioned, possessing a model that is capable of tracking the fluctuation of oil prices would be suitable for businesses and policymakers to monitor and respond appropriately to protect their operation or devise successful policy to better control the economy, respectively.

To sum up, given the results of previous study, we would base our methodology on that of Smales, L. A. (2021). Firstly, we would employ the OLS model to explore the impact on growth of oil prices, as well as using different quantiles of GPR index. Secondly, the univariate GARCH model with GARCH (1,1) and ARCH (1,1) specifications are used to prove this for all four oil prices. Lastly, in order to model the dynamics between different oil price benchmarks around the world and the role of GPR and EPU in that relationship, we would use the DCC MGARCH model as suggested by Smales, L. A. (2021).

**3. Methodology and data**

***3.1. Empirical models***

In this paper, we use GARCH (1,1) (Bollerslev, 1986) and EGARCH (1,1) (Nelson, 1991) to explore the effect of GPR and EPU on the volatility of international crude oil prices. The ARCH (p,q) model is as follows:

$$X_t = e_t \sigma_t$$

$$\sigma_t^2 = \omega + \alpha_1 X_{t-1}^2 + \cdots + \alpha_p X_{t-p}^2$$

Tim Bollerslev (1986) continued to extend the ARCH into Generalized autoregressive conditional heteroskedasticity (GARCH). GARCH (p,q) model is specified as follows:

$$X_t = e_t \sigma_t$$

$$\sigma_t^2 = \omega + \alpha_1 X_{t-1}^2 + \cdots + \alpha_p X_{t-p}^2 + \beta_1 \sigma_{t-1}^2 + \cdots + \beta_p \sigma_{t-q}^2$$

In 1991, Nelson developed the Exponential autoregressive conditional heteroskedasticity (EGARCH) in order to overcome a weakness of the original GARCH model when handling time series models, which is accounting for asymmetric effects between positive and negative asset returns. The EGARCH (p,q) model is as follows:

$$x_t = \mu + a_t$$

$$ln\sigma_t^2 = \alpha_0 + \sum_{i=1}^{p} \alpha_i (|\epsilon_{t-i}| + \gamma_i \epsilon_{t-i}) + \sum_{j=1}^{q} \beta_j \ln \alpha_{t-j}^2$$

Last but not least, we apply the multivariate GARCH (MGARCH) model to examine the volatility dynamics between different global oil prices indexes, with GPR and EPU as the exogenous shocks. The specification is the dynamic conditional correlation (DCC) (Smales, 2021). The MGARCH model also lets us account for the volatility spillover between oil prices, with the GPR and EPU as influencing factors.

### *3.2. Data*

In this research, the authors first collected the monthly GPR, as well as the sub-index of Geopolitical Risk Threat Index (GPRT) and (Geopolitical Risk Act Index) GPRA from Caldara and Iacoviello (2018)'s website[1]. The GPR index can be used to measure adverse geopolitical events as well as the risk accompanied by them. Subsequently, measuring the impact of different geopolitical categories, particularly threats and acts, can have significant implications, as well as an effective indicator of the specific sources for the impact on the dependent variables, particularly global oil prices in this study (Caldara, D. and Iacoviello, M., 2018).

Regarding the crude oil price for the analysis of this study, we exploited the monthly price of Western Texas Intermediate (WTI), and OPEC basket price, as well as the international crude oil price. The choice of these prices is made due to the fact that these are the main oil benchmarks worldwide, utilized as guidelines for pricing of crude oil across nation

The data for energy prices would be collected from the World Bank Pink sheet, while EPU is collected from policyuncertainty.com, which is set up by Baker et al (2013) to measure EPU at global and country-specific levels.

Regarding the global crude oil prices, we collected them from the World Bank Pink Sheet released in February 2023, with global average crude oil price, WTI price and BRENT price[2]. OPEC Basket price is released by OPEC via website OPEC.org[3], the website of OPEC itself. We would use the data range of January 2003 until December 2022 for this study.

While returns can be calculated for the oil prices as first log difference, EPU having 0 in the time series data requests us to use the monthly change or delta in the analysis (EPUt=EPUt-EPUt-1,). On the other hand, due to the non-linear relationship between oil prices and GPR, we would estimate the impact of absolute value of GPR at different quantiles.

## 4. Empirical Result

### *4.1. Univariate GARCH model*

We employ the univariate GARCH model in order to estimate the impact of the change of GPR and EPU as exogenous shock on the returns of different oil prices volatility, with the specification of GARCH (1,1) and EGARCH (1,1).

From the results above for GARCH (1,1) specification, we can conclude that GPR would have a positive impact on the returns of global average oil price and the WTI, while having negative impact onto the returns of BRENT and OPEC oil prices. On the other hand, EPU index would have a statistically negative impact on the return of oil prices for all four prices benchmarks apart from the WTI. Additionally, using the conditional variance equations, it is clear that monthly changes in GPR index would have statistically significant negative impact on the volatility of oil prices except for OPEC, with high statistically significant at 1% level of confidence. EPU is also shown to have a significant positive impact on the volatility of oil prices. Moreover, with both ARCH and GARCH term being significant, it is implied that the impact onto the volatility of oil prices is both long-run and short-run persistence.

**Table 1: Univariate GARCH model**

| GARCH | | PETRO | | WTI | | BRENT | | OPEC | |
|---|---|---|---|---|---|---|---|---|---|
| | | EGARCH | GARCH | EGARCH | GARCH | EGARCH | GARCH | EGARCH | |
| Mean | dGPR | 0.0055 | 0.0203 | 0.0074 | 0.0206 | -0.0007 | 0.0223 | -0.0251 | -0.0235 |
| | dEPU | -0.0311* | -0.036** | -0.0299 | -0.0398** | -0.0339** | -0.042** | -0.0465** | -0.0494*** |
| | cons | 1.3148** | 1.3163** | 1.4707*** | 1.1069** | 1.2486** | 0.9392* | 0.7884 | 0.5429 |
| Var | dGPR | -0.0228*** | -0.0031 | -0.0203*** | -0.0009 | -0.0239*** | 0.0002 | -0.0206 | 0.0035 |
| | dEPU | 0.0292*** | 0.01*** | 0.0297*** | 0.0111*** | 0.0269*** | 0.0093*** | 0.0332*** | 0.0125*** |
| | ARCH (1) | 0.3178*** | | 0.2663*** | | 0.3241*** | | 0.3476*** | |
| | GARCH (1) | 0.3415*** | | 0.3544*** | | 0.322*** | | 0.4484*** | |
| | EARCH (1) | | 0.1471 | | -0.1802** | | -0.1011 | | -0.1387 |
| | EGARCH (1) | | 0.0023*** | | 0.7837*** | | 0.7963*** | | 0.8113*** |

*Source*: *Compiled by authors.*

### *4.2. Multivariate GARCH model*

Furthermore, we utilized the DCC specifications of multivariate GARCH (MGARCH) models to examine the volatility dynamics between international crude oil prices, with GPR and EPU as exogenous shocks as specified to be the prefered specification in the result of the paper of Smales (2021).

Using the DCC specifications, we observe bi-directional effects between all four types of oil prices.

To begin with, although a rise in WTI and BRENT would be detrimental for the world average oil price, an

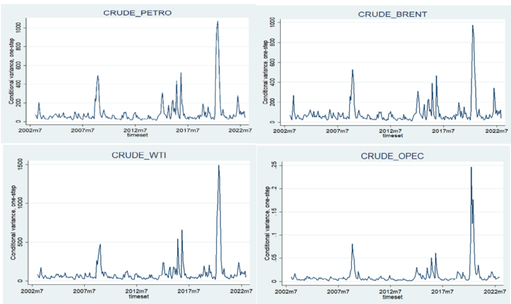
[1] *https://www.policyuncertainty.com/gpr.html*

[2] *We download data from World Bank Commodity Markets, retrived on 30 Jan 2024 from https://www.worldbank.org/en/research/commodity-markets*

[3] *https://www.opec.org/opec_web/en/*

increase in OPEC's return would lead to an increase in global oil prices. On the other hand, when the average global oil price rises, so will the profits on various types of oil pricing. There is a negative bidirectional connection between WTI and BRENT, and these oil prices are having a negative effect on the returns of other oil prices, as well as possessing a mean-reverting nature. Nevertheless, OPEC oil price is proven to be the driving force behind the increase in returns of other prices, subsequently the average global price as well. However, both GPR and EPU indexes are shown to have statistically insignificant impact on this spillover effect. Comparing the ARCH (1) and GARCH (1) terms, we also found that the volatility effect between oil prices has a stronger short-term variance tendency rather than long-run volatility persistence.

**Figure 1. Volatility of oil prices**




*Source: Compiled by authors.*

**Table 2: Multivariate GARCH Model (DCC)**

| DCC | Coeff | Std. Err. | DCC | Coeff | Std. Err. |
|---|---|---|---|---|---|
| m11 | 1.3725*** | 0.472 | m12 | 1.3351** | 0.559 |
| m21 | -0.6179*** | 0.168 | m22 | -0.5974*** | 0.208 |
| m31 | -0.9498*** | 0.344 | m32 | -0.934** | 0.400 |
| m41 | 0.605*** | 0.048 | m42 | 0.6028*** | 0.057 |
| m51 | -0.0042 | 0.013 | m52 | -0.0048 | 0.015 |
| m61 | -0.0083 | 0.011 | m62 | -0.0105 | 0.012 |
| m13 | 1.5484*** | 0.497 | m14 | 3.3901*** | 0.725 |
| m23 | -0.6554*** | 0.176 | m24 | -1.2583*** | 0.281 |
| m33 | -1.0993*** | 0.362 | m34 | -1.9977*** | 0.497 |
| m43 | 0.6036*** | 0.049 | m44 | 0.0821 | 0.077 |
| m53 | -0.0058 | 0.014 | m54 | -0.0283 | 0.019 |
| m63 | -0.0053 | 0.011 | m64 | -0.0195 | 0.017 |
| m13 | 1.5484*** | 0.497 | m14 | 3.3901*** | 0.725 |
| m23 | -0.6554*** | 0.176 | m24 | -1.2583*** | 0.281 |
| m33 | -1.0993*** | 0.362 | m34 | -1.9977*** | 0.497 |
| m43 | 0.6036*** | 0.049 | m44 | 0.0821 | 0.077 |
| m53 | -0.0058 | 0.014 | m54 | -0.0283 | 0.019 |
| m63 | -0.0053 | 0.011 | m64 | -0.0195 | 0.017 |
| arch1 | 0.3812*** | 0.061 | garch1 | 0.0627* | 0.033 |
| arch2 | 0.3468*** | 0.069 | garch2 | 0.1927*** | 0.065 |
| arch3 | 0.3993*** | 0.071 | garch3 | -0.0173 | 0.026 |
| arch4 | 0.2621*** | 0.087 | garch4 | 0.3228*** | 0.110 |

*Sources: Calculated by authors*

## Conclusion

Using GARCH approach to examine the influence of geopolitical risks and economic policy uncertainty on global energy price from January 2003 to December 2022, we find the following conclusion: Firstly, Global oil price is negatively impact on the volatility of oil prices except for OPEC, while EPU is also shown to have a significant positive impact on the volatility of oil prices. Furthermore, the impact on volatility of oil prices has both a long term and short-run volatility tendency. Lastly, there exists a short-persistent bi-directional spill-over effect between global average oil prices in monthly scopes. However, GPR and EPU indexes are found to have weak impact on these spill-over relationships.

The key finding of this paper is that GPR indexes as well as GPRA and GPRT can have impact on crude oil prices. This can be of practical applications for both businesses and policymakers.

***Firstly,*** given that we have established the impact on each level of threats, investors and regulators can utilize both GPR and EPU to monitor the level of risk and certainty of it, and pay particular attention to the quantiles in which GPR and EPU would have the most influence on the volatility of oil prices. Moreover, policymakers in government offices can create counter measure against spiking oil prices ahead of the energy shock thanks to measuring the progress of GPR on a monthly or daily basis, which can assist them in predict the trajectory of oil prices and devise appropriate strategy to counter it.

***Secondly,*** high GPR would lead to increased crude oil prices. Oil-importing nations, thus, can use this index as a method to forecast oil prices based on current global geopolitical events, which can help them to negotiate to reduce import costs and avoid inflation in the national economy. In contrast, oil-producing countries can alter their oil supply to obtain the best production size and profit. This is vital as importing governments cannot afford a high OP, and rising oil prices may spark conflicts or wars.

To sum up, government personnels as well as business owners can observe the index of GPR and EPU as effective metrics to forecast the future direction of oil prices and devise appropriate policies or maintain high business performance respectively whilst adapting to global energy price fluctuation throughout the conflict events.

## References:

*Baker, S.R., Bloom, N. and Davis, S.J. (2016). Measuring Economic Policy Uncertainty. SSRN Electronic Journal, 131(4). doi:https://doi.org/10.2139/ssrn.2198490.*

*Bollerslev, T. (1986). Generalized autoregressive conditional heteroskedasticity Journal of Econometrics, 31(3), pp.307-327.*

*Caldara, D. and Iacoviello, M. (2018). Measuring Geopolitical Risk. International Finance Discussion Paper, 2018(1222), pp.1-66. doi:10.17016/ifdp.2018.1222.*

*Kannadhasan, M. and Das, D. (2019). Do Asian emerging stock markets react to international economic policy uncertainty and geopolitical risk alike? A quantile regression approach. Finance Research Letters.*

*UN, 2022, Meetings Coverage and Press Releases, Russian Federation Announces 'Special Military Operation' in Ukraine as Security Council Meets in Eleventh-Hour Effort to Avoid Full-Scale Conflict https://press.un.org/en/2022/sc14803.doc.htm*

*Nelson, D.B. (1991). Conditional Heteroskedasticity in Asset Returns: A New Approach. Econometrica, 59(2), pp.347-370. doi:https://doi.org/10.2307/2938260.*

*Noguera-Santaella, J. (2016). Geopolitics and the oil price. Economic Modelling, 52, pp.301-309.*

*Selmi, R., Bouoiyour, J., & Miftah, A. (2020). Oil price Jumps and the Uncertainty of Oil Supplies in a Geopolitical Perspective: The Role of OPEC's Spare Capacity. International Economics.*

*Smales, L. A. (2021). Geopolitical risk and volatility spillovers in oil and stock markets. The Quarterly Review of Economics and Finance, 80, 358-366.*

*Jiang, Y., Ren, Y. S., Yang, X. G., Ma, C. Q., & Weber, O. (2024). The relationship between geopolitical risk and crude oil prices: evidence from nonlinear and frequency domain causality tests. Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad, 53(2), 123-145*

*Zhang, Y.-J. and Yan, X.-X. (2020). The impact of US economic policy uncertainty on WTI crude oil returns in different time and frequency domains. International Review of Economics & Finance, 69, pp.750-768.*

*Nitsevich, V. F., et al. (2020). Western sanctions and their consequences for Russia. Proceeding of the International Science and Technology Conference" FarEastCon-2018" Volume 1 (pp. 65-79). Springer International Publishing.*

# GREEN GROWTH IN VIETNAM: CURRENT STATUS AND POLICY IMPLICATIONS

PhD. Do Thi Thu*

**Abstract:** ***Climate change causes negative impacts on the sustainable development of many nations, including Vietnam. The World Bank (2022) showed that Vietnam's GDP was reduced by 3.2% in 2020 due to the impact of climate change. Furthermore, this impact could range from 12 to 14.5% of Vietnam's GDP in 2050. Therefore, green growth is an important strategy to achieve sustainable development goals for Vietnam. This study aims to analyze the situation of green growth in Vietnam and discuss policy implications to promote green growth in Vietnam to achieve the National Green Growth Strategy goals for the 2021 - 2030 vision towards 2050, issued under Decision No. 1658/QD-TTg dated October 1st, 2021, of the Prime Minister.***

• Keywords: *green growth, equity transition, sustainable development goals.*

*JEL codes: D62, H23, O13, O44, Q01*

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## 1. Introduction

Green growth is considered a key element of sustainable development. It has become a prominent development trend in many countries by orienting the economy towards "green" and environmentally responsible goals (OECD, 2019; World Bank, 2012). The OECD recommends that green growth offers an opportunity to contribute to sustainable economic, social, and environmental development.

In Vietnam, green growth is included in Decision No. 1658/QD-TTg in 2021 to ratify the National Green Growth Strategy for the 2021-2030 period, vision toward 2050. According to the Ministry of Planning and Investment of the Socialist Republic of Vietnam (2021), the set of green growth statistical indicators includes four main goals: (1) Reducing greenhouse gas emissions intensity per GDP; (2) Greening economic sectors, including the following fields: energy; transportation; agriculture; trade - services; technology; investment capital, bonds, credit: forest resources; mineral resources; water resources; (3) Greening lifestyles and promoting sustainable consumption; (4) Greening the transition process on the principles of equality, inclusion, and resilience enhancement. The set of indicators consists of 2 components: List of green growth statistical indicators and Content of green growth statistical indicators with 72 indicators, arranged according to 4 goals of the National Strategy on Green Growth from reducing the intensity of greenhouse gas emissions per GDP, to reflecting the level of "greening" in economic sectors.

This study aims to provide scientific evidence for policymakers to promote green growth in Vietnam. Based on some statistical indicators of green growth, it will analyze the current status of green growth and discuss policy implications for promoting it in the future.

## 2. Situation of green growth in Vietnam

This study collects indicators representing the four target groups of green growth in Vietnam based on the Green Growth Statistical Indicators of Vietnam, shown in the Ministry of Planning and Investment of the Socialist Republic of Vietnam (2021).

*Goal 1: Reducing greenhouse gas emissions intensity per GDP*

Along with economic growth, Vietnam's CO2 emissions have increased for many years. The rise in greenhouse gas emissions suggests that Vietnam should encourage green production and consumption and substitute fossil fuels with renewable energy. Although the average CO2 emissions per unit of GDP have slightly

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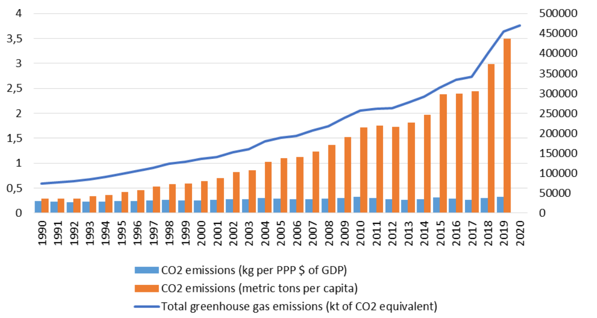
decreased, $CO_2$ emissions per capita have increased, reflecting the limitation of controlling emissions in socioeconomic activity (Figure 1).

**Figure 1. Emission intensity and economic growth in Vietnam**



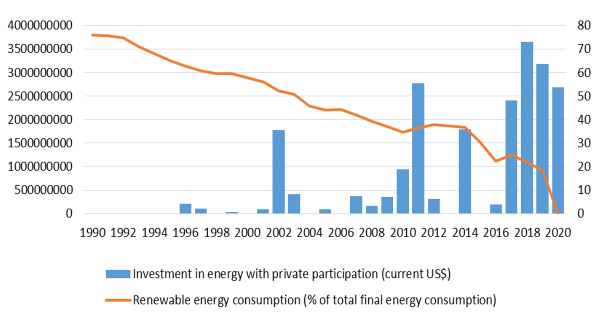

*Source: Own illustration by using data from World Bank's Data*

*Goal 2: Greening economic sectors*

With the government's firm determination and strategic policies, Vietnam has made significant progress in green growth. Between 2010 and 2020, approximately \$9 billion in foreign direct investment (FDI) was invested in renewable energy and the production of equipment for green projects, laying the foundation for a green economy valued at \$6.7 billion in 2020, with an annual growth rate of 10-13%.

Figure 2 shows an increase in private investment in the energy industry in Vietnam from 1990 to 2020. However, on the demand side, the percentage of renewable energy in total final energy consumption decreases over time. The percentage gradually declined from around 70% in 1990 to approximately 20% in 2019. This shows the limitations of encouraging the use of green energy in greening economic sectors.

**Figure 2. Supply and demand of energy**




*Source: Own illustration by using data from World Bank's Data*

*Goal 3: Greening lifestyles and promoting sustainable consumption*

Decision No. 1658/QD-TTg in 2021 to ratify the National Green Growth Strategy for the 2021-2030 period, vision toward 2050 target that the rate of municipal solid waste that is collected and treated in compliance with the regulated standards reaches 95% in 2030 and 100% in 2050. According to GSO (2023), this rate was about 91.8% in 2019 (Table 1). Although this rate is relatively close to the target, the decreasing trend in the waste collection rate in recent years shows the challenges facing the goal of promoting green lifestyles (GSO, 2023).

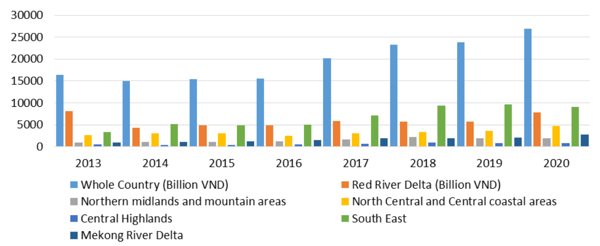
**Table 1. Domestic solid waste collection rate in urban and rural areas by region in 2019**

| Region | Urban (%) | Rural (%) |
|---|---|---|
| Red River Delta | 96.8 | 84.7 |
| Northern midlands and mountain areas | 82.3 | 51.8 |
| North Central and Central Coast areas | 84.9 | 62.8 |
| Central Highland | 62.5 | 29.1 |
| South East | 98.6 | 87.5 |
| Mekong River Delta | 88.3 | 49.1 |
| **National average** | **91.8** | **65.7** |

*Source: Ministry of Natural Resources and Environment (MONRE), cited in GSO (2023)*

The government expenditure structure also promotes sustainable consumption. Figure 3 shows that government expenditures on environmental protection increased from 16,391 billion VND in 2013 to 26,949 billion VND in 2020. The Southeast and Red River Delta regions had the highest government expenditures on environmental protection in Vietnam.

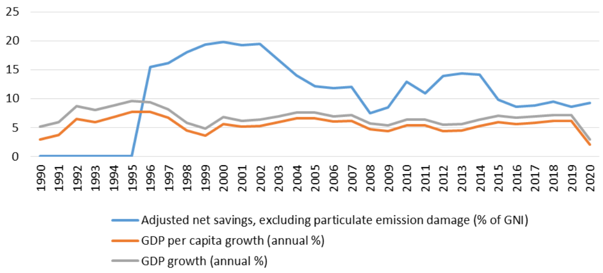
**Figure 3. Government expenditure for environmental protection, 2013-2020**




*Source: Own illustration from data of Ministry of Finance, cited in GSO (2023)*

At the same time, to encourage green lifestyles in all production and consumption, the government has handled many violations of environmental protection regulations. The number of ecological violations addressed between 2012 and 2021 increased more than 5.7 times, rising from 2,438 cases in 2012 to 14,042 cases in 2021. Similarly, the fines imposed grew nearly 7.6 times, from approximately 31.9 billion VND in 2012 to about 240.7 billion VND in 2021. This underscores the crucial role of the government in steering the private sector toward greener consumption and production practices, thereby promoting green growth (GSO, 2023).

**Figure 4. Green net saving and economic growth**




*Source: Own illustration by using data from World Bank's Data*

The goal of promoting sustainable consumption can also be assessed through the adjusted green net savings rate as a percentage of GNI, which remained positive and relatively high (15-20%) from 1996 to 2002. However, it has decreased recently (Figure 4)

*Goal 4: Greening the transition process on equality, inclusion, and resilience enhancement principles.*

Some indicators for measuring the goal of "Greening the transition process on equality, inclusion, and resilience enhancement principles" include the percentage of days in the year with air pollutant concentrations exceeding the technical standards; the rate of the urban population provided with clean water through centralized water supply systems; the rate of the rural population using clean water that meets standards; the percentage of household members with sufficient drinking water over the past 12 months; and some others. Vietnam always focuses on promoting economic growth while ensuring social equity. The social protection system and poverty reduction policies aim to leave no one behind. These are essential buffers to help Vietnam successfully implement the energy transition process to meet green growth goals while ensuring social equity.

## 3. Policy discussion on promoting the green growth in Vietnam

Analysis of the current status of green growth in Vietnam shows achievements and limitations. Along with the efforts of the Government and the private economic sector in greening production and consumption activities, statistical results show that Vietnam has achieved remarkable results in all four green growth goals. Specifically, the average emission rate per GDP tends to be stable and slightly decreasing, increasing private investment in energy industry development, increasing government spending on environmental protection, limiting environmental violations through administrative sanctions, strengthening solid waste pollution treatment, and growing green savings. However, there are still challenges in achieving green growth goals in Vietnam. The average CO2 emission rate per capita is high and has tended to increase in recent years. The green consumption trend is not yet widespread. In particular, the transition to production and consumption using renewable energy sources is still limited. Many studies have also pointed out institutional obstacles in promoting renewable energy production in Vietnam. These are essential bottlenecks that need to be removed to encourage the greening of economic sectors. In addition, the goal of equitable transition in renewable energy development, mainly promoting green growth in general, has been and is posing requirements for further improvement of the social security system. ILO (2024) analyzed the importance and orientation of designing a universal and comprehensive social security system to adapt to climate change, meeting the goal of equitable transition.

## References:

*GSO (2023), Environment Statistic in Vietnam: 2014-2021, Statistic Publishing House, Vietnam. Visit at: https://www.gso.gov.vn/wp-content/uploads/2024/01/Thong-ke-moi-truong_In_B6_compressed.pdf.*

*International Labour Organization. (2024). World Social Protection Report 2024-26: Regional companion report for Asia and the Pacific. Geneva: ILO.*

*Ministry of Planning and Investment of the Socialist Republic of Vietnam (2021), Circular No. 10/2023/TT-BKHĐT dated November 1st, 2023, stipulating the indicators for Green growth statistics.*

*OECD (2011), Towards Green Growth: Monitoring Progress, OECD Indicators, OECD Publishing.*

*OECD (2014), Green Growth Indicators 2014, OECD Green Growth Studies, OECD Publishing. http://dx.doi.org/10.1787/9789264202030-en*

*OECD (2019), Towards Green Growth in Emerging Market Economies, OECD Green Growth Papers, OECD Publishing. https://www.oecd-ilibrary.org/docserver/d5e5b5d7-enpdf?expires=1724929194&id=id&accname=guest&checksum=39C90D457DF5539262A48D92C499AA0B*

*Prime Minister of the Socialist Republic of Vietnam (2021), Decision No. 1658/QĐ-TTg dated October 1st, 2021, approving the National Strategy for Green Growth for the 2021 - 2030, with a vision toward 2050.*

*World Bank (2022), Vietnam Country Climate and Development Report, World Bank in Vietnam.*

# FACTORS AFFECTING THE DECISION TO CHANGE THE BANK SERVICE AMONG THE YOUTH IN HANOI

**Bui Dang Thanh* - Khuat Vu Ngoc Linh* - Nguyen Minh Thu****

**Abstract:** ***This study examines factors influencing young customers' bank switching behavior in Hanoi, highlighting service quality as a key factor. Nevertheless, banks should not rely solely on improving service quality for customer retention. Other factors warrant attention. Understanding these influences aids managers in allocating resources effectively to reduce customer churn and attract new clients. This study offers practical insights for banks, enhances the methodological framework, and contributes to the development of bank services.***

• Keywords: *young people, bank, switching behavior, exploratory factor analysis, Hanoi.*

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## 1. Introduction

In today's competitive financial markets, customer loyalty is crucial for banks to maintain long-term profitability. With advancements in digital banking, young consumers in particular can easily switch services if their needs are not met. Many customers, rather than expressing dissatisfaction, leave silently, which can lead to declining service quality as banks remain unaware of their issues.

In Vietnam, the rapid growth of both domestic and international banks, particularly in Hanoi, has heightened competition. The city, with over 8.4 million residents and nearly 1800 bank branches, has seen a shift toward digital banking, especially among the youth. While prior studies have examined bank switching behaviors, they often focus on older generations or foreign markets. This study seeks to understanding the underlying motivations that drive young individuals in Hanoi to switch their bank services.

Therefore, with a comprehensive perspective on the dynamic behaviors and preferences of the youth demographic, banks can develop strategies to retain their young customer base and improve service offerings in a competitive landscape.

## 2. Theoretical basis and research model

### *2.1. Theoretical basis*

Previous research on bank-switching behavior has emphasized several key factors that influence customers' decisions to change financial service providers. Colgate & Lang (2001) developed a model identifying price, service quality, and switching barriers as crucial elements driving bank-switching behavior. Building on this, Clemes et al. (2010) introduced additional factors such as technology, highlighting that digital banking services are increasingly important in customer retention.

This study also draws from the Technology Acceptance Model (TAM) proposed by Davis (1989), which suggests that perceived usefulness and ease of use are key determinants in the adoption of new technologies. For Generation Z, who are digital natives, technology plays a significant role in their banking choices. This makes the TAM particularly relevant for analyzing bank-switching behavior in Hanoi, where digital banking has become the norm among young customers.

In the Vietnamese context, studies by Vu & Pham (2022) identified additional factors like effective advertising, switching costs, and involuntary switching (such as relocation) as influential in bank-switching decisions of customers between the ages of 18 and 32 in Hanoi.

### *2.2. Research hypothesis*

Based on research theory and characteristics of the youth in Hanoi, the author selects and proposes the following research hypotheses:

*Hypothesis H1: Price has a positive impact on the switching behavior.*

Price refers to the fees, interest rates, and service charges imposed by banks. Prior studies, such as those by Clemes et al. (2010) and Gerrard & Cunningham (2004), have shown that high fees, loan interest rates,

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and low interest rates on savings accounts are major reasons for bank switching.

*Hypothesis H2: Service quality has a positive impact on the switching behavior.*

Service quality, which encompasses customer service, staff behavior, and the effectiveness of banking products, has been shown to affect customer satisfaction and loyalty. Zeithaml et al. (1996) emphasized that service quality is a significant driver of customer retention. Clemes et al. (2010) also identified poor service quality as a primary reason for bank switching.

*Hypothesis H3: Technology has a positive impact on the switching behavior.*

Technology, especially in the form of online and mobile banking services, plays a crucial role in customers' bank-switching behavior. Gerrard & Cunningham (2004) also identified technology as an important factor in the decision to switch banks. Masocha & Matiza (2017) confirmed that difficulties in using digital banking systems prompt customers to switch to banks with better technological offerings.

*Hypothesis H4: Inconvenience has a negative impact on the switching behavior.*

Inconvenience, particularly related to branch and ATM locations, can drive customers to switch banks. Levesque & McDougall (1996) argued that customers are more likely to leave a bank if they perceive its locations to be inconvenient. In the case of digital banking, however, Peppard (2000) noted that the importance of physical location might diminish as customers increasingly turn to online banking.

*Hypothesis H5: Reputation has a positive impact on the switching behavior.*

Reputation, which includes perceptions of a bank's financial stability, ethical conduct, and market standing, is a significant factor in customer retention. Gerrard & Cunningham (2004) found that reputation strongly influences bank-switching decisions, especially in competitive markets like Asia.

*Hypothesis H6: Switching costs have a negative impact on the switching behavior.*

Switching costs refer to the monetary, psychological, and procedural costs incurred by customers when switching from one bank to another. Colgate & Lang (2001) found that in the financial services industry, customers with higher switching costs are less likely to change providers, even when dissatisfied. Matthews & Murray (2007) further noted that switching costs strongly influence customer decisions to remain with their current bank.

*Hypothesis H7: Effective advertising has a positive impact on the switching behavior.*

Effective advertising can influence customers by raising awareness about better services and offers from competing banks. Cengiz et al. (2007) found that effective advertising plays a vital role in increasing customer loyalty and retention, while Clemes et al. (2010) suggested that competitive advertising can induce switching behavior in the Chinese retail banking sector.

*Hypothesis H8: Involuntary switching factors affect customers' switching banks behavior.*

Involuntary factors, such as relocation or life changes, often force customers to switch banks, even if they are satisfied with the service. Research by Khan et al. (2010) highlighted that involuntary or unavoidable switches are the most prevalent form of switching behavior.

***2.3. Research model***

Based on the above hypotheses, the authors propose a research model consisting of eight independent variables (Price, service quality, technology, inconvenience, reputation, switching costs, effective advertising, and involuntary switching) and one dependent variable (Customers' switching banks behavior).

**3. Research methodology**

The research subjects are Generation Z customers (born in 1997-2012) living in Hanoi who use banking services. The research was conducted in two main steps: (i) Preliminary research using qualitative methods to refine the research model and questionnaire through a pilot survey; (ii) Official research using quantitative methods by distributing surveys to 204 respondents. Data was analyzed using SPSS 25 software to examine the factors influencing bank-switching behavior

**4. Model estimation and the results**

***4.1. Research sample***

The research sample consists of 204 respondents, all young bank customers in Hanoi. After eliminating 24 invalid responses, 180 completed survey forms were used for analysis.

Regarding gender distribution, 63 participants were male (35%), and 117 were female (65%). In terms of age, the majority of respondents (128 people, 71.1%) were aged 18-22, followed by 23-26 years old (36 people, 20%), and under 18 years (16 people, 8.9%). The research also covered various occupations, with students making up the largest group (120 people, 66.7%), followed by office staff (32 people, 17.8%).

Income distribution showed that 42.2% (76 people) of the respondents had a monthly income of less than 5 million VND, while 31.1% (56 people) earned between 5 and 10 million VND.

### *4.2. Cronbach's Alpha test*

Based on the results from the Cronbach's Alpha test, the table 1 shows that most factors are statistically significant, with Cronbach's Alpha coefficients greater than 0.6, ensuring the reliability of the scale. However, the Inconvenience factor, with a Cronbach's Alpha of 0.533, and the Reputation factor, with a Cronbach's Alpha of 0.536, do not meet the reliability threshold and are excluded from further analysis.

**Table 1: Cronbach's Alpha test**

| Factor | Observed Variable | Mean Value | Standard Deviation | Variable-Total Correlation | Cronbach's Alpha Coefficient |
|---|---|---|---|---|---|
| Price | PC1-PC4 | 11.83-11.94 | 3.547-5.067 | 0.476-0.632 | 0.694-0.845 |
| | α = 0.823 | | | | |
| Service Quality | SQ1-SQ4 | 11.80-11.93 | 1.904-2.708 | 0.578-0.650 | 0.408-0.807 |
| | α = 0.657 | | | | |
| Technology | TC1-TC4 | 9.27-9.98 | 5.335-7.627 | 0.553-0.883 | 0.722-0.856 |
| | α = 0.846 | | | | |
| Inconvenience | IC1-IC4 | 10.84-11.17 | 3.173-5.082 | 0.120-0.441 | 0.338-0.598 |
| | α = 0.533 | | | | |
| Reputation | RP1-RP4 | 12.87-13.33 | 1.832-2.637 | 0.193-0.332 | 0.481-0.582 |
| | α = 0.536 | | | | |
| Switching Costs | SC1-SC3 | 5.61-6.11 | 3.446-5.871 | 0.507-0.648 | 0.548-0.740 |
| | α = 0.737 | | | | |
| Effective Advertising | EA1-EA3 | 6.03-6.66 | 3.143-6.506 | 0.449-0.741 | 0.499-0.835 |
| | α = 0.761 | | | | |
| Involuntary Switching | IS1-IS4 | 8.64-9.03 | 9.444-14.005 | 0.545-0.890 | 0.822-0.939 |
| | α = 0.898 | | | | |

### *4.3. Exploratory factor analysis*

Exploratory factor analysis is a technique used to reduce and summarize data. KMO coefficient equals 0.670 > 0.5: This indicates that factor analysis is appropriate for the dataset. The significance level = 0.000 < 0.1, indicating that the observed variables are correlated, making them suitable for EFA.

With the Principal Components extraction method and Varimax rotation, factor analysis extracted 6 factors from 21 observed variables and high factor loadings ranging from 0.676 to 0.938 (Table 2). Total variance explained = 64.462% > 50%, indicating that these six factors account for 64.46% of the variability in bank-switching behavior.

**Table 2: Rotated component matrix**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| IS1 - IS4 | 0.676 - 0.938 | | | | | |
| TC1 - TC4 | | 0.721 - 0.936 | | | | |
| PC1 - PC4 | | | 0.689 - 0.897 | | | |
| SQ1 - SQ3 | | | | 0.762 - 0.912 | | |
| EA1 - EA3 | | | | | 0.719 - 0.884 | |
| SC1 - SC3 | | | | | | 0.751 - 0.853 |
| Total variance explained = 64.462% | | | | | | |

### *4.4. Model evaluation*

The regression analysis was performed with six independent variables and one dependent variable, "Switching behavior" (SB). The regression equation takes the following form:

$$SB = \alpha + \beta_1(Price) + \beta_2(Service\ Quality) + \beta_3(Technology) + \beta_4(Switching\ Costs) + \beta_5(Effective\ Advertising) + \beta_6(Involuntary\ Switching)$$

*4.4.1. Multicollinearity Test*

All the Variance Inflation Factors (VIF) of the independent variables are between 1.042 and 1.073, which are greater than 1 and less than 2. This indicates that the regression model does not violate multicollinearity (Table 3).

**Table 3: Multicollinearity Test**

| | IS | TC | PC | SQ | EA | SC |
|---|---|---|---|---|---|---|
| VIF | 1.037 | 1.042 | 1.059 | 1.070 | 1.048 | 1.055 |

*4.4.2. Model Fit*

The regression model has an $R^2 = 0.226$ and adjusted $R^2 = 0.199$, indicating that 22.6% of the bank service switching behavior are affected by the above group of factors.

According to table 4, significance level ($\beta_1$, $\beta_2$, $\beta_6$) < 0.01: The independent variables Price, Service Quality and Involuntary Switching are statistically significant at the 1% level. This suggests that these variables have a strong and significant impact on customers' decisions to switch banks.

Significance ($\beta_3$, $\beta_4$, $\beta_5$) > 0.1: The variables Technology, Switching Costs and Effective Advertising are not statistically significant at the 10% level.

**Table 4: Regression coefficient**

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | β | | |
| Constant | 0.882 | 0.434 | | 2.029 | 0.044 |
| IS | 0.132 | 0.036 | 0.252 | 3.639 | $0.000^{***}$ |
| TC | 0.039 | 0.048 | 0.055 | 0.813 | $0.417^{ns}$ |
| PC | 0.274 | 0.061 | 0.311 | 4.521 | $0.000^{***}$ |
| SQ | 0.278 | 0.061 | 0.313 | 4.523 | $0.000^{***}$ |
| EA | 0.014 | 0.039 | 0.025 | 0.359 | $0.720^{ns}$ |
| SC | 0.011 | 0.040 | 0.018 | 0.267 | $0.789^{ns}$ |
| Dependent variable: Switching behavior (SB) | | | | | |

This result coincides with previous research. However, there are some differences when the inconvenience, reputation and switching costs do not have effects on the switching behavior. Nowadays, young customers can easily access the online banking service, therefore the distance and inconvenience of bank's branches is not a barrier for them. Moreover, most of the commercial banks meet the standard requirements of the State bank, and the reputation gap between banks is no longer significant. In terms of switching costs, the author believes that the youth prioritize their satisfaction when using banking services.

In contrast, young people in Hanoi often prioritize price when choosing bank services. With limited budgets, they are more mindful of fees and charges. Many have financial goals like saving for education, buying a house, or traveling. Given Hanoi's high living costs, minimizing expenses, such as banking fees, helps them work toward these goals

Service quality is crucial for young people in Hanoi, who led busy lives balancing work, education, and social activities. They value convenient, efficient banking, favoring seamless digital experiences and responsive customer support. Additionally, involuntary switching impacts their behavior; disruptions to banking services are inconvenient, especially given their reliance on internet banking and the prevalence of salary payments through banks.

***4.6 .Variance test***

** Gender*

The Independent Sample T-Test method is used to test the difference in qualitative variables with two values (gender).

Table 7 shows us that the significance level of the test = 0.754 > 0.1, meaning the variance between the two genders has no difference. The two-tailed significance equals 0.970 > 0.1, from which it can be concluded that there is no statistically significant difference when switching bank services of survey takers by gender.

**Table 7: Levene Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | |
|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference |
| SB | Equal variances assumed | 0.098 | 0.754 | 0.038 | 178 | 0.970 | 0.00366 | 0.09609 |
| | Equal variances not assumed | | | 0.038 | 127.811 | 0.970 | 0.00366 | 0.09589 |

** Age, Occupation, and Income*

Tests of Homogeneity of Variance for Age, Occupation and Income show all the significance levels of the test > 0,1, meaning the variance between different age groups, occupations, and income group has no difference.

ANOVA tests for age, occupation and income show that the significant level of ANOVA test equal 0,390; 0,849; 0,217 respectively, which are greater than 0,1, therefore the author can conclude that there is no difference of bank services switching behavior between different age groups, occupations, and income groups.

**5. Conclusion and recommendations**

***5.1. Conclusion***

According to the results of regression analysis, there are 03 factors affecting the bank services switching behavior of the youth in Hanoi: Price, Service quality and Involuntary switching. The model also shows that there are no differences between gender, age, occupation, and income groups that affect the bank services switching behavior of the youth in Hanoi.

***5.2. Recommendation***

*5.2.1. State bank and government*

Firstly, the State Bank should develop a clear legal framework for personal banking services, as this area currently lacks regulation. It should also work with the General Statistics Office to create a standardized list of banking products. Additionally, the State Bank must guide resource allocation to support new financial models and ensure effective supervision to maintain a stable market. The government, in turn, should provide a stable political and social environment, strengthen the legal framework in line with international standards, and regulate competition in the banking sector to maintain optimal conditions.

*5.2.2. Commercial banks*

Commercial banks can retain customers by providing excellent customer service, offering competitive rates, and using technology for convenience. Personalized financial advice and clear communication about policy changes build trust and loyalty; engaging in community events and initiatives further strengthens customer connections.

***5.3. Limitations and future research directions***

This study offers theoretical and managerial insights but has some limitations. A broader geographic sample could reveal regional differences in customer attitudes toward bank switching. While it examines eight factors affecting switching behavior, other unexamined factors may also play a role and warrant further study. Additionally, this research focuses on past behaviors rather than future intentions; future studies should explore factors that could influence long-term customer relationships and future switching behavior.

**References:**

*Cengiz, E., Ayyildiz, H., & Er. B. (2007), "Effects of image and adverting efficiency on customer loyalty and antecedents of loyalty: Turkish banks sample", Banks and Bank Systems, Vol. 2, No. 1, pp. 56 - 80.*

*Clemes, M. D., Gan, C., & Zheng, L. Y. (2007), "Customer switching behaviour in the New Zealand banking industry", Banks & bank systems, Vol. 2, Iss. 4, pp. 50*

*Colgate, M., & Lang, B. (2001), "Switching barriers in consumer markets: an investigation of the financial services industry", Journal of consumer marketing, Vol. 18, No. 4, pp. 332 - 347.*

*Davis, F., Bagozzir, R. & Warshaw, P. (1989), "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models", Management Science, Vol. 35, No. 8, pp. 982 -1003.*

*Gerrard, P., & Cunningham, J. B. (2004), "Consumer switching behaviour in the Asia banking market", The Journal of Service Marketing, Vol. 18(2/3), pp. 215.*

*Khan, B. (2010), "What drives interest rate spreads of commercial banks in Pakistan? Empirical evidence based on panel data", SBP Research Bulletin, Vol. 6, pp. 15 - 36.*

*Levesque, T., & McDougall, G. H. (1996), "Determinants of customer satisfaction in retail banking", International journal of bank marketing, Vol. 14, No. 7, pp. 12 - 20.*

*Masocha, R., & Matiza, T. (2017), "The role of e-banking on the switching behaviour of retail clients of commercial banks in Polokwane, South Africa", Journal of Economics and Behavioral Studies, Vol. 9, No. 3, pp. 192 - 201.*

*Matthews, C., & Murray, D. (2007), "Helping bank customers switch: A case study", Journal of Financial Services Marketing, Vol. 11, No. 4, pp. 360 - 369.*

*Peppard, J. (2000), "Customer relationship management (CRM) in financial services", European Management Journal, Vol. 18, No. 3, pp.312 - 327.*

*Vu, M.T. & Pham, T.H. (2022), "Các yếu tố ảnh hưởng đến hành vi thay đổi dịch vụ ngân hàng của khách hàng trẻ tại Hà Nội", FTU Working paper series, Vol. 2, No. 6.*

*Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996), "The behavioral consequences of service quality", Journal of marketing, Vol. 60, No. 2, pp. 31 - 46.*

# THE READINESS OF ACCOUNTANTS FOR ADOPTION OF VIETNAMESE PUBLIC SECTOR ACCOUNTING STANDARDS

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**Abstract:** ***The public sector plays an important role in the development of a country. These organizations hold a large source of funding to perform functions and tasks assigned by the state. To ensure that financial accounting information is transparent and accountable, the accounting apparatus must comply with current regulations and standards. However, implementing accounting work according to the guidance of standards is one of the difficulties that accountants encounter. By using experimental methods and applying the SEM model, the research results show that accountants in public units can be ready to integrate with standards but must be trained, fostered as well as have solidarity in the collective. Future studies can go into each specific field in a country, each locality as well as each influencing factor identified in this study.***

• Keywords: *accountant, accounting standard, public sector, readiness.*

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## 1. Introduction

The public sector has always been regarded as a crucial component, holding a regulatory position overall economic activities of a nation. This sector has two primary functions: first, ensuring social order through state management activities, and second, producing and providing public goods and services to meet essential social needs, which are undertaken by public service units. Therefore, the public sector plays a vital role, not only serving as a tool for state intervention to ensure a conducive development environment but also regulating and guiding development by directly supplying goods and services, managing, and investing in key sectors linked to national security. The scope of public sector activities is extensive, ranging from exercising state management authority to providing goods and services that cater to the consumption needs of citizens and organizations within society. However, it is challenging to precisely delineate the areas of society that fall within the public sector. Depending on each nation's perspective and development orientation, the scope of the public sector is defined differently. Even within a single country, its scope varies across different periods. Additionally, with changes in the socio-economic environment and the growing demand for improved living standards and operational efficiency, the public sector is required to undergo reforms, and financial-accounting information must become increasingly reliable.

In other words, public sector reform entails systematic and deliberate changes by the state to enhance the effectiveness and efficiency of public sector operations, meeting societal demands for essential services. Furthermore, public sector reform aims to improve management efficiency within the state apparatus and the provision of public services, especially in countries transitioning from a centrally planned economy to a socialist-oriented market economy like Vietnam. This reform process directly affects the structure and operational mechanisms of the state apparatus, as well as relationships, workforce quantity and quality in general, and accounting and auditing personnel in particular within the public sector. It also influences the balance between employment and compensation, along with the critical values that these positions bring to organizations.

During the operation of public organizations, stakeholders expect the public sector to facilitate integration, enhance transparency, and ensure the international recognition of key financial information while improving the accountability of units within this field. To achieve these objectives, the public accounting system must adhere to common standards, best practices, and the national prevailing regulations. Accordingly, international integration requires countries to provide standardized, comparable, and internationally recognized financial information. In this regard, the reform and modernization of public sector accounting legislation have been a key focus of the Vietnamese Ministry of Finance, aiming to improve financial resource management efficiency, enhance transparency, and align with international practices. In practice, public sector accounting plays a crucial role in fulfilling its functions of providing

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information and overseeing economic and financial activities of the state.

The development and publication of a public sector accounting standards system that aligns with both international practices and national realities serve two key purposes. Public sector accounting standards form an essential legal framework, serving as a basis for timely and truthful financial reporting, enhancing operational efficiency, financial management, and transparency in the utilization of public sector resources. However, challenges remain due to differences in the administrative divisions of each country, the varying expertise levels of public sector accountants, and the sheer number of public accounting units, whose scale and operational conditions differ across sectors. The pressing issue now is the feasibility of implementing public sector accounting standards and the readiness of accounting personnel in this field.

## 2. Literature review

### *2.1. Publications related to the adoption of accounting standards*

A case study on the perception of the benefits of IFRS adoption for enterprises by Phan and Mascitelli (2014) surveyed 555 respondents working in accounting and academia. The study found strong optimism regarding IFRS adoption, as respondents believed that applying IFRS would offer advantages such as improving comparability between enterprises across countries, enhancing the reliability of financial statements, enabling external investors to use financial information more effectively, and accelerating access to international markets compared to Vietnam's current accounting system. Similarly, the study by Le Hoang Phuc (2014) highlighted that IFRS adoption brings significant benefits, as transactions are assessed based on the principle of "substance over form," thereby increasing corporate responsibility in financial reporting. Furthermore, internal financial information within enterprises becomes more consistent with external reporting.

Phan et al. (2014) examined perceptions of accounting standards adoption in Vietnam, focusing on accountants' awareness, challenges, and expectations to support policymakers in designing an appropriate accounting framework. The study strongly advocated transitioning from the current accounting system to accounting standards. Similarly, Nguyen Ngoc Hiep's (2017) study on the challenges of transitioning from VAS to IFRS in certain Vietnamese enterprises identified four key obstacles: (1) high costs of system transition and staff training, (2) accountants' IFRS proficiency, including foreign language skills, (3) fundamental differences between IFRS and VAS, with VAS having limited international alignment, and (4) enterprises' capacity to manage the accounting system transition. A more recent study by Chuc et al. (2019) on standards adoption in Vietnamese enterprises surveyed 119 experts and 104 entities. The study proposed a five-level Likert scale to measure IFRS adoption challenges, including: (1) high initial implementation costs, (2) inconsistencies between Vietnam's legal framework and international accounting regulations, (3) difficulties faced by small and medium-sized enterprises (SMEs) in technology and resource allocation, (4) language barriers, (5) the complexity of IFRS with stringent disclosure requirements, (6) difficulties in recruiting qualified accountants, (7) subjectivity in financial reporting, and (8) pressure from international consulting enterprises operating in Vietnam.

### *2.2. Publications on factors affecting IFRS adoption*

Research on the factors influencing IFRS adoption has been conducted by numerous scholars. For instance, Le Tran Hanh Phuong (2019) studied macro- and micro-level factors affecting IFRS adoption in Vietnam. The study utilized data from 2016, collected from audited financial statements of 500 large-scale enterprises in Vietnam. It applied descriptive statistical techniques, regression analysis, and a logit model to test hypotheses. The results indicated that micro-level factors including foreign participation, foreign investment, and audit quality significantly impacted IFRS adoption among large enterprises in Vietnam. A similar study by Tran et al. (2019) examined the factors influencing standards adoption among Vietnamese listed firms using logistic regression analysis. Data were gathered from 154 audited financial statements in 2018. The findings revealed that ROE had a significant impact on IFRS adoption among enterprises. The study ultimately recommended that for Vietnamese listed firms to adopt accounting standards effectively, the Ministry of Finance should introduce mandatory IFRS adoption regulations for large enterprises with high ROE, enhance audit firm effectiveness, and develop audit programs based on IFRS standards.

However, another research direction focused on assessing enterprises' perceptions of the factors influencing adoption for small and medium-sized enterprises (SMEs) in Vietnam. Nguyen Thi Anh Linh (2019) conducted a study using data collected over two years (2018–2019) from a sample of 448 SMEs. Additionally, the study analyzed two control variables: (1) Cultural differences were found to have no significant impact on its adoption. (2) Political differences were found to have a significant impact on IFRS adoption (Nguyen Thi Anh Linh, 2019). Among these, enterprise characteristics and accounting personnel competence were the two most influential factors. The study further confirmed that governance capabilities and socio-economic-cultural conditions had an indeterminate impact on accounting standards adoption. However, there were no significant differences in the perceptions of IPSAS usability between corporate managers and auditors.

## 3. Theoretical background and hypothesis development

### *3.1. Institutional theory*

Institutional theory has been widely recognized as a powerful and popular explanatory tool for analyzing organizational change and behavior. The core premise is that organizational actors pursue their interests within specific institutional constraints (Thornton & Ocasio, 2008). Organizations are considered deeply embedded in their social environment, suggesting that organizational procedures and structures often reflect environmental expectations. Institutional theory thus assumes that organizations strive to respond to the demands of their institutional environment to achieve legitimacy (Meyer & Rowan, 1977). Thus, institutional isomorphism can be viewed as a theoretical approach that describes how organizational systems become increasingly similar (Rhoades & Sporn, 2002). DiMaggio and Powell (1983) concluded that organizational change is increasingly less driven by competition or the need for efficiency. Instead, they identified three primary mechanisms leading to institutional convergence: (1) Coercive isomorphism; (2) Mimetic isomorphism; (3) Normative isomorphism

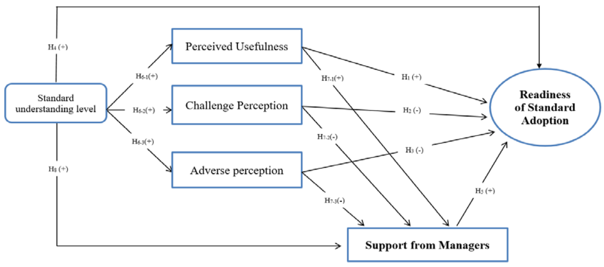
### *3.2. Agency theory*

Jensen and Meckling (1976) argue that if managers are not the owners of an organization, agency costs become a necessary expense. Agency costs refer to the costs incurred to develop a better principal-agent relationship, including: (i) Monitoring costs, which are expenses related to overseeing the actions of agents. (ii) Bonding costs, which involve designing and implementing mechanisms to limit inappropriate managerial actions. (iii) Opportunity costs, which arise when owners impose constraints on agents to prevent misuse of delegated authority for personal gain. Agency theory, developed by Jensen and Meckling (1976), explains the relationship between agents and principals, highlighting that the interests of agents differ from those of managers. As a result, conflicts arise due to agency costs, and monitoring costs are incurred to align different interests (Jensen & Meckling, 1976). These monitoring costs arise from the need to oversee managerial actions, prompting managers to select different accounting methods to reduce agency costs. If an organization adopts IFRS, it may be required to adhere to stricter financial reporting regulations and disclose more information to shareholders and competitors (Bananuka et al., 2019).

Furthermore, agency theory suggests that managerial actions are influenced by what managers expect from the organization (Jensen & Meckling, 1976). Therefore, managers will make decisions that optimize their benefits, and their role is crucial in determining whether an organization adopts IFRS. This decision depends on their perception of the benefits of IFRS adoption for the organization, as well as their knowledge of IFRS. Based on the agency theory approach, this dissertation enhances the explanatory power of agency theory by integrating it with institutional isomorphism theory to explain managerial support and organizational readiness. Additionally, the dissertation combines agency theory with institutional isomorphism theory to analyze the impact of knowledge level, perceived benefits, perceived challenges, and perceived disadvantages on managerial support and organizational readiness.

The above hypotheses are shown through the proposed research model according to the following Figure 1.

**Figure 1: Proposed research model**




*Source: Proposed by the author*

## 4. Research methodology

The research process was conducted in two specific stages with two main steps as follows: Stage 1 for Preliminary Research Process and Stage 2 for Official Research Process. In particular:

### *4.1. Qualitative preliminary research*

This phase is conducted based on the second draft scale, in which the dissertation carries out a pilot survey with a sample size of 77 using a convenience sampling method. The preliminary research is utilized to analyze Cronbach's Alpha reliability coefficient and Exploratory Factor Analysis (EFA). The outcome of this stage is the refinement of the measurement scale, which serves as the foundation for the official research phase.

### *4.2. Official Research Process*

The official research is based on direct surveys of the research subjects. The primary objective of the survey method is to collect data to evaluate the suitability of the research model using the PLS-SEM method. To assess the model, study conducts tests on composite reliability, convergent validity, and discriminant validity, as well as evaluating the structural model using bootstrapping estimation with a sample size of 5,000 (N = 5,000). Subsequently, assessing the coefficient of determination (via the R2 coefficient the predictive level of the model (via the Q2 coefficient) and the impact level (via the f2 coefficient).

**5. Research results and discussion**

***5.1. Reliability and convergent validity***

According to the research process, each measurement scale applied in the dissertation is inherited from original scales with different spatial and temporal characteristics. The qualitative research results have adjusted and supplemented the measurement scales to better suit the organizational characteristics in Vietnam. Therefore, the scales mentioned in the preliminary quantitative research were used to assess scale reliability and conduct Exploratory Factor Analysis (EFA) with a sample size of 77 observations. The detailed characteristics of the preliminary research sample are presented in Table 4.8. After data processing and computations using statistical software, out of the 325 organizations directly surveyed, 238 valid responses remained after eliminating incomplete or invalid questionnaires. Consequently, the dissertation utilized these 238 valid survey responses for the official research phase. The first crucial step in the research process is to examine reliability and convergent validity. According to Hair et al. (2014), to assess the reliability of a measurement scale, the study employs the Composite Reliability (CR) coefficient, which must be greater than 0.7 to be considered reliable. Additionally, the Average Variance Extracted (AVE) must exceed 0.5 to confirm both reliability and convergent validity (Fornell & Larcker, 1981).

**Table 1: Reliability and convergent validity test results**

| Scale | Cronbach's Alpha | rho_A | Composite Reliability (CR) | Average Variance Extracted (AVE) |
|---|---|---|---|---|
| HOTRO | 0.884 | 0.884 | 0.920 | 0.742 |
| MDHB | 0.886 | 0.897 | 0.929 | 0.814 |
| MDSS | 0.876 | 0.879 | 0.923 | 0.801 |
| NTBL | 0.897 | 0.951 | 0.920 | 0.697 |
| NTLI | 0.890 | 0.890 | 0.925 | 0.755 |
| NTTT | 0.784 | 0.809 | 0.874 | 0.698 |

*Source: Author's Data Processing Results*

The test results in Table 4.20 show that all Composite Reliability (CR) coefficients exceed 0.9, and the Average Variance Extracted (AVE) values are all greater than 0.5. The lowest AVE is 0.697 for the "Perceived Disadvantages" scale. Therefore, the author has sufficient grounds to conclude that the measurement scales for all concepts meet the criteria for reliability and convergent validity.

***5.2. Model fit assessment***

According to Hu & Bentler (1999), the SRMR index is used to evaluate the goodness of fit of a model, where an SRMR value below 0.08 indicates a good fit. However, Henseler et al. (2015) argue that SRMR serves as the Goodness-of-Fit index for PLS-SEM models and is used to assess parameter discrepancies within the research model.

**Table 2: Model fit test results for PLS-SEM**

| Criteria | Saturated Model | Estimated Model |
|---|---|---|
| SRMR | 0.067 | 0.104 |
| d_ULS | 1.137 | 2.755 |
| d_G | 0.733 | 0.782 |
| Chi-Square | 1007.517 | 1050.406 |
| NFI | 0.734 | 0.723 |

*Source: Author's Data Processing Results*

Table 2 reports a Chi-square statistic of 1007.517 with a p-value of 0.000, which is less than 1%, along with an SRMR value of 0.067, which is below 0.08. These results confirm that the model is well-fitted for the research context and empirical data.

***5.3. Fornell-Larcker discriminant validity test***

Table 3 indicated that all diagonal correlation coefficients in the matrix are higher than those within the same column, indicating that the measurement scales satisfy the requirement for discriminant validity (Hair et al., 2014).

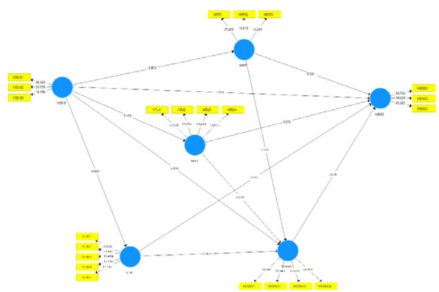
**Table 3: Fornell-larcker discriminant validity test results**

| Measurement scale | HOTRO | MDHB | MDSS | NTBL | NTLI | NTTT |
|---|---|---|---|---|---|---|
| HOTRO | **0.861** | | | | | |
| MDHB | 0.194 | **0.902** | | | | |
| MDSS | 0.537 | 0.099 | **0.895** | | | |
| NTBL | -0.148 | -0.012 | -0.265 | **0.835** | | |
| NTLI | 0.152 | 0.465 | 0.325 | -0.385 | **0.869** | |
| NTTT | -0.136 | 0.061 | -0.320 | -0.158 | 0.040 | **0.836** |

*Source: Author's Data Processing Results*

The study assesses the structural model using the Bootstrapping test. According to Schumacher & Lomax (2004), in order to generalize research findings to the population, the dissertation needs to reassess reliability through the bootstrapping technique. The dissertation performs a resampling analysis with 5,000 observations, corresponding to n = 5,000, while the initial sample size was 238. The Bootstrapping results, as presented in Table 4.23, are evaluated by the author as follows:

**Figure 2: PLS-SEM estimation results**



*Source: Results from SmartPLS 3.0 software*

Hair et al. (2017b) suggest that a R2 value within an acceptable range starts from 20%, where R2 values of 25%, 50%, and 75% correspond to the independent variable's predictive ability over the dependent variable at weak, moderate, and strong levels, respectively. The estimation results in Table 4.23 indicate that the adjusted R2 for the readiness to adopt standards are 44.8%, which falls within the 25% to 50% range, suggesting a moderate predictive power of the independent variables over the dependent variable.

### *5.4. Research discussion*

The research findings emphasize the challenges organizations face when adopting accounting standards, including Higher employee training costs, increased financial investment in technology infrastructure to prepare reports based on accounting standards, Implementation costs potentially outweighing the benefits of applying these standards. This is explained by the profit-driven nature of most organizations—any cost increase directly reduces profits. Consequently, accountants require extensive knowledge, skills, and language training to adopt VPSAS effectively. Notably, many accountants lack VPSAS awareness, as they have never received formal training, leading to negative perceptions of VPSAS adoption. Moreover, the findings highlight the crucial role of managerial support in increasing organizational readiness.

## 6. Conclusion and managerial implications

### *6.1. Closing remarks*

Public accounting must comply with policies, regulations, and implementation requirements established by accounting standards. Accounting standards serve as the foundation for public sector units to carry out accounting tasks, prepare financial statements, and provide useful information for management, monitoring, and supervision of state resources. In particular, they contribute to the centralized and standardized data management of public sector accounting units, align accounting regulations with international practices, facilitate economic integration, attract external resources, and enhance the quality and efficiency of public sector accounting operations. Each country develops a strategy for government financial system development based on specific phases. This process requires a team of accountants with adequate expertise, knowledge, and readiness to apply accounting standards in practical settings.

A well-trained and competent workforce of accountants and accounting experts who are prepared to implement standards is considered a crucial resource. Over time, they must be systematically trained to acquire specialized knowledge and professional experience, meeting technical competency requirements, maintaining professional ethics, complying with accounting laws, economic regulations, and adapting to technological advancements in line with the current level of technological development, particularly in the era of Industry 5.0.

### *6.2. Managerial involvement*

It must be emphasized that the application of accounting standards in public sector units significantly contributes to enhancing financial management and governance at both macro and micro levels. Public sector leaders rely on financial and accounting information provided by the accounting department to generate relevant data, ensure comparability, and establish a highly reliable basis for assessing public financial performance, improving decision-making processes, and strengthening accountability. Accountants who are ready to apply and accept new regulations play a key role in human resource reform, aimed at enhancing the effectiveness and efficiency of public administration, optimizing public sector resources, and attracting social resources for the provision of public goods and services. These reforms lead to transformations in management structures, relationships between units, and interactions between the public and private sectors. From a micro and macro governance perspective, leaders of public sector units that adopt accounting standards will ensure data standardization and centralization across public accounting units, align accounting regulations with international practices, and fully implement accrual-based accounting in public sector units. This, in turn, will facilitate economic integration, attract external resources, and improve the quality and efficiency of public sector accounting operations.

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## References:

*Ajzen, I., 1991. The theory of planned behavior. Organizational behavior and human decision processes, 50(2), pp.179-211.*

*Armstrong, C.S., Barth, M.E., Jagolinzer, A.D. and Riedl, E.J., 2010. Market reaction to the adoption of IFRS in Europe. The accounting review, 85(1), pp.31-61.*

*DiMaggio, P.J. and Powell, W.W., 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, pp.147-160.*

*Hail, L., Leuz, C. and Wysocki, P., 2010. Global accounting convergence and the potential adoption of IFRS by the US (Part I): Conceptual underpinnings and economic analysis. Accounting Horizons, 24(3), pp.355-394.*

*Hair Jr, J.F., Sarstedt, M., Ringle, C.M. and Gudergan, S.P., 2017b. Advanced issues in partial least squares structural equation modeling. Sage publications.*

*Nguyen Ngoc Hiep, 2017. The factors impact on conversion of financial statements from Vietnam's accounting standard (VAS) into international financing reporting standard (IFRS)– experimental research for Vietnamese companies. International Journal of Science and Research, 6(3) March 2017, pp.396-406.*

*Phan, D.H.T., Joshi, M. and Mascitelli, B., 2016. Are Vietnamese Accounting Academics and Practitioners Ready for International Financial Reporting Standards (IFRS)? Book: Economics and Political Implications of International Financial Reporting Standard, Chapter 2, pp. 27-46.*

*Phan, D.H.T. and Mascitelli, B., 2014. Optimal approach and timeline for IFRS adoption in Vietnam: Perceptions from accounting professionals. Research in Accounting Regulation, 26(2), pp.222-229.*

*To, M.L. and Ngai, E.W., 2007. The role of managerial attitudes in the adoption of technological innovations: an application to B2C e-commerce. International Journal of Enterprise Information Systems (IJEIS), 3(2), pp.23-33.*

*Tran, T., Ha, X., Le, T. and Nguyen, N., 2019. Factors affecting IFRS adoption in listed companies: Evidence from Vietnam. Management Science Letters, 9(13), pp.2169-2180.*

*Tran, M. D., Ngo, T. T. M., Phan, T. U., Do, D. T., and Pham, T. T. H., 2020. Determinants influencing the conversion of Financial Statements: The case of multinational firms in Vietnam. The Journal of Asian Finance, Economics, and Business, 7(3), pp. 17-27.*

*Winney, K., Marshall, D., Bender, B. and Swiger, J., 2010. Accounting globalization: roadblocks to IFRS adoption in the United States. Global Review of Accounting and Finance, 1(1), pp.167-178.*

# FACTORS AFFECTING DIGITAL TRANSFORMATION IN THE COOPERATIVE SECTOR: A STUDY OF BINH DUONG PROVINCE

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**MSc. Nguyen Thi Thanh Ha***

**Abstract:** ***Digital transformation in the collective economy and cooperatives is a key policy of the Party and the State, aimed at enhancing efficiency, flexibility, and resource optimization. Despite its potential to improve production methods, increase product value, and integrate cooperatives into value chains, significant barriers remain. This study uses factor exploration with a Likert scale to identify six key factors influencing digital transformation: leadership awareness, financial resources, labor force, technical expertise, and stakeholder influence. The findings lead to proposed solutions to improve digital transformation effectiveness in cooperatives.***

• Keywords: *digital transformation, corporation economy, and cooperatives.*

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## 1. Introduction

According to the Ministry of Planning and Investment (2023), the total number of cooperatives in the country reached 29,378 as of December 31, 2022, reflecting a 5.4% increase from the previous year. All six economic regions experienced growth in cooperative numbers compared to December 31, 2021. The Central Highlands saw the highest increase at 7.1%, followed by the Northern Midlands and Mountainous region at 7.0%, the Mekong Delta at 6.4%, the Southeast at 6.0%, the North Central and Central Coastal region at 5.4%, and the Red River Delta with the lowest increase at 2.8%. The cooperative economic model directly contributes 4.8% to the national gross domestic product (GDP) and indirectly contributes over 30% of GDP through value added by the household economy. Despite the growth in the number of cooperatives, only 60% are operating effectively and meeting market economy requirements. Key factors contributing to this issue include insufficient capital, labor, technical infrastructure, and market access. Research indicates that fewer than 20% of cooperatives possess the capability for self-capitalization, and only 0.5% have access to financing from credit institutions, with agricultural cooperatives experiencing even lower rates. Consequently, over 80% of cooperatives rely on informal market borrowing.

Directive No. 19/CT-TTg, issued by the Government on June 3, 2023, emphasizes the ongoing concern and support for the cooperative economy, including cooperatives, from the Party, the State, and development partners. Recent advancements in the cooperative economy have been noted, such as heightened awareness of its importance and improvements in institutional and policy mechanisms. Despite these positive changes, the development of the cooperative economy and cooperatives has not met established goals and expectations. There are challenges remain, including weak internal capacities, limited effectiveness, inadequate organizational models, insufficient managerial skills, and particularly slow progress in digital transformation. There is a notable lack of specific strategies and actions for digital transformation within cooperatives (Vu, 2023).

Digital transformation seeks to modernize production and business management models within the cooperative economy, aiming to create a more flexible, efficient, cost-effective, and resource-optimized approach. This transformation involves adopting new business models that leverage digital technologies extensively. In an increasingly competitive environment, digital transformation is essential for enhancing efficiency, productivity, and market access. It serves as a crucial lever for advancing the development of collective economic

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sectors and cooperatives. A survey by the Vietnam Cooperative Alliance (2023) indicates that 83.5% of cooperatives recognize the necessity of digital transformation, 18.9% have specific implementation plans, and 68% utilize at least one method for online product introduction and sales (Hoang Giang, 2024). This study aims to explore and identify the factors influencing digital transformation in the cooperative sector in Binh Duong and to propose recommendations to accelerate these activities in the current phase.

**2. Literature review**

McKinsey (2019) defines digital transformation as the strategic reconfiguration of technology, business models, and operational processes to consistently deliver novel value to customers and employees, fostering growth in the digital economy. Fitzgerald et al. (2013) further elaborate digital transformation as the adoption of innovative digital technologies to enhance operational efficiencies and refine managerial practices. In today's dynamic business landscape, the imperative for digital transformation mandates swift adaptation and evolution of business strategies to sustain competitiveness and relevance in the market. This imperative extends to cooperatives, entities that not only operate as business entities but also contribute to economic and societal well-being. Through the integration of these technologies, digital transformation catalyzes advancements by significantly enhancing operational efficiency, productivity, and competitive positioning for organizations. Conceptually, digital transformation unfolds in a tripartite process (Ancín et al., 2022). Firstly, the "digitization" phase involves the conversion of analog data into digital formats, encoding information into data structures. Information technology and communication tools, alongside innovative digital solutions, expedite this transformation by facilitating the storage and transmission of digital data. Secondly, the "digitalization" stage encompasses the incorporation of specific digital tools into core business processes like production, distribution, and customer engagement. Finally, the "digital transformation" phase transcends the preceding stages by heralding the adoption of new business models driven by widespread digital technology utilization, fundamentally reshaping the operational paradigms and value creation mechanisms of enterprises (Ancín et al., 2022).

The impact of digital transformation in the contemporary era has been instrumental in shaping our society amidst rapid globalization (Miah & Omar, 2012). Digitization serves as the foundation for potential innovations in the technological sphere, fostering significant value creation. The emergence of the digital economy presents a novel economic paradigm aimed at fostering growth in traditional sectors and propelling the rapid expansion of new industries, profoundly influencing the digital transformation journeys of businesses (Deng et al., 2020).

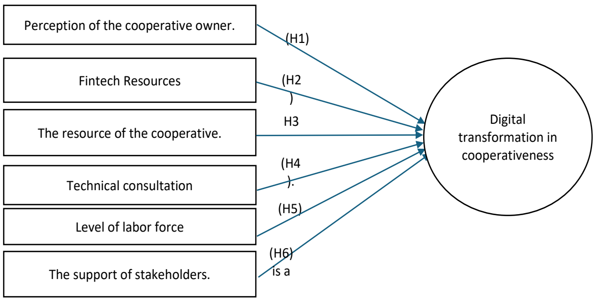
Digital transformation significantly influences small and medium-sized enterprises (SMEs) and cooperative sectors. Notably, cooperatives encounter challenges in formulating, implementing, and realizing comprehensive digitalization strategies and restructuring operational frameworks due to constraints such as limited resources, insufficient awareness, and organizational capacity (Li et al., 2018; Garzoni et al., 2020; Vu Phuong Nhi, 2023). The digital transformation within cooperative sectors holds paramount importance, given their pivotal role in national economies, addressing poverty, fostering employment opportunities, driving economic progress, and instigating social transformations (Hambani & Harefa, 2019; Purbasari & Raharja, 2021). Leveraging digital technologies empowers cooperatives to access markets at cost-effective rates (Ulas, 2019).

In Vietnam, research conducted by Dương Hoài An and colleagues (2023) reveals that variables associated with cooperative directors' characteristics, such as age, educational attainment, number of social media accounts, and e-wallet usage, significantly influence the preparedness for digital transformation within cooperatives. Moreover, the surveyed cooperatives' characteristics, including age, social media presence, information technology proficiency of members and staff, banking relationships, and engagement in e-commerce platforms, have a substantial bearing on their digital transformation.

Furthermore, essential objective factors for digital transformation in cooperatives encompass external service support, digital transformation training, availability of digital hardware, technical consultation for conversion, and financial assistance. To expedite the digital transformation process in cooperatives, comprehensive oversight by governmental bodies, cooperative associations, and pertinent stakeholders is imperative to meet their requirements. Simultaneously, cooperatives must proactively harness all available resources to train their workforce for the digital transformation journey.

Following a synthesis of the analyzed insights, the study proposes the establishment of a model that includes:

**Proposed research model by the research team**




### 3. Research Methodology

The study employed the exploratory factor analysis method, utilizing a set of Likert scale inquiries to examine the impact of various factors on the digital transformation process within cooperative sectors. A structured questionnaire was administered to 158 cooperatives in Binh Duong. The research model delineated independent variables guided by the research framework, encompassing:

H1: Cooperative leaders' perceptions (educational background, knowledge, managerial proficiency, IT competencies).

H2: Technological and financial resources (possession of bank accounts, adeptness in financial tech usage, engagement in e-commerce, application of IT in financial operations).

H3: Cooperative resources (internal capital, social connections, market competitiveness, skilled workforce).

H4: Technical guidance from relevant entities (technical advisory assistance, technological transfer prerequisites, standardization, and readiness for digital transformation).

H5: Workforce skills and tech acumen (skilled employees, IT-literate staff, trained personnel, awareness of digital transformation initiatives).

H6: Support from pertinent departments (local assistance, governmental regulations, incentives, technical team support).

The dependent variable focused on the state of digital transformation within Binh Duong cooperatives (preparedness, digital transformation roadmap, utilization of online sales methods). Statistical examination criteria comprised:

Cronbach's Alpha coefficient significance level: $0.6 < \alpha < 0.95$ (acceptable range is 0.7 to 0.9; > 0.95 implies question duplication).

Item-total correlation coefficient > 0.3 to determine variable relevance; coefficients below 0.3 warrant removal from the scale due to insignificance. The research results are presented in the next section of the article.

### 4. Research results and discussion

#### *4.1. Research model results*

*First,* the study conducted a test of the scales, requiring the scales to achieve the test indexes of the significance level of the Cronbach's Alpha coefficient to be greater than 0.6. The value of the Cronbach's Alpha coefficient from 0.7 to 0.95 is considered good quality.

At the same time, the Corrected Item-Total Correlation coefficient must be greater than 0.3. The research results show that all scales have a Corrected Item-Total Correlation level greater than 0.3. This indicates that there is a high correlation between the variables with other variables in the group.

**Table 1. Cronbach's Alpha test**

| Scale | Cronbach's Alpha | Corrected Item-Total Correlation | Quality Assessment |
|---|---|---|---|
| NT | 0.857 | >0.3 | Good quality |
| NL | 0.750 | >0.3 | Good quality |
| LD | 0.811 | >0.3 | Good quality |
| LQ | 0.823 | >0.3 | Good quality |
| TC | 0.831 | >0.3 | Good quality |
| KT | 0.889 | >0.3 | Good quality |
| CDS | 0.844 | >0.3 | Good quality |

Performing Variance Explained test shows that the value of Cumulative % is 68.238 (greater than 0.5), which means that 68.238% of the variation of factors is explained by observed variables. Besides, the value of Eigenvalues must meet the requirement of being greater than 1.

**Table 2. Total Variance Explained**

| Component | Initial Eigenvalues | | | Rotation Sums of Squared Loadings | | | |
|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | Total | % of Variance | Cumulative % |
| 1 | 5.424 | 22.601 | 22.601 | 5.424 | 3.064 | 12.765 | 12.765 |
| 2 | 2.920 | 12.167 | 34.767 | 2.920 | 2.889 | 12.039 | 24.804 |
| 3 | 2.623 | 10.931 | 45.698 | 2.623 | 2.779 | 11.580 | 36.384 |
| 4 | 2.481 | 10.337 | 56.035 | 2.481 | 2.760 | 11.500 | 47.884 |
| 5 | 1.729 | 7.205 | 63.240 | 1.729 | 2.603 | 10.846 | 58.730 |
| 6 | 1.199 | 4.997 | 68.238 | 1.199 | 2.282 | 9.507 | 68.238 |

Checking the value of Rotated Component Matrixa, we see that the identified factors have 6 groups of factors affecting the digital transformation of cooperatives, the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is greater than 0.5 and less than 1, with a significance level of sig.0.000. From here, the study discovered that there are 6 groups of factors of the independent variable that have affected the dependent variable (digital transformation variable) in the study.

Finally, a regression analysis was conducted to examine the influence of independent variables on the dependent variable. For this analysis, the Adjusted R Square value was determined to be

0.609. This indicates that 60.9% of the variation in the transformation of numbers in cooperatives is explained by the six independent variables, namely the perception of cooperative owners, technological and financial resources, cooperative resources, skill level and technological knowledge of workers, technical support and advice from relevant parties, and support from relevant government agencies. Additionally, the examination of VIF values revealed that all independent variables had VIF values less than 10, indicating no issue of multicollinearity among the independent variables. Furthermore, the sig values for all independent variables were found to be less than 0.5, demonstrating the statistical significance of the independent variables in the study.

**Table 3. Rotated Component Matrix[a]**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| KT1 | 0.892 | | | | | |
| KT2 | 0.868 | | | | | |
| KT4 | 0.825 | | | | | |
| KT3 | 0.809 | | | | | |
| NT4 | | 0.906 | | | | |
| NT1 | | 0.815 | | | | |
| NT3 | | 0.806 | | | | |
| NT2 | | 0.723 | | | | |
| LQ4 | | | 0.907 | | | |
| LQ2 | | | 0.822 | | | |
| LQ1 | | | 0.775 | | | |
| LQ3 | | | 0.706 | | | |
| TC3 | | | | 0.811 | | |
| TC1 | | | | 0.789 | | |
| TC2 | | | | 0.778 | | |
| TC4 | | | | 0.756 | | |
| LD4 | | | | | 0.822 | |
| LD3 | | | | | 0.797 | |
| LD2 | | | | | 0.779 | |
| LD1 | | | | | 0.748 | |
| NL4 | | | | | | 0.750 |
| NL1 | | | | | | 0.718 |
| NL3 | | | | | | 0.653 |
| NL2 | | | | | | 0.632 |
| KMO: 0.758 | | | | | | |
| Sig. 0.000 | | | | | | |

**Table 4. Results of the regression analysis in the research model**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | -0.927 | 0.317 | | -2.927 | 0.004 | | |
| NT | 0.325 | 0.055 | 0.333 | 5.901 | 0.000 | 0.785 | 1.274 |
| NL | 0.240 | 0.062 | 0.243 | 3.884 | 0.000 | 0.634 | 1.576 |
| LD | 0.200 | 0.052 | 0.200 | 3.824 | 0.000 | 0.912 | 1.097 |
| LQ | 0.129 | 0.054 | 0.126 | 2.407 | 0.017 | 0.909 | 1.100 |
| TC | 0.250 | 0.052 | 0.273 | 4.847 | 0.000 | 0.787 | 1.271 |
| KT | 0.134 | 0.052 | 0.138 | 2.583 | 0.011 | 0.868 | 1.151 |
| Adjusted R Square: 0.609 | | | | | | | |
| Anova (F: 41.703; Sig. 0.000) | | | | | | | |

### *4.2. Discussion of the research*

According to the Cooperative Alliance of Binh Duong Province (2023), as of the end of 2023, there are approximately 242 cooperatives with 47,647 members in the entire province of Binh Duong. Among them, 46 cooperatives are inactive. The cooperatives are divided into different sectors: transportation (66 cooperatives), agriculture (83 cooperatives), handicraft industry (13 cooperatives), construction (11 cooperatives), trade and services (34 cooperatives), environment (25 cooperatives), and people's credit funds (10 funds).

In a gradual progression, cooperatives have enhanced operational efficiency, significantly bolstering local employment opportunities. Nonetheless, amidst the evolving technological landscape, several cooperatives struggle to align with practical demands, leading to operational halts. This transition challenge necessitates a novel business model apt for the current milieu. Executing Decision No. 816/QD-UBND on the Digital Transformation Plan (2021-2025, with a vision to 2030) by the People's Committee of Binh Duong Province, alongside Plan No. 593/KH-UBND, the local Cooperative Alliance has crafted a digital transformation roadmap for the 2023-2025 period. This initiative equips cooperative entities with shared information systems across the province, heightening owners' digital transformation awareness.

Within this framework, the cognitive factor of digital transformation awareness among cooperative leaders emerges as statistically significant, exerting a robust influence on cooperative digitalization (sig. value 0.000, beta coefficient 0.333). These findings align closely with digitalization endeavors in Binh Duong province and resonate with prior studies by Li et al. (2018), Garzoni et al. (2020), Vu Phuong Nhi (2023), and Duong Hoai An et al. (20323).

The financial facet underscores the necessity for cooperatives to engage in banking activities, proficiently use financial technologies, partake in e-commerce platforms, and integrate IT into financial transactions. Capital acquisition for production expansion poses a major hurdle, with limited access to credit due to collateral shortages hindering many cooperatives. Furthermore, land scarcity impedes production scaling. The model underscores the pivotal role of financial resources in facilitating digital transformation.

Resource allocation encompasses self-owned capital, social capital, market competitiveness, and skilled labor resources, all impacting cooperative digital transformation. Despite facing operational constraints like capital inadequacy, outdated equipment, and modest production scales, cooperatives generate limited revenues, affecting profitability. Labor policies within cooperatives remain restricted, underscoring the resource factor's influence on digital transformation capabilities. These outcomes echo studies by Li et al. (2018), Garzoni et al. (2020), and Vu Phuong Nhi (2023).

Successful digital transformation in cooperatives hinges on labor force support and adept operation of digitalization processes. Insufficient skills and IT acumen among the workforce impede development requisites, underscoring the need for enhanced training and awareness. Cooperation among labor forces emerges as a pivotal factor for successful digital transformation endeavors.

Technical consultations play a vital role in facilitating cooperative digitalization, necessitating technological conditions for seamless technology transfer, training, and infrastructural readiness. Challenges persist, such as inadequate infrastructure, outdated equipment, and manual production methods, impeding digital transformation. Collaborative efforts among relevant stakeholders, with state support, drive effective digital transformation, fostering cooperative resilience, management enhancement, and integration into the international economy effectively.

## 5. Conclusion and Policy Implications

The cooperative sectors are progressively solidifying their foothold in the province's economic landscape. On average, 10% of cooperatives are established annually, strengthening economic and social effectiveness by reducing poverty, addressing employment needs, and stabilizing livelihoods. However, with evolving development trends emphasizing technology applications and cooperative management, the focus on digital transformation activities within cooperatives is crucial. Despite persistent challenges in this process, cooperatives and stakeholders are attentive to several key issues.

***Firstly,*** enhancing the utilization of 4.0 technology and advanced science benefits cooperatives by improving operational efficiency and product consumption. Recognizing digital transformation as essential for enhancing competitiveness, production efficiency, and market value chain participation is imperative for cooperative leaders.

***Secondly,*** improving access to financial resources remains vital. Capital shortages hinder production and business processes, necessitating strengthened access to financial technology applications. Promoting electronic trading products, digitizing management processes, and expanding product consumption markets are areas cooperative leaders need to prioritize.

***Thirdly,*** training a skilled workforce to meet digital labor process requirements is crucial. Understanding and implementing data digitization in technological processes is essential for labor entities to adapt to cooperative operations effectively during digital transformation.

***Fourthly,*** ensuring resource factors in digital transformation implementation, such as favorable land policy access, capital resources, and a competent management team, are essential for cooperative groups to thrive.

***Fifthly,*** technical team support is indispensable for gradually implementing and operating digitalization processes. Skilled technical teams need to provide training throughout the process to swiftly resolve technical difficulties faced by cooperatives.

***Finally,*** involving relevant parties is key. Streamlining cooperative legal frameworks, defining management and operational functions clearly, and constructing supportive mechanisms and policies are vital steps. Policies encompassing land, finance, credit, science, technology, marketing support, market expansion, infrastructure investment, and human resource development are crucial. However, consistent and comprehensive education on cooperation at all levels is lacking, aiming to ensure a thorough understanding of cooperatives' nature, role, and position.

These research findings present perspectives on cooperative economic development and factors influencing the digital transformation process. This study aims to contribute evidence to enhance digital transformation initiatives for cooperatives in the current stage.

## References:

*Ministry of Planning and Investment (2023). White Book on Cooperatives in Vietnam. Statistical Publishing House, 2023.*

*Ancín, M., Pindado, E., Sánchez, M., 2022. New trends in the global digital transformation process of the agri-food sector: an exploratory study based on Twitter. Agric. Syst. 203, 103520 https://doi.org/10.1016/j.agsy.2022.103520*

*Deng., et al. (2020). Analysis on the development of digital economy in Guangdong Province based on improved entropy method and multivariate statistical analysis. Entropy, 22(12), 1–21. https://doi.org/10.3390/e22121441*

*Duong Hoai An (2023). The readiness for digital transformation in cooperatives in the Northeast region of Vietnam. Vol. 228 No. 03 (2023): Journal of Social Sciences - Humanities – Economics*

*Fitzgerald., et al. (2013). Embracing Digital Technology: A New Strategic Imperative | Capgemini Consulting Worldwide. MIT Sloan Management Review, 55(1), 1–13.*

*Garzoni., et al. (2020). Fostering digital transformation of SMEs: a four levels approach. Management Decision, 58(8), 1543–1562. https://doi.org/10.1108/MD-07- 2019-0939*

*Hambani, S., & Harefa, E. (2019). Analisis Kewirausahaan, Permodalan, Partisipasi Anggota Dan Keberhasilan Keuangan Koperasi Pegawai Republik Indonesia. Jurnal Akunida, 5(1), 69. https://doi.org/10.30997/jakd.v5i1.1870*

*Hoang Giang (2024). 'Activating' digital transformation in cooperatives, accessed on the Government Newspaper on July 19, 2024, at https://baochinhphu.vn/kich-hoat-chuyen-doi-so-trong-hop-tac-xa-102220922193417986.htm*

*Vietnam Cooperative Alliance (2023). Accessed at https://vca.org.vn/*

*Binh Duong Cooperative Alliance (2023). Report on the situation of the collective economy, cooperatives, and the activities of the Binh Duong Cooperative Alliance in 2023 and the directions and tasks for 2024.*

*Li., et al. (2018). Digital transformation by SME entrepreneurs: A capability perspective. Information Systems Journal, 28(6), 1129– 1157. https://doi.org/10.1111/isj.12153*

*Miah, M., & Omar, A. (2012). Technology Advancement in developing countries during Digital Age. International Journal of Science and Applied Information Technology, 1(1), 30–38.*

*Purbasari, R., & Raharja, J, S. (2021). Analysis of Modern Cooperatives in the Digital Era: From Values To Greatness. AdBispreneur: Journal of Business Administration and Entrepreneurship Thought and Research, Vol.6, No.3, pp. 295-310 December 2021.*

*Ulas, D. (2019). Digital Transformation Process and SMEs. Procedia Computer Science, 158, 662–671. VanBoskirk. (2016). The Digital Maturity Model 4.0. Forrester, 0–17.*

*People's Committee of Binh Duong Province (2021). Decision No. 816/QD-UBND dated 31/2/2021 on the issuance of the Digital Transformation Plan for the period 2021-2025, with a vision to 2030.*

*Vu Phuong Nhi (2023). Promoting digital transformation in the collective economic area, cooperatives, Government Electronic Newspaper, accessed on 19/7/2024. https://baochinhphu.vn/day-manh-chuyen-doi-so-trong-khu-vuc-kinh-te-hop-tac-hop-tac-xa-102230603153121767.htm.*

# THE IMPACT OF ACCOUNTING STANDARDS AND CSR SUSTAINABILITY REPORTING ON FIRM VALUE

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**Abstract:** ***This study aims to examine the impact of accounting standards and CSR sustainability reporting on firm value in term of Southwest Asia firms. Specifically, CSR sustainability reporting is considered as the moderating factor to the nexus between accounting standards and firm value. The data of 4,786 Southwest Asia firms was downloaded from Refinitiv Eikon, and the final sample for quantitative research being 1,873 firms in the 2019-2023 periods. Finally, the Maximum likelihood structural equation modelling has been employed to test the hypotheses. The result has indicated that high-quality accounting standards (e.g., IFRS) has a significant impact on firm value. And the CSR sustainability reporting has a significant moderating impact on the nexus between accounting standards and firm value. These findings benefit to improving the literature of high quality accounting standards, CSR sustainability reporting, and firm value.***

• Keywords: *accounting standards, csr sustainability reporting, firm value, southwest asia firms.*

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## 1. Introduction

The interplay between accounting standards, CSR sustainability reporting, and firm value presents a complex research challenge. While studies have examined the individual impacts of these factors (e.g., Gao et al., 2019; Qian et al., 2020), their interconnectedness remains poorly understood. Traditional accounting research often neglects the rising importance of non-financial metrics (Rutherford, 2020), focusing primarily on financial indicators of firm value. Consequently, the nuanced relationship between accounting standards and CSR reporting remains largely unexplored. This research gap necessitates investigating how high-quality accounting standards, like IFRS, interact with CSR reporting practices, moving beyond simplistic correlations between general frameworks and firm value.

CSR sustainability reporting, while promising, faces research challenges. Studies struggle to link CSR initiatives with financial performance due to subjective non-financial data (e.g., Rahi et al., 2024). Varying regulatory frameworks, from mandatory to voluntary disclosures (e.g., Hassan et al., 2023), further complicate assessing CSR reporting's impact on firm value. Understanding these institutional influences on reporting quality and credibility is crucial for effective policy. Investor expectations, particularly with the rise of socially responsible investing, also play a key role (Perera, 2024).

A key research gap lies in understanding the interplay between accounting standards and CSR sustainability reporting. While studies examine their individual effects on firm value (e.g., Qian et al., 2020), their synergistic impact remains largely unexplored. How accounting standards influence CSR reporting quality and credibility, shaping investor perceptions and firm value, is a complex, unanswered question. This necessitates comprehensive research integrating accounting, finance, and sustainability perspectives (Sindhu et al., 2024). By embracing a holistic view acknowledging both financial and non-financial metrics, we can move beyond simplistic firm value understandings toward a more sustainable and responsible business ecosystem.

Analyzing 1,873 ASEAN-5 firms from 2019-2023, this research finds that both accounting standards and CSR reporting positively impact firm value. CSR reporting significantly moderates the relationship between accounting standards and firm value. This nuanced understanding benefits practitioners, policymakers, and investors seeking to promote responsible business practices and sustainable value creation.

## 2. Theoretical foundations

### *2.1. Related theory*

Institutional theory explains accounting standards' impact on firm value. Organizations face institutional pressures from regulators and industry bodies (Schiavi et al., 2024). Accounting standards, as formalized rules, shape organizational behavior and legitimacy. Adhering to high-quality standards signals trustworthiness and transparency, boosting investor confidence and firm

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value (Gao et al., 2019; Minh et al., 2023), especially under information asymmetry. However, a balanced approach considering both institutional pressures and internal factors is crucial for sustainable value creation.

Resource-based view (RBV) theory suggests CSR reporting moderates the relationship between accounting standards and firm value. While high-quality accounting standards benefit firm value through transparency and investor confidence, strong CSR commitment amplifies this (Breuer et al., 2024). Robust CSR reporting demonstrates a commitment beyond financial performance (Rahi et al., 2024), acting as a valuable resource that strengthens the link between accounting standards and firm value, creating a more sustainable foundation for long-term growth.

### 2.2. Hypotheses

High-quality accounting standards, marked by transparency and comparability, enhance firm value by reducing information asymmetry and boosting investor confidence (Gao et al., 2019). These standards ensure trustworthiness and accountability, fostering a level playing field (Minh et al., 2023). Adherence signals commitment to ethical practices, attracting responsible investors. However, meeting these standards can strain resources (Hou et al., 2024), and a focus on compliance may overshadow genuine commitment to sustainability, potentially leading to a superficial "tick-box" approach. Based on this, the study tests the following hypothesis:

*H1. High-quality accounting standards have a positive and significant impact on firm value.*

High-quality accounting standards, characterized by transparency and reliability, are a key institutional force shaping organizational behavior and enhancing legitimacy (Minh et al., 2023). Robust CSR practices and transparent reporting demonstrate a commitment beyond financial performance, aligning with societal and investor expectations (Sindhu et al., 2024). While high-quality accounting enhances firm value by boosting investor confidence and reducing information asymmetry, CSR reporting mediates this relationship, amplifying the positive impact. Demonstrating ethical and sustainable practices communicates a broader value proposition, resonating with values-driven investors (Makau, 2024). This enhances firm reputation and brand image, attracting responsible investments. Strong CSR reporting also signals commitment to long-term value creation and mitigating risks associated with negative externalities (Ftiti et al., 2024). This enhanced trust mediates the positive impact of accounting standards on firm value, ultimately leading to greater overall value creation. This leads to the following hypothesis:

*H2. CSR sustainability reporting has a mediating effect on the relationship between high-quality accounting standards and firm value.*

RBV theory posits that firms gain a competitive edge through deploying unique resources and capabilities. Demonstrating commitment to ethical and sustainable practices signals prioritization of long-term value creation beyond financial performance (Sindhu et al., 2024). Robust CSR reporting enhances reputation and brand image, increasing customer loyalty and attracting talent (Ftiti et al., 2024). These positive externalities can mitigate the impact of minor deviations from accounting standards, as investors perceive a focus on ethical conduct. CSR reporting moderates the relationship between accounting standards and firm value, creating a synergistic effect for sustainable value creation. This suggests firms with strong CSR reporting may experience higher perceived value, even with standard accounting practices, particularly relevant in today's socially conscious investment landscape (Thomas et al., 2024). The following hypothesis is proposed:

*H3.* CSR sustainability reporting *fosters a positive relationship between high-quality accounting standards and firm value.*

### 3. Research method

To assess the influence on Southeast Asian economies, five developing ASEAN nations with the highest GDPs were selected. Using a 2019-2023 dataset, 4,786 firm data points were extracted from Refinitiv Eikon, resulting in a final sample of 1,873 firms with complete data from Thomson Reuters Eikon Datastream. Firm value (FV) was measured as market capitalization plus total debt divided by total assets (e.g., Fedorova et al., 2023). High-quality accounting standards (FAS) were measured using a binary scale: 1 for IFRS adoption, 0 otherwise (e.g., Minh et al., 2023). CSR reporting (CSRD) also employed a binary scale: 1 for reporting firms, 0 otherwise (e.g., Al-Shaer & Zaman, 2016). Control variables included firm size (SIZE, the natural logarithm of total assets), leverage (LEV, total debt to total assets), sales growth (GROW, year-over-year sales change), and sector (SECT, encoded from 11 GISC sectors).

The hypotheses were examined by the model (1) using the ML-SEM as follows:

$$FV_{i.t} = \beta_0 + \beta_1 FAS_{i.t} + \beta_2 CSRD_{i.t} + \beta_3 FAS_{i.t}*CSRD_{i.t} + \beta_4 SIZE_{i.t} + \beta_5 LEV_{i.t} + \beta_6 GROW_{i.t} + \beta_8 SECT_{i.t} + \varepsilon_{i.t} \quad (1)$$

Where: $i$ represented to the company, and $t$ represented to the year. The quantitative data processing stages encompassed: (1) unit root test and endogeneity checks; (2) assessing model shortcomings; (3) ML-SEM evaluating; and (4) robust test.

### 4. Research results and discussion

The first table reveals that across all countries, firm value has been relatively high, with a mean of 4.62 and a standard deviation of 1.82. Notably, the Philippines exhibit the highest average firm value (5.35), while

Vietnam has the lowest (3.46). In term of FAS, Malaysia and Thailand, which have adopted IFRS, have a notably higher average FAS score (0.98 and 1.00 respectively) compared to other countries. While all countries exhibit relatively low average CSRD scores, Malaysia stands out with the highest score (0.23), implying a greater emphasis on CSR reporting among Malaysian firms.

**Table 1: Descriptive summary**

| | | Indonesia | Malaysia | Philippines | Thailand | Vietnam | Total |
|---|---|---|---|---|---|---|---|
| Firms | | 438 | 603 | 161 | 579 | 92 | 1,873 |
| Observations | | 2,190 | 3,015 | 805 | 2,895 | 460 | 9,365 |
| FV | Mean | 4.77 | 4.39 | 5.35 | 4.72 | 3.46 | 4.62 |
| | SD | 1.89 | 1.70 | 1.90 | 1.71 | 2.09 | 1.82 |
| FAS | Mean | 0.09 | 0.98 | 0.12 | 1.00 | 0.00 | 0.64 |
| | SD | 0.10 | 0.15 | 0.33 | 0.00 | 0.00 | 0.48 |
| CSRD | Mean | 0.10 | 0.23 | 0.15 | 0.17 | 0.03 | 0.16 |
| | SD | 0.30 | 0.42 | 0.36 | 0.38 | 0.16 | 0.37 |
| SIZE | Mean | 5.35 | 5.05 | 6.18 | 5.23 | 4.19 | 5.23 |
| | SD | 1.66 | 1.60 | 1.92 | 1.60 | 1.68 | 1.69 |
| LEV | Mean | 0.30 | 0.21 | 0.26 | 0.30 | 0.27 | 0.26 |
| | SD | 0.33 | 0.17 | 0.18 | 0.21 | 0.18 | 0.23 |
| GROW | Mean | 0.13 | 0.09 | 0.79 | 0.21 | 0.35 | 0.21 |
| | SD | 0.95 | 1.08 | 17.47 | 2.87 | 3.88 | 5.49 |
| SECT | Mean | 4.98 | 5.17 | 6.19 | 5.51 | 5.23 | 5.32 |
| | SD | 3.11 | 3.11 | 3.41 | 3.21 | 3.55 | 3.21 |

Rigorous data analysis employed both LLC (appropriate for balanced panels with N/T approaching zero) and time series fixed effects approaches. These methods, applied to firm value (FV), confirmed data stationarity, essential for valid time series analysis. The absence of autocorrelation was validated by a Prob>F value exceeding 0.05 for FV. Similarly, Prob>$\chi 2$ > 0.05 for FV indicated no heteroscedasticity, ensuring consistent data variability. VIF coefficients below 5 and tolerance coefficients above 0.2 confirmed minimal multicollinearity among exogenous variables. Beta coefficients below 0.8 further demonstrated variable independence, strengthening the reliability of the research findings.

**Table 2: Summary of hypotheses test**

| Hypothesis | | Model (1) | |
|---|---|---|---|
| | | beta | p-value *(z-value)* |
| $H_1$ | FAS → FV | 0.0354 | 0.000 *(3.39)* |
| $H_2$ | FAS → CSRD → FV | 0.0723 | 0.000 *(8.66)* |
| $H_3$ | FAS*CSRD → FV | -0.1458 | 0.025 *(-2.23)* |
| | SIZE → FV | 0.8396 | 0.000 *(11.79)* |
| | LEV → FV | -1.1006 | 0.000 *(-23.87)* |
| | GROW → FV | -0.0003 | 0.864 *(-0.17)* |
| | SECT → FV | 0.0002 | 0.948 *(0.07)* |
| $\chi^2(9)$ (Prob>$\chi^2$) | | 0.156 | |
| SRMR | | 0.019 | |
| RMSEA | | 0.076 | |
| CFI | | 0.991 | |
| TLI | | 0.984 | |

The results in Table 2 have demonstrated strong support for $H_1$ and $H_2$, with significant positive coefficients for the direct ($\beta$ = 0.0354, p < 0.001) and indirect ($\beta$ = 0.0723, p < 0.001) effects of FAS on FV. Nevertheless, $H_3$ has revealed a negative and significant interaction effect ($\beta$ = -0.1458, p < 0.025). While the direct and mediating effects of FAS on FV are positive, the moderating effect of CSRD suggests potential complexities in the joint impact of these components. The model's robust fit, indicated by a high CFI (0.991) and TLI (0.984), as well as a low RMSEA (0.076), adds confidence to the findings. The significant coefficients for firm size and leverage suggest their substantial influence on firm value in the context of ASEAN-5 nations.

**Table 3: Summary of hypotheses test by sector**

| Nexus | Final sample | | Environmentally sensitive sectors | | Non-environmentally sensitive sectors | |
|---|---|---|---|---|---|---|
| | beta | p-value | beta | p-value | beta | p-value |
| $H_1$: FAS → FV | 0.0354 | 0.000 | 0.0840 | 0.000 | 0.1135 | 0.007 |
| $H_2$: FAS → CSRD → FV | 0.0723 | 0.000 | 0.0715 | 0.000 | 0.0684 | 0.000 |
| $H_3$: FAS*CSRD → FV | -0.1458 | 0.025 | -0.1722 | 0.034 | -0.2119 | 0.036 |

The third table highlights a significant positive association between FAS and FV in both environmentally sensitive and non-environmentally sensitive sectors, with the effect being more pronounced in non-environmentally sensitive firms (the firm do not belong to an activity sector relates to environmental problems). The positive effect of FAS on FV is mediated by CSRD, indicating that the adoption of robust financial reporting practices enhances firm value through increased transparency and accountability in sustainability practices. In term of H3, both environmentally sensitive and non-sensitive firms exhibit a negative interaction effect, suggesting a diminishing marginal return on combined financial and sustainability reporting.

**Table 4: Summary of hypotheses test by IFRS adopted**

| Nexus | Final sample | | IFRS adopted | | GAAP adopted | |
|---|---|---|---|---|---|---|
| | beta | p-value | beta | p-value | beta | p-value |
| $H_1$: FAS → FV | 0.0354 | 0.000 | 0.1624 | 0.000 | -0.1332 | 0.591 |
| $H_2$: FAS → CSRD → FV | 0.0723 | 0.000 | 0.0266 | 0.071 | -0.0512 | 0.181 |
| $H_3$: FAS*CSRD → FV | -0.1458 | 0.025 | -0.3092 | 0.001 | - | - |

According to Table 4, the $H_1$ hypothesis, which assesses the direct impact of FAS on FV, reveals a significantly favorable nexus for IFRS adopters (beta = 0.1624, p-value = 0.000). In contrast, for GAAP adopters, this nexus is not statistically significant (beta = -0.1332, p-value = 0.591). Secondly, while both IFRS and GAAP adopters demonstrate a positive association between CSRD and FV (betas of 0.0266 and -0.0512 respectively), the magnitude and significance differ significantly. IFRS adopters indicate a weaker yet still statistically significant relationship (p-value = 0.071), implying that the influence of FAS on FV is mediated by CSRD. For GAAP adopters, the relationship is non-significant (p-value = 0.181), indicating that CSRD alone does not significantly mediates the nexus within a GAAP framework. These findings suggest that IFRS adoption might promote a stronger linkage between FAS and FV, possibly through the meditating role of CSRD.

### *4.3. Robustness test*

According to Table 5, the direct relationship between FAS and FV is consistent for both high and low FV firms, with statistically significant positive beta values. This suggests that high-quality accounting standards (e.g., IFRS adoption) positively influence FV regardless of the firm's existing value. Nevertheless, while the positive impact of FAS on FV through CSRD is statistically significant for high FV firms, with a substantial beta of 0.1655, it becomes considerably weaker and marginally significant for low FV firms. This suggests that high FV firms leverage CSRD to enhance the positive effect of FAS on their value, potentially demonstrating a stronger commitment to transparency and sustainability. Conversely, low FV firms may not see the same benefit, possibly due to a weaker existing value base or limited resources to invest in robust CSRD practices. Furthermore, the moderating effect of CSRD on FAS-FV nexus, captured by $H_3$, reveals a critical difference between the groups. High FV firms exhibit a statistically significant negative moderating effect, indicating a negative relationship between FAS and CSRD in predicting FV. This finding points to a possible diminishing effect of CSRD on FV when combined with robust FAS practices for high FV firms.

**Table 5: Findings for different FV of firms**

| Nexus | High FV | | Low FV | |
|---|---|---|---|---|
| | beta | p-value | beta | p-value |
| $H_1$: FAS → FV | 0.1712 | 0.000 | 0.2003 | 0.000 |
| $H_2$: FAS → CSRD → FV | 0.1655 | 0.000 | 0.0301 | 0.070 |
| $H_3$: FAS*CSRD → FV | -0.3084 | 0.000 | -0,2510 | 0.343 |

## Conclusion

In light of the RBV and institutional theory, this paper specifies the impact of FAS and CSRD on FV in the circumstances of ASEAN-5 firms, as well as the moderation role played by CSRD. The ML-SEM approach has been employed on the pattern of 1,873 listed firms in the ASEAN-5 for the interval 2019 to 2023. The results of the paper could be recapitulated as follows: (1) a strong positive nexus between high-quality accounting standards and FV; (2) the significant mediating effect of CSRD on the FAS-FV nexus; (4) the moderating influence of CSRD on the FAS-FV nexus.

In term of theoretical implications, the mediating role of CSR reporting suggests that the link between high-quality accounting standards and firm value may be explained by information conveyed through CSR, challenging the traditional view of accounting standards solely as mechanisms for financial transparency. Secondly, the moderating effect implies that the relationship's strength depends on CSR reporting levels, highlighting its potential as a complement or substitute for financial reporting. Robust CSR reinforces the positive impact of high-quality accounting, while weak CSR dilutes it. This suggests the effectiveness of accounting standards in driving firm value depends on CSR reporting quality, emphasizing a holistic approach encompassing both financial and sustainability aspects. Further research could explore optimal CSR reporting levels, stakeholder influence on disclosure, and regulatory impacts on the interplay between CSR, accounting, and firm value.

In term of practical implications, firms can leverage the positive link between high-quality accounting and firm value by enhancing transparency, building stakeholder trust, and attracting sustainability-focused investors. Furthermore, strategic CSR reporting can mitigate risks associated with negative environmental or social impacts, protecting reputation and financial performance. Investors benefit from understanding CSR's mediating and moderating effects, gaining a more holistic view of a company's long-term sustainability by considering both financial and CSR disclosures. Policymakers can use these findings to develop regulations encouraging responsible corporate behavior and enhancing investor confidence. Promoting CSR integration into accounting standards incentivizes comprehensive sustainability disclosures. Exploring standardized CSR frameworks could enhance comparability and reliability, enabling more informed investment decisions.

The study utilizing ASEAN-5 firms provides valuable insights into the mediating and moderating impact of CSR sustainability reporting, but it is important to acknowledge certain limitations. The sample, restricted to ASEAN-5 firms, may not be fully generalizable to other regions or industries, potentially limiting the extent to which findings can be extrapolated. Additionally, the focus on firm value as a proxy for performance might overlook other relevant measures such as social and environmental impacts. Moreover, the study focuses on a snapshot in time and does not capture the dynamic evolution of CSR reporting practices and their impact on firm value over time. Future research could address these limitations by expanding the sample size to encompass a broader range of firms and regions, exploring alternative data sources, incorporating a broader set of performance metrics, and adopting a longitudinal approach to capture the evolving relationship between CSR, accounting standards, and firm value.

## References:

*Al-Shaer, H., & Zaman, M. (2016). Board gender diversity and sustainability reporting quality. Journal of Contemporary Accounting & Economics, 12(3), 210-222.*

*Breuer, W., Trauzettel, T., Müller, T., & Salzmann, A. (2024). An international perspective on corporate social responsibility, investor time preferences, and cost of equity. International Business Review, 33(1), 102194.*

*Fedorova, E., Drogovoz, P., Popova, A., & Shiboldenkov, V. (2023). Impact of R&D, patents and innovations disclosure on market capitalization: Russian evidence. Kybernetes, 52(12), 6078-6106.*

*Ftiti, Z., Jeriji, M., Kammoun, S., Louhichi, W., & Zenaidi, A. (2024). Corporate social responsibility disclosure and corporate creditworthiness: Evidence from the UK. International Journal of Finance & Economics, 29(2), 1259-1276.*

*Gao, P., Jiang, X., & Zhang, G. (2019). Firm value and market liquidity around the adoption of common accounting standards. Journal of Accounting and Economics, 68(1), 101220.*

*Hassan, Q. M., Khudir, I. M., & San Olawuyi, D. S. (2023). Regulating corporate social responsibility in energy and extractive industries: The case of international oil companies in a developing country. Resources Policy, 83, 103607.*

*Hou, X., Xie, H., Xu, S., Tong, Z., & Liu, Z. (2024). Whether the reform of the accounting system affects the corporate innovative behavior: evidence from a quasi-natural experiment. Kybernetes, 53(7), 2361-2384.*

*Makau, S. (2024). Impact of Corporate Social Responsibility (CSR) Reporting on Firm Performance. American Journal of Accounting, 6(1), 13-24.*

*Minh, N. N., Van, D. N., & Thanh, H. T. T. (2023, May). Impact of IFRS application on firm performance through disclosure quality. In International Conference on Emerging Challenges: Strategic Adaptation in The World of Uncertainties (ICECH 2022) (pp. 386-401). Atlantis Press.*

*Perera, A. (2024). Investor value orientation and environmental and social implications: a case of New Zealand agribusinesses. Social Responsibility Journal, 20(7), 1284-1299.*

*Qian, W., Tilt, C., Dissanayake, D., & Kuruppu, S. (2020). Motivations and impacts of sustainability reporting in the Indo-Pacific region: Normative and instrumental stakeholder approaches. Business Strategy and the Environment, 29(8), 3370-3384.*

*Rahi, A. F., Johansson, J., Blomkvist, M., & Hartwig, F. (2024). Corporate sustainability and financial performance: A hybrid literature review. Corporate Social Responsibility and Environmental Management, 31(2), 801-815.*

*Rutherford, B. A. (2020). Are accounting standards memes? the survival of accounting evolution in an age of regulation. Philosophy of Management, 19(4), 499-523.*

*Schiavi, G. S., Behr, A., & Marcolin, C. B. (2024). Institutional theory in accounting information systems research: Shedding light on digital transformation and institutional change. International Journal of Accounting Information Systems, 52, 100662.*

*Sindhu, M. I., Wong, W. K., & Maswadi, L. (2024). Implications of corporate social responsibility on the financial and non-financial performance of the banking sector: A moderated and mediated mechanism. Heliyon, 10(9), e30557.*

*Thomas, A. S., Jayachandran, A., & Biju, A. V. N. (2024). Strategic mapping of the environmental social governance landscape in finance–A bibliometric exploration through concepts and themes. Corporate Social Responsibility and Environmental Management. https://doi.org/10.1002/csr.2805*

# UNIVERSITY SOCIAL RESPONSIBILITY: RESPONSIBILITY ASPECT FOR LEARNERS

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**Abstract:** ***Universities are responsible for training learners with professional knowledge and skills, the ability to work independently, the ability to self-study and research to improve their qualifications, so learners play the role of the most important stakeholders for universities. The objective of this study is the social responsibility of universities to learners in Vietnam through survey data from universities and learners through questionnaires related to the social responsibility of universities to learners in Vietnam. By using a combination of qualitative and quantitative research methods, the results of this study show that the 12 attributes of social responsibility of universities to learners in Vietnam are quite high. All attributes of the variables are statistically significant. This article is an academic contribution to understanding the research that has developed and focused on the social responsibility of universities to learners in Vietnam, taking into account data from a number of reference research databases and survey results.***

• Keywords: *university social responsibility, learners, social responsibility accounting.*

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## 1. Introduction

Social responsibility is gaining attention from researchers and business leaders, particularly in the context of universities, a unique type of enterprise focused on training and research. This concept, known as University Social Responsibility (USR), highlights the specific responsibilities universities have towards their learners.

One of the key responsibilities in the admission process involves selecting truly qualified candidates. Universities must establish clear goals, training programs, and output standards, which help learners understand what is expected of them. By providing accessible admission information, universities enable prospective students to assess their fit and make informed decisions about attending. This not only streamlines the recruitment process but also ensures that students can pursue their academic aspirations effectively.

During the training process, universities are responsible for guiding students through scientific research and monitoring their progress. Regular support and advisement help learners overcome challenges and enhance their knowledge and skills, promoting lifelong learning. Universities can employ various assessment methods to ensure that evaluations are valid, reliable, and fair, allowing for timely feedback that aids learners in improving their academic performance.

Despite its growing importance, the USR remains a relatively new field. While UNESCO recognizes its value in cultivating and developing educational principles, significant gaps in research persist. There is a lack of a consistent theoretical framework for USR and for analyzing universities' application of its principles. To address these gaps, further exploration into both theoretical and practical aspects of USR is crucial, emphasizing its significance in higher education.

## 2. Literature review

According to Wigmore-Álvarez et al. (2020), the fundamental difference between CSR and USR is rooted in the university's role in professional training and knowledge development, resulting in distinct impacts compared to businesses. Some researchers argue that USR should not be seen as separate from teaching and research activities (Parsons, 2014). Social responsibility has become integral to universities, influencing both internal organization and external relations, and higher education institutions need to embody principles of social responsibility to establish their identity and reputation (Kotecha, 2010).

Incorporating social responsibility into curriculum design contributes to educating future professionals, emphasizing ethics, social values, and awareness of the economic, social, and environmental impacts of business activities (Aznar Minguet et al., 2011). The teaching of social responsibility in universities is increasingly important within the context of education for sustainable development (ESD) (Setó-Pamies et al., 2011). Research shows that managerial commitment

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to CSR in corporations often relates to qualities developed through higher education rather than physical characteristics (Quazi, 2003). Education and awareness play crucial roles in achieving behavioral change essential for sustainability (Tang et al., 2011). Thus, corporations seeking to integrate social issues into their strategic business plans will require graduates with substantial formal education and professional development in sustainability.

Vallaeys' definition of USR is widely accepted: it is a policy of ethics in university activities, encompassing responsible management of education, research, and the environment, with a focus on promoting sustainable human development (Wigmore-Álvarez & Ruiz-Lozano, 2012).

## 3. Research methods

### *3.1. Scale and design of questionnaires*

This study uses a 5-point Likert scale from 1 (totally disagree) to 5 (strongly agree). Statements are adapted from previous studies and expert opinions to align with the current context of Vietnamese universities, based on expert interviews and group discussions. University social responsibility to learners is measured by twelve observed variables (see Table 1)

### *3.2. Samples and data collection*

The study sample was selected using a convenient method. After designing the questionnaire, we conducted the survey online through Google Docs and in-person, sharing the link via social networks like Zalo, Facebook, and email. Participants included university board chairs, board members, principals, vice principals, and accounting staff in Vietnam. Of the 650 questionnaires collected, 64 were deemed invalid due to reliability issues, leaving 586 for analysis.

### *3.3. Data processing*

Quantitative research methods supported by SPSS software include descriptive statistics.

## 4. Results

The survey results on the current status of university social responsibility implementation towards learners are summarized in Table 1.

**Table 1. University social responsibility to learners**

| | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| USRL1 | Learners can easily access admission information, output standards, training programs, etc. to make appropriate choices. | 586 | 2 | 5 | 4.34 | .657 |
| USRL2 | Ensure the student-to-faculty ratio is in accordance with regulations. | 586 | 2 | 5 | 3.96 | .800 |
| USRL3 | Manage student admissions in a transparent and fair manner, using clear, well-defined criteria to inform selection decisions and providing formal feedback to unsuccessful candidates. | 586 | 3 | 5 | 4.41 | .598 |
| USRL4 | The school's training program is built on a foundation of knowledge and includes content on professional ethics, communication culture, and charitable responsibility for learners to train them to become citizens with creative thinking and decision-making ability, active and civilized citizens of a sustainable, developing society. | 586 | 2 | 5 | 3.93 | .819 |
| USRL5 | Tuition fees are set appropriately to ensure they meet the learning needs of the majority of learners. | 586 | 2 | 5 | 3.99 | .796 |
| USRL6 | Scholarship policies encourage learning, as well as policies to support students in difficult circumstances during their studies. | 586 | 2 | 5 | 3.96 | .810 |
| USRL7 | There are policies and conditions for students to exchange, study, and research with universities at home and abroad. | 586 | 2 | 5 | 3.25 | .959 |
| USRL8 | Facilities serving learners, such as libraries, information technology platforms, dormitories, medical stations, and other learning support conditions, ensure prescribed standards, with special attention to environmental, health, and safety factors, taking into account the specific needs of people with disabilities, and are constantly improved. | 586 | 2 | 5 | 4.02 | .780 |
| USRL9 | Adopt learner-centered teaching and learning approaches, ensuring assessment and feedback are used to promote learner learning. | 586 | 3 | 5 | 3.95 | .774 |
| USRL10 | Ensure equality and fairness for all learners. | 586 | 2 | 5 | 4.10 | .805 |
| USRL11 | Coordinate with firms and employers in using experts, facilities, and equipment to organize practical training and internships to improve practical and internship skills and increase employment opportunities for students. | 586 | 2 | 5 | 4.02 | .781 |
| USRL12 | Diversify training forms, ensuring to meet the learning needs of all learners according to different geographical areas, capacities, and personal conditions (expand and diversify access to education with a commitment to lifelong learning). | 586 | 3 | 5 | 3.78 | .800 |
| | Valid N (listwise) | 586 | | | 3.98 | .503 |

*Source: Authors compiled and SPSS software SPSS20*

Table 1 shows that the mean values corresponding to the university's social responsibility to learners are above average, with the overall mean value being Mean = 3.98 (less than 4).

## 5. Discussion and implications

The analysis shows that the disclosure of admission information and output standards for learners is rated positively (mean = 4.43), complying with regulations on public disclosure. However, the student-to-lecturer ratio is rated lower (mean = 3.96). The autonomy of public and private institutions in developing teaching staff has not ensured equal competition or encouraged an increase in lecturers relative to training scale. As a result, universities often optimize resources by increasing the student/teacher ratio to meet enrollment targets, leading some schools to face penalties for exceeding their training capacity. This situation reflects ongoing challenges in maintaining quality educational standards while accommodating growth.

Manage student admissions transparently and fairly, using clear criteria to inform selection decisions and provide feedback to unqualified candidates. Schools typically conduct admissions according to an annually published plan. However, some public and private universities face challenges, such as a large number of virtual candidates and difficulty meeting enrollment targets. As a result, admission management may lack transparency and fairness, leading to practices like calling for admission earlier than regulations and not allowing students to withdraw applications. This creates difficulties for students when choosing a school and major.

The school's training program is based on knowledge and covers professional ethics, communication culture, and charitable responsibilities to develop learners into creative and active citizens of a sustainable society. Implementation levels vary widely; some schools are rated as low as 2 weak, while others score a 5 the best. The overall average rating is only 3.93. Hanoi National University (2023) notes that financial autonomy leads universities to focus on low-cost fields with high demand, resulting in programs that are often "heavy" on theory and "light" on practical application. There is a notable lack of connection with the labor market, as many universities provide only what they have, rather than what society needs (Le Anh Vinh, 2023).

The main source of finance for private universities is tuition fees, while public universities rely on the state budget, tuition, and other revenue sources (such as technology transfer and public-private partnerships). The largest revenue source for both types is tuition fees. Due to financial pressure, determining appropriate tuition fees to meet the majority's learning needs only averages 3.99. Public universities benefit from state funding, resulting in lower tuition fees compared to private institutions. Public university tuition fees are generally appropriate, meeting the needs of most learners (mean = 4.15), whereas private universities average lower (mean = 3.65).

The difference in funding sources gives public universities an advantage in implementing scholarship policies, supporting students in difficult circumstances, and facilitating exchanges with domestic and foreign institutions more effectively than private universities. However, the overall status of student exchange between higher education institutions remains low (mean = 3.25).

The application of learner-centered teaching and learning support methods, ensuring that assessment and feedback are used to promote learning for learners, is also implemented by universities at a rather modest level (with Mean = 3.95).

Facilities serving learners, such as libraries, IT platforms, dormitories, and medical stations, which ensure environmental, health, and safety standards while considering the needs of people with disabilities, are rated only at a fair level (Mean = 4.02). By 2023, of the 237 universities in Vietnam (excluding military academies), only 09 schools (an increase of 02 since 2022) were assessed by The Impact Rankings for their contributions to social and human development and environmental protection efforts, aligning with the implementation of 17 Sustainable Development Goals and aiming for a consensus to create "a world that leaves no one behind".

Coordination with enterprises to utilize experts and facilities for practical training and internships is crucial (mean = 4.02). Some schools effectively implement this, earning good ratings, while many private institutions score below average. The overall average for this social responsibility indicator is only slightly above average. Public universities benefit from state investments in facilities and finances, making them more proactive in collaborating with businesses during training processes compared to private universities (mean = 4.33 vs. 3.35).

According to the Report of the Department of Higher Education - Ministry of Education and Training from June 2021 on cooperation between universities and enterprises in information technology, 40.7% of 135 surveyed higher education institutions have cooperation activities in both IT and other fields (55/135). Additionally, 44.4% collaborate only in other areas (66/135), 8.1% focus solely on IT (11/135), while 6.7% have no cooperation with enterprises (9/135), primarily among institutions specializing in specific majors in the arts.

A total of 6,126 enterprises are cooperating with 135 surveyed higher education institutions, averaging 60 enterprises per institution. Notably, institutions with strong cooperation in both IT and other fields include Thu Dau Mot University (75 in IT, 357 in other fields), Ho Chi Minh City University of Technical Education (31 in IT, 163 in other fields), Eastern International University (30 in IT, 140 in other fields), Ho Chi Minh City University of Industry (45 in IT, 240 in other fields), and Hanoi University of Industry (21 in IT, 161 in other fields). These institutions represent the leading group in cooperation with firms.

From another perspective, cooperation between universities and enterprises in our country remains limited. Most school-enterprise linkages focus on immediate needs and short-term plans rather than long-term strategies (78% versus 22%). The cooperation level is largely at the "initial development understanding" stage (214 out of 493 universities) or "short-term cooperation" (174 out of 493). Only 58 universities are deemed "long-term partners," and 47 are classified as "strategic partners" of enterprises.

Policies to ensure fairness to all learners are implemented in schools rated at mean = 4.10.

The scale of university training has increased at both undergraduate and postgraduate levels, providing high-quality human resources for the country's socio-economic development. In the 2021-2022 school year, there were over 2 million students, with 80.56% attending public institutions. Full-time training accounted for 88.21%, part-time for 8.52%, and distance learning for 3.27%. Despite rising enrollment, the gap in access to higher education between income groups in Vietnam is widening, although inequality among ethnic groups has improved over the past decade. Thus, diversifying training forms and meeting the learning needs of all learners across different regions and backgrounds is urgent. However, this responsibility is currently implemented at only a modest assessment level, with a mean rating of 3.78.

According to Hoang Minh Son (2023), developing digital higher education is an effective strategy to expand access. Universities and lecturers can collaborate on a common platform to develop and share courses, focusing on their strengths to reduce costs. Courses can reach students nationwide, including international learners, enhancing educational effectiveness and offering more choices. This approach allows students to select programs from multiple universities, choose courses with the best lecturers, and access top virtual labs. The credit-based training model is thus expanded globally, improving quality and accessibility. Additionally, universities should clarify their social responsibilities to learners, employees, and related parties, including support for training programs and local commitments.

## 6. Conclusion and recommendations

Universities are crucial for societal development as they educate students in knowledge, ethics, and cultural values, enabling them to contribute to economic and cultural sustainability. Our research shows that while the level of social responsibility varies, the average value concerning students is consistently above average, with an overall mean of 3.98. This indicates that Vietnamese universities are increasingly recognizing their social responsibilities, particularly towards students. However, awareness of social responsibility related to sustainable development goals remains incomplete. Implementing social responsibility in universities requires not only internal commitment but also collaboration among all participants to fulfill their respective roles within mutually beneficial relationships.

To enhance the social responsibility activities of universities in alignment with sustainable development goals, we recommend the following solutions:

***Firstly,*** the Vietnamese government should enhance the development of guidelines on social responsibility and synchronize the legal framework regarding the implementation of social responsibility with the relevant parties in universities. This will create a legal corridor, enabling universities to implement social responsibility more clearly and specifically.

***Secondly,*** enhancing awareness within higher education institutions and the broader community. Currently, social responsibility is not only a concern for the private sector (businesses) but also for public service providers, including universities. In light of ongoing economic development and globalization, the social responsibility of universities is garnering increasing attention. Universities must recognize this issue and incorporate it into their strategies and actions. Then, they can be able to allocate budgets and develop specific programs to effectively fulfill the social responsibilities to which they have voluntarily committed.

***Thirdly,*** universities need to innovate in their governance, focusing on autonomy and accountability. This includes proactively leveraging financial resources from the community, thereby actively fulfilling their responsibilities towards students and the community. Universities should also increase accountability and transparency, especially through communication channels with students, the community, and partners.

***Fourthly***, reforming education and research activities by integrating modules related to sustainable development, changing perceptions of sustainable business practices, increasing applied research, and actively collaborating with local regions in training, researching, and implementing activities.

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## References:

*Aznar Minguet, P., Martinez-Agut, M.P., Palacios, B., 2011. Introducing sustainability into university curricula: an indicator and baseline survey of the views of university teachers at the University of Valencia. Environ. Educ. Res. 17 (2), 145e166.*

*Le Anh Vinh (2023). Current situation and solutions to improve the quality of university education to serve development and improve the quality of human resources to meet the goals of industrialization and modernization of the country in the new period. Education Conference 2023: Institutions and policies to improve the quality of higher education (National Conference, Vietnam)*

*Parsons, A. (2014), Litterature review on social responsibility in higher education, BC, Canada.*

*Quazi, A.M. (2003), "Identifying the determinants of corporate managers' perceived social obligations", Management Decision, Vol. 41 No. 9, pp. 822-831. https://doi.org/10.1108/00251740310488999*

*Tang, K., Robinson, D. A., & Harvey, M. Sustainability Managers or Rogue Mid-Mangers: A Typology of Corporate Sustainability Managers. Managerial Decision, 49(8), 371-1747. http://dx.doi.org/101108/0025174111163719*

*UNESCO (2014), Shaping the Future We Want UN Decade of Education for Sustainable Development, 2005-2014 Final Report, In United Nations Educational, Scientific and Cultural Organization.*

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# MACHINE LEARNING APPLICATIONS IN GRADUATION PREDICTION AT THE ACADEMY OF FINANCE, VIETNAM

PhD. Cu Thu Thuy* - Nguyen Duc Thanh**

**Abstract:** ***This study investigates the application of supervised machine learning methods for predicting student learning outcomes based on academic performance in previous semesters. The experimental data comprises of 2344 graduated from the CQ56 and CQ57 (2022 and 2023) cohorts across all majors at the Academy of Finance. The result indicates that J48 decision tree algorithm achieved the highest prediction accuracy for graduation classification, both with the original data and the preprocessed data that addresses missing values. This preliminary study demonstrates the potential for an effective application of machine learning to student data mining at the Academy of Finance.***

• Keywords: *machine learning, predicting student learning outcomes, educational data mining.*

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**1. Introduction**

Nowadays, higher education institutions are facing intense competition due to the changing of the education market, as well as demands from learners and society. To thrive, they must improve on various aspects, with student learning quality being a crucial factor. Minimizing student attrition and improving academic performance are common goals shared across institutions. Beyond academic rules and regulations, analysis of prior academic performance could assist in prediction of students' final learning outcomes. These results could provide students with an effectively guide toward improving their learning strategies and achieving better results in the future.

Educational data mining has gathered significant attention from researchers and developers as it becomes essential for institutions seeking to enhance educational quality based on innovative techs (Sumitha et al., 2016). Predicting student learning outcomes is challenging due to its multi-faceted nature, however this is the central issue to create breakthroughts. Various methods have been employed to generate these predictions. Recently, Machine Learning (ML) has been used to develop models utilizing big data to support student academic performance prediction and decision-making in educational settings (Alalawi et al., 2023).

Currently, the application of machine learning models to predict student learning outcomes at the Academy of Finance remains unexplored. This study aims to address the question of which methods are suitable for this purpose and provide empirical evidence for their reliability. Several machine learning models are applied to predict graduation outcomes at the Academy of Finance based on students' prior academic data.

The remainder of this paper is structured as follows: Section 2 reviews relevant literature; Section 3 presents the experimental results from applying machine learning methods to student data at the Academy of Finance; and the Conclusion summarizes the findings, limitations, and future research directions.

**2. Literature review**

In recent years, extensive research have been conducted on the application of machine learning to predict student learning outcomes, identify at-risk students, and forecast dropout rates. Key studies include:

Khalid et al. (2023) conducted a systematic literature review on the employment of Machine Learning (ML) to predict student learning outcomes in Educational Data Mining (EDM), covering publications from January 2010 to October 2022. Over 50 distinct ML algorithms were identified across 162 papers. Three primary ML methods for predicting student learning outcomes are classification, regression, and clustering, with classification being the most prevalent, accounting for 80% of applications. Regression and clustering follow, representing 14.6% and 5.2%, respectively. The most employed algorithms include Decision Tree, Random Forest, Naive Bayes (NB), Artificial Neural Networks (ANN), and Support Vector Machine (SVM). Based on assessment of training time complexity, Naive Bayes and Decision Tree are identified as the least computationally demanding algorithms, which may explain their widespread adoption.

The comprehensive research conducted by Hellas et al. (2018) explores the question, "What is the most advanced technology currently used in predicting students' learning outcomes?" Decision Trees, Neural Networks, and SVM were found to be highly prevalent.

Experimental results from specific data sets in recent years are summarized as follows:

Sumitha et al. (2016) predicted student grades (Excellent, Good, Average, Below Average) based on

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demographic information, school details, attendance records, CGPA, and results from the previous semester for approximately 350 students from KLN College of Information Technology (affiliated with Anna University). The results showed that J48 algorithm achieved the highest accuracy rate at 97.27%.

Yaacob et al. (2019) analyzed a dataset consists of 631 graduates from 2013 to 2016 from the Statistics Department at Universiti Teknologi MARA Cawangan Kelantan and Universiti Teknologi MARA Cawangan Negeri Sembilan. The Naive Bayes algorithm achieved the highest prediction accuracy (89.26%), compared to Decision Tree, k-Nearest Neighbors (k-NN), and Logistic Regression.

Bujang et al. (2021) employed multiple machine learning models, including J48, Logistic Regression, Random Forest, NB, k-NN, and SVM, to predict student learning outcomes. The dataset comprised of 641 students from the Information Technology and Media Department at Malaysia Polytechnic University. The study compared six models and found that J48 and Random Forest achieved the highest accuracy rate of 98.9%. Applying the Synthetic Minority Over-sampling Technique (SMOTE) further improved the accuracy of all six models to 99.5%.

N. G. Cu et al. (2024) improved performance of machine learning algorithm such as J48, Logistic Regression, Random Forest, MLP, k-NN, and SVM on prediction of at-risk students by a novel data rebalancing technique.

In addition to utilizing data from the institutional information system, some researchers have also conducted surveys to gather direct feedback from students.

In Vietnam, numerous researchers have utilized machine learning models to predict students' academic performance. Uyen and Tam (2019) analyzed data from 555 students across the 54th, 55th, and 56th cohorts of the Information Technology Department at Vinh University. Similarly, Son et al. (2022) recommended employing machine learning models for early predictions of academic performance based on education and enrollment data from Hanoi Metropolitan University. More recently, Thuy (2023) analyzed a dataset of 6,696 students from 2000 to 2010 from the Banking Department at the Banking Academy of Vietnam.

The findings of these studies highlight several key advantages of using machine learning to predict learning outcomes, including increased prediction accuracy, automation and time efficiency, reduced subjectivity in analysis, improved education quality, and the ability to identify potential trends. Given that machine learning models can process vast amounts of data and be applied on a large scale, their expansion is relatively straightforward, making them particularly beneficial for large schools and institutions that educate thousands of students. Educators could also modify machine learning models, allowing them to be applied to a wide range of educational sectors and systems.

Building on these insights, this study utilizes widely adopted machine learning models in education to predict graduation classifications using accessible data from the Academy of Finance.

**3. Experimental results**

The sample dataset includes 2344 graduated from the CQ56 and CQ57 cohorts across all majors at the Academy. Due to data extraction limitations, a subset of the total student population from the two cohorts were selected.

Input features for prediction are academic results from the first two years of study. Graduation classifications are: Excellent, Very Good, Good, and Average. Table 1 summarizes the dataset.

**Table 1: General information of the student dataset**

| Graduation classification | Number of Observations | Percentage (%) |
|---|---|---|
| Average | 20 | 0.85% |
| Good | 1332 | 56.83% |
| Very Good | 829 | 35.37% |
| Excellent | 163 | 6.95% |
| Total | 2344 | 100% |

*Source: Authors' calculations*

The data includes students from a variety of programs. Because the institution uses a credit-based system, students can enroll in different courses (within certain limits). Building a prediction model on this data poses a significant challenge due to the need to handle missing data: courses which not all students are required to take, or only a portion of students could participate.

When using raw data, only some machine learning algorithms can be directly applied, such as prediction models using association rules or decision tree algorithms (Do et al., 2023). In this study, the decision tree model was selected to experiment with missing data based on the research of other authors.

The prediction results of the J48 decision tree model on the raw data are quite promising, as detailed in Table 2 and Table 3 below.

**Table 2: Performance of the J48 model with raw data**

| Algorithm | Accuracy | Precision | Recall | F1-Score |
|---|---|---|---|---|
| J48 | 97.82% | 98.79% | 98.71% | 98.75% |

*Source: Authors' calculations*

Below are the detailed results for each class:

**Table 3: Performance of the J48 model for each class with raw data**

| Class | Precision | Recall | F1-Score |
|---|---|---|---|
| Very Good | 97.32% | 96.50% | 96.91% |
| Good | 97.83% | 98.35% | 98.09% |
| Average | 100.00% | 100.00% | 100.00% |
| Excellent | 100.00% | 100.00% | 100.00% |

*Source: Authors' calculations*

To accommodate to the data format requirements of other machine learning models, missing data was replaced with the mean of variable. Specifically, numerical missing values were replaced with the mean of the observed values for the respective feature.

Categorically missing values were replaced with the mode (most frequent category) of the observed data. The performance of different machine learning models for predicting student learning outcomes on this processed data is presented in Table 4.

**Table 4: Performance of machine learning models with processed data**

| Algorithm | Accuracy | Precision | Recall | F1-Score |
|---|---|---|---|---|
| J48 | **98.04%** | **98.91%** | **98.84%** | **98.87%** |
| Nnge | 78.86% | 78.10% | 65.42% | 71.20% |
| Logistic Regression | 85.79% | 61.43% | 59.76% | 60.58% |
| MLP | 84.64% | 61.66% | 58.15% | 59.85% |
| SMO | 78.33% | 77.32% | 40.47% | 53.13% |
| Adaboost | 91.25% | 90.13% | 49.59% | 63.98% |

*Source: Authors' calculations*

Considering all the metrics, including accuracy, precision, recall, and F1-score, the J48 decision tree model provides the best prediction results. With the J48 model, these values are 98.04%, 98.91%, 98.84%, and 98.87%, respectively; this result suggests that applying this method in practice at the Academy is entirely feasible. The results of the other models are more limited compared to the decision tree-based model. Among the remaining models, Adaboost performed the best, followed by logistic regression, the multilayer perceptron (MLP) neural network, the Nnge algorithm (a variant of the K-nearest neighbor strategy), and SMO (a support vector machine optimization algorithm). These algorithms gave more limited prediction results compared to the J48 decision tree algorithm. One possible explanation is supplementing missing data with the average values of variables is not the best approach. In the future, the research will be expanded further to address this issue.

Regarding the best-performing algorithm, the J48 decision tree, the classification results for each class in the prediction task are presented in Table 5.

**Table 5: Performance of the J48 model for each class with processed data**

| Class | Precision | Recall | F1-Score |
|---|---|---|---|
| Very Good | 97.57% | 96.86% | 97.22% |
| Good | 98.06% | 98.50% | 98.28% |
| Average | 100.00% | 100.00% | 100.00% |
| Excellent | 100.00% | 100.00% | 100.00% |

*Source: Authors' calculations*

The results demonstrate that the J48 algorithm performed well across all classes. Additionally, minority classes such as "Average", which accounts for only 0.85% of observations, and the "Excellent" class, which represents 6.95% of observations, also achieved strong predictive performance. The prediction model performed well (balanced) across all classes in the student academic performance classification task. This ensures that the predictions do not suffer from bias, particularly in the case of minority classes. Bias in classification could lead to incorrect treatment of minority-class instances when applying the predictions in real-world scenarios.

## 4. Conclusion

This study contributes to the application of modern machine learning methods in educational data mining at the Academy of Finance. It provides a framework for prediction of final academic outcomes based on students' performance in earlier stages of their studies. The experimental results, using data from graduates in 2022 and 2023 (cohorts CQ56 and CQ57), indicate that the J48 decision tree model offers the best predictive performance. These findings align with the results observed in similar studies by Sumitha et al. (2016) and Bujang et al. (2021).

These predictions can serve as a warning for students currently enrolled at the Academy, prompting them to adjust learning strategies and enhance their commitment to academic pursuits. Furthermore, these insights can assist faculty and administrators in providing targeted support to struggling students and improving overall learning outcomes, ultimately increasing students' employment prospects.

One limitation of the study is that it relies solely on academic performance data from the first two years of study to predict graduation classification. In reality, several other factors could influence graduation outcomes, including extracurricular activities (e.g., sports, performing arts), participation in supplementary courses, involvement in professional clubs, engagement in scientific research, and family-related factors such as parental education level, income, financial support, and family dynamics. Additionally, the issue of handling missing data in machine learning models requires further research when applied to student datasets. Another limitation of this study is the employment of only a few standalone machine learning models. Future research should explore the application of ensemble learning methods, deep learning models, and improvements to existing models to enhance prediction accuracy. Addressing these limitations will be the focus of future research.

## References:

*Alalawi, K., Athauda, R., Chiong, R. (2023), "Contextualizing the current state of research on the use of machine learning for student performance prediction: A systematic literature review", Volume 5, Issue 12, Special Section title: Additive Manufacturing for Advanced Materials and Structures, https://doi.org/10.1002/eng2.12699.*

*Bujang, S. D. A., Selamat, A., Ibrahim, R., Krejcar, O., Herrera-Viedma, E., & Fujita, H. (2021), "Multiclass prediction model for student grade prediction using machine learning", IEEE Access ( Volume 9), pp. 95608- 95621. DOI: 10.1109/ACCESS.2021.3093563.*

*Do, V., T., Nguyen, G. C., Thi, H. D., & Ngoc, L. P. (2023), "Classification and variable selection using the mining of positive and negative association rules", Information Sciences, 631, pp.218-240.*

*Hellas, A., Ihantola, P., Petersen, A., Ajanovski, V.V., Gutica, M., Hynninen, T., Knutas, A., Leinonen, J., Messom, C., & Liao., S. N. (2018), "Predicting academic performance: A systematic literature review", In Proceedings Companion of the 23rd Annual ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE '18 Companion), Larnaca, Cyprus. ACM, New York, NY, USA, 25 pages. https://doi.org/10.1145/3293881.3295783.*

*N. T. Uyên, N. M. Tâm (2019), "Áp dụng thuật toán khai phá dữ liệu trong dự báo kết quả học tập của sinh viên", Tạp chí khoa học, Tập 48 - Số 3A, pp. 68-73.*

*N. T. K. Son, N. V. Bien, N. H. Quynh, C. C. Tho (2022), "Machine learning based admission data processing for early forecasting students' learning outcomes", International Journal of Data Warehousing and Mining, Volume 18, Issue 1. DOI: 10.4018/IJDWM.313585.*

*N. V. Thủy (2023), "Sử dụng các mô hình Machine learning dự đoán tình trạng sinh viên tốt nghiệp đúng hạn", Tạp chí Khoa học & Đào tạo Ngân hàng, Số 255- Tháng 8. 2023, tr 52-64.*

*N. G. Cu, T. L. Nghiem, T. H. Ngo, M. T. L. Nguyen, H. Q. Phung (2024), "Increment of academic performance prediction of at-risk student by dealing with data imbalance problem", Applied Computational Intelligence and Soft Computing 2024 (1), 4795606, DOI: https://doi.org/10.1155/2024/4795606.*

*Sumitha, R., Vinothkumar, E. S., and Scholar, P. (2016), "Prediction of students outcome using data mining techniques", International Journal of Scientific Engineering and Applied Science (IJSEAS), Volume 2, Issue 6, pp.8.*

*Yaacob, W. F. W., Nasir, S. A. M., Yaacob, W. F. W., &, Sobri, N. M. (2019), "Supervised data mining approach for predicting student performance", Indonesian Journal of Electrical Engineering and Computer Science. Vol. 16, No. 3, December 2019, pp. 1584~1592.*

# DOES ORGANIC FOOD CONSUMPTION BRING ECONOMIC BENEFITS? A STUDY ON FACTORS INFLUENCING GEN Z'S PURCHASE INTENTION

**Ths. Le Thi Thoan* - Nguyen Ngoc Linh* - Nguyen Hoang Vu* - Pham Minh Tien***
**Tran Le Nguyen****

**Abstract:** ***Organic food is gaining popularity among younger consumers due to its perceived health benefits and food safety attributes. Beyond health, it also offers long-term economic advantages, such as reduced medical costs and improved quality of life. This study examines key factors influencing Gen Z's organic food Purchase Intention, based on a sample of 338 consumers in Ho Chi Minh City. Using multiple regression analysis in SPSS 20, the research identifies Health Consciousness, Knowledge of Organic Food, Marketing and Communication, and Subjective Norms as significant determinants, with Health Consciousness and Subjective Norms having the strongest impact. These findings offer valuable insights for businesses, enabling them to craft marketing strategies that emphasize both health benefits and financial savings to drive organic consumption.***

• Keywords: *Gen Z, organic food, purchase intention, Ho Chi Minh City.*

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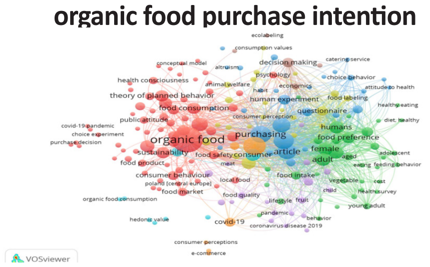
## 1. Introduction

Organic food is gaining increasing popularity worldwide, not only in developed nations but also in emerging markets. A growing body of literature has explored factors influencing consumer attitudes and purchase intentions toward organic food. Health consciousness and food safety concerns have been widely acknowledged as primary motivators for organic food consumption (Rashid et al., 2024). Furthermore, consumer knowledge about organic food plays a crucial role in shaping attitudes and trust toward these products. Additionally, sustainability considerations, particularly in production processes, significantly impact purchasing behavior.

In Vietnam, studies on the intention to purchase organic food have identified various influencing factors such as attitude, subjective norms, trust, health consciousness, environmental concern, perceived quality, and behavioral control, among others (Huynh Quang Minh & Nguyen Thi Ngoc Trinh, 2024). However, the number of studies remains limited, and there is still a lack of consensus regarding the factors influencing consumers' intention to purchase organic food in Vietnam and different regions.

By applying the bibliometric analysis method using scientific sources from Scopus (Figure 1), the authors identified studies related to Gen Z's intention to purchase organic food. Prior studies cover topics such as food safety consumers, sustainability, health consciousness, and women (Rashid et al., 2024; Gruszecka et al., 2023). Figure 1 presents the bibliometric analysis results, highlighting key research themes of organic food purchasing behavior.

**Figure 1: Bibliometric analysis of studies related to organic food purchase intention**




*Source: Copmpiled by the authors*

While previous studies have explored factors influencing organic food consumption, research on their combined impact on Gen Z in developing countries remains limited. This study addresses this gap by examining key determinants of Gen Z's organic food purchase intention in Ho Chi Minh City, offering fresh insights into how health consciousness, knowledge, marketing, and subjective norms shape their buying behavior. Furthermore, understanding these factors can help consumers make more informed

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purchasing decisions, ultimately leading to long-term economic benefits. Additionally, improved consumer awareness and trust in organic products can encourage more competitive pricing and better accessibility in the market, making organic food a more economically viable option for a broader audience.

## 2. Theoretical Framework and research model

### *2.1 Theoretical Framework*

*Organic food*

According to Rashid et al. (2024), organic foods are agricultural products that are produced completely naturally, without the use of any synthetic chemicals such as chemical fertilizers, pesticides or preservatives. Organic foods are often associated with images of natural, local, fresh and pure products, reflecting consumers' concern for the origin and quality of food.

*Gen Z*

Gen Z is a group of people born between 1997 and 2013, growing up in the context of strong technological development, especially the internet, smartphones and social networks. They are a multicultural generation, with superior access and use of technology, deeply influencing consumer trends and market behavior. Gen Z also achieves financial independence and the ability to make their own decisions, especially between the ages of 18 and 27 (Huynh Quang Minh & Nguyen Thi Ngoc Trinh, 2024; Schroth, 2019).

*The Theory of Reasoned Action*

The Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1975) states that behavior is driven by intentions, which are shaped by attitudes and subjective norms. In the context of organic food, purchase intention is influenced by perceived benefits like health and sustainability, as well as social expectations from family, peers, and media. Thus, TRA provides a solid framework for this study, exploring how Gen Z's attitudes, knowledge, and social influences drive their intention to buy organic food.

*The Theory of Planned Behavior*

Ajzen's (1991) Theory of Planned Behavior (TPB) states that intention is the primary predictor of behavior, shaped by attitude, subjective norms, and perceived behavioral control. Venkatesh et al. (2000) further applied this to technology use, such as mobile apps and social media. This study extends TPB by incorporating knowledge of organic food and marketing communication, offering a comprehensive view of Gen Z's purchasing behavior to help businesses refine their strategies.

### *2.2. Hypothesis and reasearch model*

*Health consciousness*

Health awareness is a key factor influencing consumer behavior, especially in organic food choices. Previous research found that health-conscious individuals prefer more nutritious, high-quality products. Similarly, a strong focus on personal health fosters a positive attitude toward organic food. Ahmad et al. (2015) further emphasized that these consumers choose organic products not only for health benefits but also for their environmental impact. Additionally, organic food benefits show a strong preference for these products with minimal risk concerns. Based on this, the following hypothesis is proposed:

H1: Health consciousness positively affects Gen Z's intention to purchase organic food.

*Knowledge about organic food*

Consumers with greater awareness of food safety tend to prefer organic products due to their understanding of health and environmental benefits (Xu et al., 2023). Knowledge helps shape positive attitudes and informed purchasing decisions, while environmentally conscious consumers are more inclined to choose organic food. Trinh Thuy Anh (2014) emphasizes that knowledge about organic food characteristics significantly influences consumer trust. For Gen Z, a generation valuing transparency and sustainability, greater awareness may enhance confidence and purchase intention. Based on this reasoning, the following hypothesis is proposed:

H2: Knowledge about organic food positively affects Gen Z's intention to purchase organic food.

*Marketing and communication*

Using advertising to promote products is a popular marketing strategy for businesses and sales, helping consumers access information about organic foods through media such as phones, television, magazines, social networks, and the internet (Nguyen Thi Thao Nguyen & Le Thi Trang, 2021). Advertising provides information about the benefits of organic foods, thereby raising consumer awareness. Wang et al. (2019) suggest that advertising promotes purchase intentions, while others indicate that effective marketing improves brand recognition and positive customer attitudes. Therefore, we hypothesize the following:

H3*:* Marketing and communication positively impact Gen Z's intention to purchase organic food.

*Perceived value*

Curvelo et al. (2019) found that the perceived value of organic food is associated with nutrition, safety, taste, and premium pricing. Consumers are willing to pay higher prices due to the perceived nutritional benefits. According to previous research, perceived value drives the adoption of green products and influences consumer purchasing decisions. Similarly, Hsu et al. (2019) confirm that consumers are more likely to pay a premium for organic food when they perceive high value in the product. This suggests that enhancing perceived value could be a crucial factor in encouraging Gen Z to purchase organic food, especially when perceptions of quality, safety, and nutritional benefits play a significant role. Based on this reasoning, the following hypothesis is proposed:

H4: Perceived value positively affects Gen Z's intention to purchase organic food.

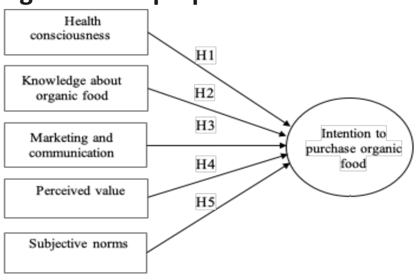
*Subjective norms*

Subjective norms stem from social influences, including family and friends, which encourage individuals to adopt group behaviors (Chen et al., 2022). Research indicates that when influencers hold positive attitudes toward organic food, consumers are more likely to choose it. Previous research highlighted that subjective norms represent social pressure from family and community, shaping behavioral decisions. Ajzen (1991) emphasized that these norms are based on personal beliefs about influencers, significantly impacting individual behavior. Based on this, we propose the following hypothesis:

H5: Subjective norms positively affect Gen Z's intention to purchase organic food.

*The proposed research model:*

**Figure 2: The proposed research model**




*Source: Compile by the authors*

**3. Research methods**

This study applies the multiple regression method, with the sample size determined according to Tabachnick & Fidell (1996). We surveyed 375 residents in Ho Chi Minh City who belong to Gen Z and have the intention to purchase organic food. After data cleaning, 338 valid responses were used for formal analysis. SPSS 20 was utilized to conduct Cronbach's alpha test, exploratory factor analysis (EFA), and regression analysis.

**4. Results of the study**

***4.1 Cronbach's Alpha Analysis Results***

The reliability measurement scales using Cronbach's Alpha coefficient with the test results of all variables meeting the reliability requirements (≥ 0.6) and the total correlation coefficient of all variables is guaranteed to be higher than the allowable level (≥ 0.3).

***4.2. Exploratory Factor Analysis (EFA)***

According to Hair et al. (2010), the results of EFA analysis showed that all variables had the required weights and no variables were eliminated from the model. Below are the results of EFA analysis.

**Table 4.2: EFA analysis results**

| Rotated Component Matrix[a] | | | | | |
|---|---|---|---|---|---|
| | Component | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| YTSK2 | | | 0.775 | | |
| YTSK5 | | | 0.770 | | |
| YTSK3 | | | 0.762 | | |
| YTSK1 | | | 0.738 | | |
| YTSK4 | | | 0.664 | | |
| KTH3 | | | | | 0.778 |
| KTH1 | | | | | 0.760 |
| KTH4 | | 0.308 | | | 0.704 |
| KTH2 | | | | | 0.639 |
| MKT3 | | | | 0.812 | |
| MKT2 | | | | 0.772 | |
| MKT4 | | | | 0.762 | |
| MKT1 | | | | 0.732 | |
| GTC4 | 0.871 | | | | |
| GTC1 | 0.842 | | | | |
| GTC3 | 0.830 | | | | |
| GTC2 | 0.820 | | | | |
| GTC5 | 0.793 | | | | |
| CCQ3 | | 0.786 | | | |
| CCQ5 | | 0.765 | | | |
| CCQ2 | | 0.754 | | | |
| CCQ1 | | 0.723 | | | |
| CCQ4 | | 0.673 | | | |

*Principal Component Analysis*

*Source: Extracted from SPSS 20)*

*Interpretation: YTSK: Health consicousness; KTH: Knowledge about organic food; MKT: Marketing and communication; GTC: Perceived value; CCQ: Subjective norms.*

Exploratory factor analysis (EFA) shows that the KMO coefficient = 0.865 is in the range (0.5 ≤ KMO ≤ 1) which meets the requirements. Bartlett's test has a Sig value = 0.000 ≤ 0.05, so the observed variables of the scale are related to each other. The total variance extracted is 64.383%, the factor loading coefficient is ≥ 50%, and the weight difference is ≥ 0.3, meeting the requirements. This shows that the exploratory factor analysis is suitable for the data.

Exploratory factor analysis (EFA) shows that the KMO coefficient = 0.865 is in the range (0.5 ≤ KMO ≤ 1) which meets the requirements. Bartlett's test has a Sig value = 0.000 ≤ 0.05, so the observed variables of the scale are related to each other. The total variance extracted is 64.383%, the factor loading coefficient is ≥ 50%, and the weight difference is ≥ 0.3, meeting the requirements. This shows that the exploratory factor analysis is suitable for the data.

***4.3. Regression analysis***

The regression analysis results in Table 4.3 show that the eliminated variable is "Perceived value" because Sig = 0.638 ≥ 0.05, the remaining variables all meet the requirements with Sig ≤ 0.05. In addition, the $R^2$ coefficient is 0.46, which means that the research model has a 46% appropriateness.

The adjusted R-squared value after regression analysis of the factors influencing the intention to purchase organic food is 0.46, meaning that variations in consumer purchase intention can be explained by the influence of independent variables on the dependent variable. This indicates that the model's explanatory power is at 46%, while the remaining 54% is attributed to external independent variables outside the model and random errors.

**Table 4.3: Regression results of factors affecting intention to buy organic food**

| Coefficients[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 0.204 | 0.292 | | 0.700 | 0.485 | | |
| | CCQ | 0.270 | 0.054 | 0.258 | 5.044 | 0.000 | 0.625 | 1.601 |
| | MKT | 0.174 | 0.046 | 0.156 | 3.752 | 0.000 | 0.939 | 1.065 |
| | KTH | 0.151 | 0.052 | 0.145 | 2.897 | 0.004 | 0.652 | 1.534 |
| | GTC | -0.022 | 0.046 | -0.019 | -0.471 | 0.638 | 0.992 | 1.008 |
| | YTSK | 0.360 | 0.051 | 0.349 | 7.074 | 0.000 | 0.670 | 1.492 |

*a. Dependent Variable*

*Source: Extracted from SPSS 20*

This research finds that Subjective Norms (CCQ), Marketing and Communication (MKT), Knowledge of Organic Food (KTH), and Health Consciousness (YTSK) positively influence the Intention to Purchase Organic Food (YD), while Perceived Value (GTC) is excluded. This suggests that consumers are not fully aware of the health benefits organic food offers, limiting its influence on their purchase decisions.

Among the significant factors, Health Consciousness has the strongest impact (β = 0.349), followed by Subjective Norms (β = 0.258). This highlights the crucial role of personal health awareness and social influences in shaping Gen Z's purchase intentions. Conversely, Perceived Value does not significantly affect purchase decisions, indicating that despite their health consciousness, Gen Z consumers may lack sufficient information, perceive prices as high, or have limited awareness of organic food's true benefits. To address this gap, businesses should strengthen communication strategies, provide transparent information, and optimize pricing to help consumers recognize organic products' real value, thereby boosting purchase intentions.

These findings align with Ahmad et al. (2015), which underscore the importance of Health Consciousness in driving organic food consumption. Additionally, this study reinforces the impact of Subjective Norms on purchase intention, supporting Chen et al. (2022), who highlighted the role of family and peer influence in shaping Gen Z's organic food consumption behavior.

$$YD = 0.204 + 0.258\ CCQ + 0.156\ MKT + 0.145\ KTH + 0.349\ YTSK$$

(Interpretation: *CCQ: Subjective norms; MKT: Marketing and communication; KTH: Knowledge about organic food; YTSK: Health consicousness)*

**5. Conclusion**

Thus, Gen Z's intention to buy organic food in Ho Chi Minh City is primarily driven by Health Consciousness, followed by Subjective Norms, Marketing and Communication, and Knowledge about Organic Food. However, Perceived Value is excluded, suggesting that while consumers prioritize health, they may not fully recognize the unique benefits of organic food.

These findings highlight the need for stronger communication and marketing strategies to enhance awareness and engagement. To boost purchase intention, businesses should focus on brand building, creative promotions, and educational efforts that foster sustainable consumption habits.

Beyond health benefits, this study also underscores the economic advantages of organic consumption, such as long-term healthcare savings and improved quality of life. Businesses can leverage this by reshaping marketing strategies to emphasize both nutritional and financial benefits. Providing transparent cost-benefit comparisons, flexible pricing models, and loyalty incentives such as discounts or subscription plans can help bridge the perceived value gap and drive stronger consumer commitment to organic food.

**References:**

*Ahmad, S. N. B., Omar, A. B., & Rose, R. B. (2015). Influence of personal values on generation Z's purchase intention for natural beauty products. Advance in Global Business Research, 12(1), 436-446.*

*Ajzen, I. (1991). The Theory of planned behavior. Organizational Behavior and Human Decision Processes.*

*Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. Psychological bulletin, 82(2), 261.*

*Anh, T. T. (2014). Factors affecting customers' purchasing decisions for organic food in Ho Chi Minh City. Commerce Science, 68, 36-42.*

*Chen, L., Wu, Q., & Jiang, L. (2022). Impact of environmental concern on ecological purchasing behavior: the moderating effect of Prosociality. Sustainability, 14(5), 3004.*

*Curvelo, I. C. G., Watanabe, E. A. D. M., & Alfinito, S. (2019). Purchase intention of organic food under the influence of attributes, consumer trust and perceived value. Revista de Gestão, 26(3), 198-211.*

*Gruszecka-Kosowska, A., Mazur-Wlodarczyk, K., & Wódkowska, A. (2023). Native vs. Unique Fruit Popularity: Exploring the Sustainable Fruit Consumption in Poland. Sustainability, 15(14), 10953.*

*Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis. In Multivariate data analysis (pp. 785-785).*

*Hsu, S. Y., Chang, C. C., & Lin, T. T. (2019). Triple bottom line model and food safety in organic food and conventional food in affecting perceived value and purchase intentions. British food journal, 121(2), 333-346.*

*Huynh, M. Q., & Trinh, N. T. N. (2024). Research on the impact of key opinion consumers (KOCs) on the purchasing decisions of Gen Z through the Shopee e-commerce platform in Ho Chi Minh City. Journal of Science and Technology-IUH, 69(3).*

*Nguyen, N. T., & Trang, L. T. (2021). Factors influencing the intention to purchase organic food among consumers in Ho Chi Minh City. Journal of Ho Chi Minh City Open University-Economics and Business Administration, 16(1), 160-172*

*Rashid, I., & Lone, A. H. (2024). Organic food purchases: does green trust play a part?. Asia-Pacific Journal of Business Administration, 16(4), 914-939.*

*Schroth, H. (2019). Are you ready for Gen Z in the workplace?. California Management Review, 61(3), 5-18.*

*Tabachnick B. G., Fidell L. S. (1996), Using multivariate statistics (3rd ed.), New York, HarperCollins.*

*Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. Information systems research, 11(4), 342-365.*

*Wang, X., Pacho, F., Liu, J., & Kajungiro, R. (2019). Factors influencing organic food purchase intention in developing countries and the moderating role of knowledge. Sustainability, 11(1), 209.*

*Xu, H., Xiao, M., Zeng, J., & Hao, H. (2022). Green-labelled rice versus conventional rice: perception and emotion of chinese consumers based on review mining. Foods, 12(1), 87.*

# DO ONLINE REVIEWS IMPACT CONSUMER BEHAVIOR? A CASE STUDY OF SHOPEEFOOD APP

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Tran Le Nguyen**

**Abstract:** ***Online reviews are a key driver of consumer purchasing behavior, especially in the post-COVID-19 era, were digital platforms shape decision-making. This study examines the impact of online reviews on purchasing decisions within ShopeeFood, a food delivery service in the Shopee ecosystem. Using multivariate regression analysis on data from 411 ShopeeFood users in Ho Chi Minh City via SPSS 20, the findings reveal that reviewer influence, review quality, review quantity, and positive/negative user reviews significantly affect purchase intention. Notably, negative reviews have the strongest impact, highlighting consumer sensitivity to unfavorable feedback. These findings have financial implications for both consumers and businesses. Consumers can make more cost-effective choices by leveraging high-quality reviews, minimizing financial risk from poor purchases. For businesses, strategic review management enhancing engagement, encouraging detailed feedback, and addressing negative reviews can boost trust, revenue, and long-term profitability in the digital marketplace.***

• Keywords: *online reviews, purchasing decisions, app shopeefood.*

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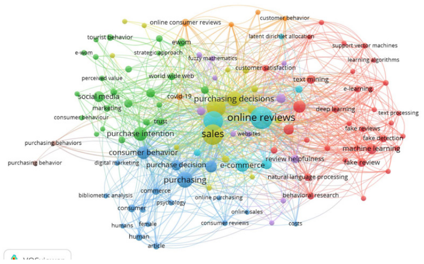
## 1. Introduction

The Internet has revolutionized how consumers gather information and make purchasing decisions, with online reviews playing a crucial role (Macheka et al., 2024). Consumers increasingly rely on reviews to assess products and services, with those consulting online feedback being twice as likely to purchase. Notably, 69% of customers trust online reviews as much as personal recommendations.

**Figure 1: Bibliometric analysis of online reviews' impact on purchasing decisions**




*Source: Compiled by the authors*

Using bibliometric analysis via VOS Viewer, this study identifies key factors influencing online purchases, including reviews, sales, e-commerce, and consumer behavior (Wu et al., 2024). Positive reviews significantly impact both sales and purchasing decisions (Kim et al., 2024), while influencer endorsements are particularly effective among young consumers, especially women (Macheka et al., 2024).

Prior research highlights the strong influence of online reviews on consumer behavior and their correlation with revenue (Kim et al., 2024). However, most studies focus on general e-commerce rather than online food delivery apps like ShopeeFood. Additionally, research has primarily examined international markets, overlooking emerging economies. To bridge this gap, this study investigates the impact of online reviews on ShopeeFood users' purchasing decisions in Ho Chi Minh City.

## 2. Theoretical Framework and research model

### *2.1 Theoretical framework*

*Online reviews*

According to Ruiz-Mafe et al. (2018), online reviews are a form of information provided by one consumer to another through the internet. Consumers are the ones who create reviews posted on shopping sites or online forums. To make a purchasing decision, consumers need important sources of supporting information, and online reviews are considered a valuable source of support for consumers on various aspects of e-commerce.

*ShopeeFood*

ShopeeFood is an app developed by Shopee to meet customer needs in the food delivery sector, starting operations in April 2020. ShopeeFood is also seen as

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an app that not only meets social demands but also competes with other rivals such as Grab and GoJek. In order to stay competitive, ShopeeFood began collaborating with various food and beverage industries in early 2021 (Vania & Simbolon, 2021).

*The theory of reasoned action (TRA)*

The TRA model was established in 1967 and later refined and expanded by Fishbein et al. (1977). It is widely applied to explain the relationships between attitudes, social norms, and human behaviors. Reliability is considered an essential factor in connecting consumer behavioral intentions to their attitudes (Zhang et al., 2016). Purchase intention serves as the driving force behind customers' decisions to shop online. The TRA theory is regarded as an effective tool that plays an important role in predicting and explaining user behavior.

*The theory of planned behavior (TPB)*

The TPB theory was developed from the Theory of Reasoned Action (TRA) to more accurately predict consumer behavior. TPB is widely applied and used in human behavior research. The TPB theory assesses behavioral tendencies through three key variables: "Attitude toward the behavior," "Subjective norm," and "Perceived behavioral control." These variables determine the inclination or effort of individuals to perform a specific behavior (Uyên & Long, 2020).

***2.2 Hypotheses and research model***

*Reviewer influence*

Online reviews, especially from influencers, play a crucial role in shaping consumer purchasing decisions. With their credibility and broad reach, influencers significantly impact consumer trust and decision-making. Xiao et al. (2018) highlighted how influencer recommendations influence purchasing behavior. The expansion of broadband infrastructure has further enhanced access to online reviews via blogs, posts, and digital platforms. Influencer-generated reviews have a stronger effect on trust and purchase intention than those from regular users. Based on these insights, the following hypothesis is proposed:

H1: Reviewer influence has a positive impact on consumers' purchase intention.

*Review information quality*

In the digital marketplace, review information quality significantly influences consumer perceptions and purchase decisions. Consumers associate high-quality reviews with reliable product information, boosting their confidence in making informed choices. Previous research found a positive correlation between perceived review quality and the reliability of product information. Genuine reviews reflecting real consumer experiences serve as valuable insights, shaping purchasing behavior. Key determinants of review quality include argument strength, logical reasoning, and consistency (Truong Dinh Chien & Nguyen Viet Ha, 2023). Based on these insights, the following hypothesis is proposed:

H2: Review information quality has a positive impact on consumers' purchase intention.

*Review quantity*

According to previous research, in order for consumers to have a foundation and trust when making online purchasing decisions, the review quantity helps consumers easily grasp complete and consistent information about the product. The more reviews there are, the more it increases consumers' trust, providing a basis to believe that these reviews offer valuable information and persuasion, or in other words, trust in the quality (Zhang et al., 2016). Furthermore, multiple studies have demonstrated that the number of reviews positively influences consumer trust in online shopping environments. Based on these insights, the following hypothesis is proposed:

H3: Review quantity positively affects consumers' purchase intention.

*Positive/negative user reviews*

Positive reviews indicate consumer satisfaction and significantly enhance trust in a product, thereby strengthening purchase intention. Previous research emphasize that a higher volume of positive reviews increases the likelihood of persuading potential consumers. Conversely, negative reviews reflect dissatisfaction and can erode consumer trust. Research suggests that consumers are more influenced by negative feedback, as it provides detailed insights into product limitations, helping them make more informed decisions (Mayzlin et al., 2014). Based on these findings, the following hypotheses are proposed.

H4a: Positive user reviews positively influence online purchase intention.

H4b: Negative user reviews negatively influence online purchase intention.

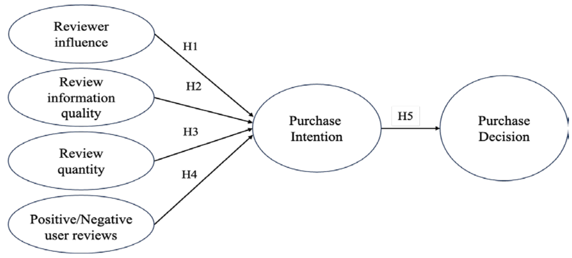
*Purchase intention*

According to the Theory of Reasoned Action (Fishbein et al., 1975), factors such as attitude and subjective norms influence consumer behavioral intentions, which indicate a person's intention to perform a certain behavior (Ajzen, 2002). According to the Theory of Planned Behavior, factors such as behavioral attitude, perceived behavioral control, and subjective norms influence human behavioral intentions. When the intention to purchase reaches a certain threshold, it leads to actual behavior, which is the online purchasing decision. The clearer and more specific the intention, the faster the decision-making process will be. Therefore, the authors propose the following hypothesis:

H5: Purchase intention has a positive impact on the purchasing decision.

*The proposed research model.*

**Figure 2: The proposed research model**




*Source: Compiled by the authors*

**3. Research methodology**

This study employed a convenience sampling method, with the sample size determined based on the guidelines of Tabachnick & Fidell (2013). A survey was conducted among 432 individuals who had previously made purchases via the ShopeeFood app in Ho Chi Minh City. After data cleaning, 411 valid responses were retained for analysis. The dataset was processed using SPSS 20, and analyses included Cronbach's Alpha for reliability testing, Exploratory Factor Analysis (EFA) for dimensionality reduction, and multiple regression analysis to examine the relationships between variables.

**4. Results of the study**

***4.1. Cronbach's alpha analysis***

After conducting the Cronbach's Alpha reliability analysis, the results of the measurement scales tested ranged from 0.764 to 0.896, and the total item correlations were all greater than 0.3. No variables were removed from the model.

***4.2. Exploratory factor analysis***

According to Hair et al. (2010), exploratory factor analysis (EFA) is considered adequate when the KMO values fall within the range of (0.5 ≤ KMO ≤ 1); Sig values are ≤ 0,05; total variance extracted is ≥ 50%; and factor loadings are ≥ 0.3. Therefore, the exploratory factor analysis (EFA) is appropriate for the research data.

After conducting an Exploratory Factor Analysis (EFA), the variables MD1, MD2, MD3, and MD4 exhibited notably high factor loadings(approximately 0.84), indicating that they constitute a strong group of factors. Following these are the variables SL1 through SL5, along with the remaining variable groups. This underscores the clear discriminant validity of the factors involved. The analysis results show that the KMO coefficient = 0.892; Sig value = 0.000 < 0.05; Total variance explained = 68.779% > 50%, indicating that the factors in this study explain 68.779% of the observed variance.

**Table 4.1: Results of the final EFA analysis**

| Rotated Component Matrix[a] | | | | | |
|---|---|---|---|---|---|
| | Component | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| MD2 | .845 | | | | |
| MD1 | .842 | | | | |
| MD3 | .842 | | | | |
| MD4 | .839 | | | | |
| SL4 | | .759 | | | |
| SL5 | | .744 | | | |
| SL2 | | .713 | | | |
| SL3 | | .711 | | | |
| SL1 | | .695 | | | |
| TC3 | | | .784 | | |
| TC1 | | | .759 | | |
| TC2 | | | .741 | | |
| CL1 | | | | .801 | |
| CL2 | | .361 | | .739 | |
| CL3 | | | | .711 | |
| TIC2 | | | | | .821 |
| TIC3 | | | | | .792 |
| TIC1 | | | .332 | | .682 |

*Source: Extracted from SPSS 20*

*Interpretation: MD: Reviewer influence; SL: Review Quantity; YD: Purchase intention; TC: Positive reviews; TIC: Negative reviews; CL: Review quality*

Exploratory Factor Analysis (EFA) for the mediator variable "purchase intention" (YD) yields a KMO = 0.853, which is within the range [0.5; 1]. Bartlett's test shows a Sig value = 0.000 < 0.05, and the extracted variance is 60.86% > 50%. Thus, all tests are satisfied, and the "purchase intention" variable explains 60.86% of the observed variance.

EFA analysis for the dependent variable "Decision" (QD) shows a KMO = 0.834, which is within the range [0.5; 1]. Bartlett's test results in a Sig value = 0.000 < 0.05, and the extracted variance is 73.34% > 50%. All tests are satisfied, and the dependent variable "Purchase Decision" (QD) explains 73.34% of the data variance.

***4.3. Regression analysis***

**Table 4.2: Results of Regression Analysis on the Impact of Online Reviews on Consumer Intentions**

| Coefficients[a] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.220 | 0.195 | | 6.264 | 0.000 | | |
| | MD | 0.109 | 0.031 | 0.155 | 3.557 | 0.000 | 0.773 | 1.294 |
| | CL | 0.081 | 0.042 | 0.097 | 1.932 | 0.054 | 0.585 | 1.709 |
| | SL | 0.219 | 0.049 | 0.217 | 4.474 | 0.000 | 0.629 | 1.590 |
| | TC | 0.143 | 0.043 | 0.159 | 3.294 | 0.001 | 0.637 | 1.571 |
| | TIC | 0.188 | 0.036 | 0.241 | 5.204 | 0.000 | 0.686 | 1.457 |

*a. Dependent Variable: YD*

*Source: Extracted from SPSS 20*

The adjusted R-squared value obtained from the regression analysis of the factors influencing consumer intention through the ShopeeFood app is 0.402, indicating that the variability in consumer intention is explained by the independent variables at a level of 40.2%. This suggests that the fit of the research model is satisfactory at 40.2%. The remaining 59.8% is accounted for by independent variables outside the model and random error.

The research results indicate that factors such as Reviewer Influence (MD), Review Information Quality (CL), Number of Reviews (SL), Positive User Reviews (TC), and Negative User Reviews (TIC) significantly shape consumer purchase intention (YD). Among these, Negative Reviews (TIC) have the strongest impact, with the highest standardized Beta coefficient of 0.241, followed by Number of Reviews (SL) at 0.217. Consumers' Negative Reviews (TIC) emerges as the primary factor influencing the change in purchase intention through the ShopeeFood app. This study supports the findings of Tran Thi Huynh Nga et al. (2023), which suggest that review quality positively influence purchase intention. The regression equation is as follows:

$$YD = 1.220 + 0.155MD + 0.097CL + 0.217SL + 0.159TC + 0.241TIC$$

Interpretation: *MD (Influence level), CL (Review Information Quality), SL (Number of Reviews), TC (Positive Reviews), TIC (Negative Reviews)*.

***Purchase intention***

**Table 4.3: Results of regression analysis on the impact of purchase intentions on online purchasing decisions**

| Coefficients[a] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.419 | 0.218 | | 6.517 | 0.000 | | |
| | YD | 0.660 | 0.050 | 0.547 | 13.227 | 0.000 | 1.000 | 1.000 |

*a. Dependent Variable: QD*

*Source: Extracted from SPSS 20*

The analysis results show that the regression model achieves an acceptable fit with an R-squared value of 0.3, an adjusted R-squared value of 0.298, Sig = 0.000 < 0.05, and a VIF coefficient of 1, which falls within the validated range, indicating that the model has good reliability. The regression equation for Intent affecting Decision is as follows:

$$QD = 1.419 + 0.547YD$$

Interpretation: *QD (Online purchase decision); YD (Online purchase intention)*

The research confirms a direct, positive relationship between purchase intention and online shopping behavior. In the growing e-commerce landscape, purchase intention serves as a key driver of online purchase decisions. Unlike Truong Dinh Chien et al. (2023), who rejected the link between Review Information Quality (CL) and Purchase Intention, this study provides evidence that CL influences Purchase Intention, ultimately affecting Purchase Decisions on ShopeeFood.

Additionally, these findings align with Tran Thi Huynh Nga et al. (2023) regarding the impact of Review Information Quality (CL) and Review Quantity (SL). The study also reinforces the connection between Positive (TC) and Negative Consumer Reviews (TIC) and Purchase Intention (YD) on ShopeeFood.

**5. Conclusion**

Research shows that online reviews significantly influence consumers' purchase intentions and decisions on ShopeeFood in Ho Chi Minh City. Specifically, the influence of reviewers, the quality of review information, the number of reviews, and the ratio of positive/negative reviews all play important roles in shaping buying behavior. Among these, negative reviews and the number of reviewers have the strongest impact.

The findings of this study contribute to a broader understanding of consumer behavior in e-commerce and food delivery services. By recognizing the power of online reviews and implementing proactive review management strategies, businesses can foster stronger relationships with consumers, mitigate the impact of negative feedback, and reinforce their competitive advantage in an increasingly digitalized marketplace. Additionally, businesses can stimulate and encourage customers to provide more reviews by offering promotions and incentives that appeal to their interests, creating motivation for them to write reviews about the products.

**References:**

*Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior 1. Journal of applied social psychology, 32(4), 665-683.*

*Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. Psychological bulletin, 82(2), 261.*

*Chien, T. D., & Ha, N. V. (2023). Research on the impact of triggering factors of eWOM on the intention to use digital banking: a combined approach using the ELM and TPB model*

*Fishbein, M., và Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.*

*Hair, J., Black, J. W., Babin, B. J., & Anderson, E. R. (2010). Multivariate data analysis United State of America: Pearson Prentice Hall.*

*Kim, J. M., Park, K. K. C., & Marjerison, R. K. (2024). Usefulness of Online Reviews of Sensory Experiences: Pre-vs. Post-Pandemic. Journal of Theoretical and Applied Electronic Commerce Research, 19(2), 1471-1492. doi:10.3390/jtaer19020073.*

*Macheka, T., Quaye, E. S., & Ligaraba, N. (2024). The effect of online customer reviews and celebrity endorsement on young female consumers' purchase intentions. Young Consumers, 25(4), 462-482. doi:10.1108/yc-05-2023-1749*

*Mayzlin, D., Dover, Y., & Chevalier, J. (2014). Promotional reviews: An empirical investigation of online review manipulation. American Economic Review, 104(8), 2421-2455.*

*Ruiz-Mafe, C., Chatzipanagiotou, K., & Curras-Perez, R. (2018). The role of emotions and conflicting online reviews on consumers' purchase intentions. Journal of Business Research, 89, 336-344.*

*Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). Using multivariate statistics (Vol. 6, pp. 497-516). Boston, MA: pearson.*

*Tran, T. H. N. (2023). The impact of online reviews on the online shopping intentions of customers in Can Tho city concerning the fashion industry.*

*Vania, I., & Simbolon, R. (2021). Pengaruh Promo ShopeeFood Terhadap Minat Beli Pengguna Shopee (Di Daerah Tangerang Selatan). Jurnal Ekonomis, 14(2b).*

*Wu, X., Liao, H., & Tang, M. (2024). Product ranking through fusing the wisdom of consumers extracted from online reviews on multiple platforms. Knowledge-Based Systems, 284, 111275. doi:10.1016/j.knosys.2023.111275*

*Xiao, M., Wang, R., & Chan-Olmsted, S. (2018). Factors affecting YouTube influencer marketing credibility: a heuristic-systematic model. Journal of media business studies, 15(3), 188-213.*

*Zhang, D., Zhou, L., Kehoe, J. L., Kilic, I. Y. (2016). What Online Reviewer Behaviors Really Matter? Effects of Verbal and Nonverbal Behaviors on Detection of Fake Online Reviews. Journal of Management Information Systems, 33(2), 46 481*

# A PROPOSED RESEARCH MODEL ON THE RELATIONS BETWEEN DESTINATION IMAGE AND SLOW TRAVEL INTENTIONS OF VISITORS

PhD. Nguyen Thi Quynh Huong*

**Abstract:** ***The impact of destination image on visit intention, return intention, satisfaction, and willingness. to recommend a destination to others. In-depth research on slow travel, slow travel intention, and the relationship between destination image and slow travel is still limited. Therefore, based on the synthesis of documents, related theories, and qualitative research methods, the article proposes a research model and hypotheses about the relationship between destination image and travel intention. slow schedule of tourists; On that basis, suggest research directions and serve as a basis for further research, especially experimental research.***

• Keywords: *destination image; slow travel; intentions of visitors.*

*JEL codes: Q01, Z30, Z32*

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## 1. Introduction

In tourism, destination image has become a subject that has drawn more attention and been recognized for its importance to tourists when it comes to choosing a particular destination (Lin, C, Morais et al., 2007); making travel decisions (Hunt, J.,1975; Chon, K. S, 1990); in tourism marketing (Schuster, R., Sullivan et al., 2008; Molina, A., Gomez, M., & Martin Consuegra, D., 2010); and in tourism behavioral intentions (Echtner, C. & Ritchie, B., 1993; Baloglu, S., & McClearly, K.W.,1999; Lee, C. K, 2009; Qu, H., Kim et al., 2011).

Previous research findings indicate that many factors can affect the behavior of tourists, of which destination image is deemed as a crucial one as it affects the future visit intentions, return intentions, the willingness to recommend the tourism destination to other people and intentions to choose tourism forms of visitors (Chen, C., & Tsai, D., 2007). Destination image helps to draw visitors, increase their spending (Chi & Qu, 2008) and stimulate their decision-making (Bigne & Sanchez, 2001; Chen, C., & Tsai, 2007). Lin et al. (2007) believe that destination image is the perceptions of visitors about a particular destination or place. The studies on destination image in the relations with tourism intentions in general and the intentions to choose a tourism form in particular continue to draw scholars' attention and open new research directions in different contexts and time settings.

In an increasingly competitive business environment, destinations always try to differentiate their tourism products by creating competitive advantages and positioning in the global market to gain a higher market share (Gomezelj & Mihalič, 2008). However, the increase in competition and development has resulted in a reverse effect in the tourism industry, that is the emergence of "slow travel" - a form of tourism characterized by the trend of tourists travelling and staying in one destination longer (Dickinson & Lumsdon, 2010). Slow travel has emerged as a new tourism form which is considered as a sustainable replacement for mass tourism (Fullagar et al., 2012). Slow travel is predicted to change the hobbies of tourists as they focus on environmental protection with longer stay time and prefer homestay to hotels (Vietnam National Administration of Tourism, 2020). Slow tourism involves more profound and genuine experiences.

Reality has shown that slow travel has become more popular in recent time and is considered as a replacement for mass tourism in order to promote sustainable tourism (Serdane et al., 2020). Slow travel is seen as a solution to sustainable tourism development model (Dickinson & Lumsdon, 2010; Lipman & Murphy, 2012). Literature review indicates that although the impacts of destination image on tourism intentions in general and intentions to choose a tourism form in particular have drawn attentions of many scholars in recent time, studies have mostly focused on the impacts of destination image on the visit intentions, return intentions,

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satisfaction, willingness to recommend a destination to other people. In-depth research on slow travel, slow travel intentions, factors affecting slow travel behavior, relations between destination image and slow travel remains limited. This research gap calls for further studies on the relations between destination image and slow travel as well as the necessity to build up a research model on the impacts of destination image on slow travel intentions of visitors. The building of this research model is the foundation for further research directions related to destination image and slow travel; it also provides some marketing implications for policy makers, travel agencies, destination management boards, marketers in tourism organization to refer to when they are to build up orientations for developing a comprehensive destination image and facilitating sustainable tourism development.

**2. Literature review on destination image and slow travel intentions**

***2.1. Tourism destination image***

*2.1.1. Concept of tourism destination image*

Destination image is discussed in many studies with different contents. In tourism, many researchers view that destination image plays an important role to tourists in destination selection, holiday decision-making and tourism behavioral intentions (Lin, C, Morais et al., 2007; Hunt, J.,1975; Chon, K. S, 1990; Echtner, C. & Ritchie, B., 1993; Baloglu, S., & McClearly, K.W.,1999; Lee, C. K,2009; Qu, H., Kim et al., 2011). In 1975, Hunt became one of the first researchers to introduce the concept of destination image, which refers to the impressions that one or many people have of a destination which is not their residential area. J.L.Crompton (1979) emphasizes individuals impressions when defining destination image: it is the overall belief, ideas and impressions of a person or a tourism destination. The concept of destination image is used in studies in different contexts and time settings but they all underline the terms “impressions”, “perceptions” or “belief” of visitors.

*2.1.2. Tourism destination image formation*

The process of forming tourism destination image is considered as multi-faceted and closely inter-related. As shown in previous studies, tourism destination image formation comes from (1) information sources, (2) images and (3) the combination of information sources, individuals factors and images.

*- Tourism destination image formed from information sources*

Information sources are the first basis with direct impacts on the perceptions of visitors of a tourism destination; the more positive these perceptions, the more visitors the destination can attract (Mayo, E. J., & Jarvis, L. P.1981). The formation of destination image is closely linked with information sources (Gartner, W. C., 1993); the received information sources depend on non-commercial information (real images) or commercial information (created images) (Gunn, C. A., 1988). Reality has shown that even when a visitor has not yet accessed any non-commercial information, he can still form a particular tourism image. Based on the view that destination image can be formed by a combination of information from different media and sources, Beerli, A., & Martín, J. (2004) classify information into 5 types: Public information; Coverage information; Self-control information; Organic information, and Visit information. The combination of these 5 kinds of information is the foundation for tourism destination image formation.

As such, information sources and the process of tourism destination image formation are closely related; personal perceptions form the image in the mind of visitors from the information they already have.

*- Tourism destination image formed from different kinds of images*

According to Gunn, C. A. (1972), there are two image levels that affect tourism destination image formation: (1) Organic image, which results from informal information developed from actual experiences and recommendations of friends and relatives as well as information reminded by advertisements and relevant publications; (2) Induced image, which is formed by the promotions and communications that tourism destination managers actively implement such as tourism brochures, posters. In the meantime, Fakeye, P. C. & J.L. Crompton (1991) state that organic image, induced image and complex image are three kinds of images that individuals may receive to form the tourism destination image: (1) Organic image is formed by the recommendations of tourism experiences from friends, relatives and from non-advertising information sources (geography books, television or magazines); Induced image is formed from the published tourism information such as leaflets, websites that introduces the destination, it is the product of tourism marketing efforts; and (3) Complex image is formed from actual experiences of visitors in the destination.

So it can be seen from these views that it is necessary to impact on these three image levels as they all have direct and indirect effects on intentions of visitors so as to develop impressive destination image in the mind of visitors.

*- Tourism destination image formed from the combination of information sources, individuals factors and images*

Baloglu & McClearly (1999) present the model of tourism destination image formation based on visitors' perceptions and emotions, individuals factors and tourism experiences. Baloglu, S.,& McClearly, K.W. (1999) believe that there are two main groups of factors that affect tourism destination image formation: (1) Individual factors, which include psychological factors such as values, motivations and characteristics of visitors, social factors such as ages, education background, marital status and others; and (2) Tourism experiences, which include information sources, tourism experiences and travel frequencies of visitors. The differences in the factors of each individuals lead to different evaluations of a tourism destination image.

*2.1.3. Components of tourism destination image*

Identifying components of image is very necessary to build up tourism image that covers "belief, impressions, emotions and desires" of each visitor. Research has shown that only using "perception" to evaluate destination image has resulted in the inadequacy in "emotions" that visitors have to the destination that they have visited. In most concepts of tourism destination image, the terms "belief", "perception" and "impressions" are used to reflect "image perceptions" of visitors. "Perception" should not be limited to rational aspects but should include emotional ones. The combination of these two aspects is considered the best and most comprehensive explanation for the way visitors form a tourism destination image (Baloglu, S., & Brinberg, D., 1997; Beerli, A., Diza, G. & Perez, P.J., 2002; Lin, C, Morais, D., Kersetter, D. & Hou, J., 2007). In this sense, the model of destination image with two components of perceived destination image and emotional destination image has been used in relevant studies. Perceived image refers to knowledge or belief that an individual has of a particular destination. The perceived attributes may be specific (landscape, cultural and natural elements, etc.) or perceived (atmosphere, hospitality, etc.) (Walmsley, D. J., & Jenkins, J. M.,1993; Chew, T. E. Y. & Jahari, A. S., 2014). Emotional image refers to the emotions that visitors have of a destination (feeling relaxed, hilarious or bored, etc.), reflecting their personal emotion attachment to that destination (Walmsley, D. J., & Jenkins, J. M.,1993). The difference between these two kinds of image shows that emotional image is a kind of responses in feelings while perceived image is the knowledge related to environmental factors (Baloglu, S., & McClearly, K.W. (1999).

As such, there is a consensus that perceived image and emotional image are the two components of the destination image.

***2.2. Slow travel***

*2.2.1. Concept of slow travel*

Slow travel is a holiday in which travellers spend more time for holiday and have more flexible plans to experience tourism services in harmony with the local nature, community, people and culture in the destination to a maximum interaction level (Mathiou et al., 2022). This concept is seen as most appropriate with the essence of slow travel and visitor behavior. The idea of "slow" started in Italy in the 1970s when a local organization guided visitors how to enjoy local food. Reality has shown that the philosophy of slowness has been expanded to all other aspects in human life such as slow food, slow eating, slow living. Husemann & Eckhardt (2019) believe that slowness or declining speed refer to the fact that consumers seek opportunities to escape from hustle and bustle of life and participate in different slow consumption forms. Consumers who seek the "slow" area in geographical, cultural and social environment are not affected by the partial or entire speed acceleration (Berger Remy et al., 2020). This aims to preserve the cultural value of each locality amid the trend of globalization and booming development of science and technology.

A review of related studies indicates the common thing between the concepts of slow travel, that is slow travel brings a slow rather than fast holiday (Husemamn & Eckhardt, 2019; Oh et al., 2016). According to Lumsdon & McGrath (2011), slow travel may involve using slow-moving vehicles, staying longer to discover local food. J.E.Dickinson et al. (2011) affirm that slow travel is a newly emerging concept that offers an alternative to air and car travel as visitors go to the destination more slowly, stay longer and move less during their holiday. As such, the process of slowing down the holiday brings more opportunities for visitors to interact and connect with local people and destination in a deeper manner (J.E.Dickinson & Lumsdon, 2010; J.E.Dickinson et al., 2011).

Some authors identify the differential attributes of Slow Tourism. For example, Bac Paul (2014), draws up a comparative table between Slow Tourism and fast tourism, or mainstream.

**Table 1: Slow travel v. Fast travel comparison**

| | Mode of travel | Slowness | Travel Experience | Environmental Consciousness | Sense of place |
|---|---|---|---|---|---|
| SLOW TOURISM | Walking/Cycling | Unhurried | Travelling through the landscape | Low consumption of fuels Cultural Exchange (attachment) | Cultural Exchange (attachment) |
| FAST TOURISM | Airplane | Hurried | Travel corridor | High consumption of fuels | Minimal cultural contact (detatchment) |

*Source: Bac Paul, 2014*

In short, it can be seen that slow travel switches the focus from the quantity of experiences gained in the holiday to the quality of these experiences, reflected in the following aspects: (1) slow travel helps visitors have diverse travel experiences; (2) visitors can understand stories that lie behind the objects they are watching in the destination; (3) visitors can flexibly choose their holiday agenda to ensure slow temp in the holiday so that they can relax and recover effectively; (4) visitors spend more time to get to know more about local culture, connect with local people and the destination itself; visitors enjoy the sceneries, harmonize with the nature and become friendly with the environment during their holiday.

*2.2.2. Slow travel intentions*

Intention is a necessary process in the forms of behavioral expressions, it is the intention reflected before an actual behavior is made (Fishbein, M., & Ajzen, I., 1975); is the subjective probability of an individual to establish actual behaviors (Ajzen, I., & Fishbein, M., 1980). There is a close connection between intentions and actual behavior, so identifying intentions is the best way to predict actual behavior of individuals (Ajzen, 1991). When there is an opportunity for action, intentions will lead to behavior, so if intentions are measured accurately, it will be the best predictor for behavior (Martin Fishbein & Ajzen, 1977). In tourism, intentions of visitors are expressed in 3 stages: before the visit, during the visit and after the visit (Rayan, C., 2002; Williams, C., & Buswell, J., 2003).

In this research, slow travel intention is understood as behavior of a visitor in choosing slow travel in the future. This level is reflected by the visitor's intention, certainty, readiness, plan-making and efforts to take the visit with slower tempo to fulfill the main objectives of the visit, that is, increasing experiences by visiting and interacting with different objects in the destination, thereby discovering the surrounding environment, exploring himself in a moderate tempo so as to recharge their physical and spiritual well-beings (Serdane et al., 2020; Le Busque et al., 2022).

*2.2.3. Relations between destination image and slow travel intentions*

Chon, K. S (1990); Echtner, C. & Ritchie, B. (1993) believe that destination image affects visitors' subjective perceptions and travel intentions. Lin et al. (2007) affirm that perceived image and emotional image are two components that create the overall image and this image will determine visitors' preferences of a particular destination in comparison with others. Accordingly, positive destination image can have a positive impact on travel intentions, specifically slow travel intentions in this research. The impacts of destination image on slow travel intentions of visitors are considered under the impacts of many elements and stages; the choice of slow travel reflects the motivations and objectives that visitors want to achieve via the overall image and benefits that slow travel brings forth. As such there is a correlation between destination image and slow travel intentions, the measurement scales for slow travel intentions are inherited from previous study by B.Meng & Choi (2016) which illustrate the levels of willingness and commitments to participate in slow travel in the future.

**3. Research model and hypotheses**

Upon reviewing related studies and theories on the relations between destination image and slow travel intentions, a research model reflecting the correlations between variables and research hypotheses is as follows:

- Perceived image and emotional image are the two most overall components to explain overall image (Baloglu, S., & Brinberg, D.,1997; Beerli, A., & Martin, J.,2004; Lin, C, Morais, D., Kersetter, D. & Hou, J.,2007; Stylidis, D., Shani, A & Belhassen, Y. 2017); each image combination of each component has different impact levels on the formation of the overall image (Qu, H., Kim, L. H., & Im, H.,2011; Stylidis, D., Shani, A & Belhassen, Y., 2017; Stylidis, D., Shani, A & Belhassen, Y. 2017). Accordingly, there are two research hypotheses on the relations between perceived image, emotional image and overall image.

*H1: Perceived image has a positive impact on the overall image of the tourist destination*

*H2: Emotional image has a positive impact on the overall image of the tourist destination*

- Slow travel intentions have an important meaning amid the current fierce competition and sustainable development orientations of destinations; desires for "slow living" in harmony with the nature and higher awareness of visitors about responsible tourism. Previous studies have demonstrated that overall image is one of the most important elements to provoke travel intentions of visitors, the more positive the overall image, the more positive the behavioral intentions of visitors. So this research aims to test the impacts of overall image on slow travel intentions of visitors via hypothesis H3.

*H3: Overall image of the tourist destination has a positive impact on slow travel intentions of visitors*

- The most recent studies tend to see image as a concept that is formed through the perceptions and emotions of visitors; it is the result of two closely-related images: perceived image and emotional image (Beerli, A., Diza, G. & Martin, D.J., 2004). There is a consensus that perceived image and emotional image have positive relations, perceived image is the pre-condition of emotional image and can directly impact on emotional image of the destination. This research proposes hypothesis H4 to test if perceived image has an impact on emotional image.

*H4: Perceived image has a positive impact on the emotional image of the tourist destination*

- Perceived image and emotional image are two components that contribute to the overall image. Together with considering the impacts of overall image on slow travel intentions of visitors, evaluating the impacts of each afore-mentioned component on visitors' intentions is very important as perceived image will provoke travel intention of visitors while emotions of visitors to a destination will help to motivate that intention. However, the impact level and order of each component on travel intentions of visitors are different in each research context. Therefore, to further clarify the relations of each component of destination image with slow travel intentions of visitors, this research proposes 2 hypotheses on the impacts of perceived image and emotional image on slow travel intentions to a tourist destination.

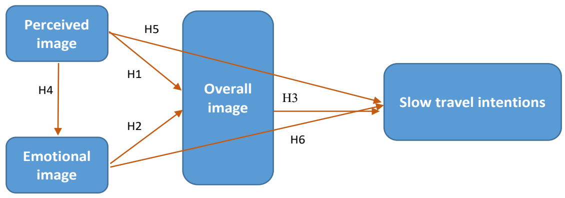
*H5: Perceived image has a positive impact on slow travel intentions of visitors.*

*H6: Emotional image has a positive impact on slow travel intentions of visitors.*

The proposed research model will consider and analyze the differences as affected by demographic characteristics and tourism experience to overall image, slow travel intentions and relations in the research model.

The research model on the relations between destination image and slow travel intentions is shown in the following Figure 1:

**Figure 1. Research hypotheses in the model**




*Source: proposed by authors*

### 4. Conclusion and further research directions

The main aims of the article are to build up theoretical model to open to the following research, especially empirical one, the relations between destination image and slow travel intentions. In the coming time, empirical research will be done to test the hypotheses that are developed from the proposed research model. The findings from empirical research will be the foundations to propose solutions and recommendations, they will also provide some marketing implications to help policy-makers, travel agencies, destination management board, marketers in tourism organizations have more grounds to orient the development of overall image and develop tourism sustainably.

### References:

*Ajzen, I. (1991), The theory of planned behavior, Organizational Behavior and Human Decision Processes, 50(2), pp. 179-211.*

*Bac Paul, D., (2014), From Slow Food To Slow Tourism, Annals of Faculty of Economics, University of Oradea, Faculty of Economics, vol. 1(2), pp.137-144.*

*Baker, D., & J.L. Crompton. (2000), Quality, Satisfaction and Behavioral Intentions, Annals of Tourism Research, 27, pp.785 - 804.*

*Baloglu, S., & Brinberg, D. (1997), Affective images of tourism destination, Journal of Travel Research, 35(4), pp.11-15.*

*Beerli, A., & Martin, J. (2004), Factors influencing destination image, Annals of Tourism Research, 31(3), pp.657-681.*

*Bigné, J. Sánchez, M., & Sánchez, J. (2001), Tourism Image, Evaluation Variables and After Purchase Behaviour: Inter-Relationship, Tourism Management, 22 (6), pp. 607- 616.*

*Buhalis, D. (2000), Marketing the competitive destination of the future, Journal of Tourism Management, 21, pp.97-116.*

*Chen, C., & Tsai, D. (2007), How Destination Image and Evaluative Factors Affect Behavioral Intentions, Tourism Management, 28, pp.1115-1122.*

*Fishbein, M., & Ajzen, I. (1975), Belief, attitude, intention, and behavior. An introduction to theory and research, Reading, MA: Addision- Wesiey.*

*Lee, C. K (2009), A structural model for examining how destination image and interpretation services affect future visitation behavior: a case study of Taomi ecovillage, Journal of sustainable Tourism, 17(6), pp.727–745.*

*Zhang. H., Fu. X., Cai. L., & Lu, L. (2014), Destination image and tourist loyalty: A meta-analysis, Tourism Management, 40, pp.213-223.*

# THE IMPACTS OF MEME MARKETING ON PURCHASE INTENTION ON FOOD DELIVERY APPLICATIONS OF GENERATION Z IN HO CHI MINH CITY

**Assoc.Prof.PhD. Pham Hung Cuong* - PhD. Le Giang Nam* - Le Nhat Quyen****

**Abstract:** ***Through the survey of 302 youngers between 16 and 30 ages in Ho Chi Minh City from March to June, 2023, the article shows that there are major points that are worth noticing to food delivery applications (FDAs): (1) Female customers tend to connect more emotionally with advertising or brands than men; (2) Ads containing quick and simple content make it easier for audiences to absorb information; (3) People who are active on social media tend to prefer meme ads and engage with brands more; (4) Informativeness surprisingly dominates the impact besides entertainment factors as expected.***

• Keywords: *meme marketing, food delivery application, gen Z.*

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**Introduction**

More and more marketers are shifting towards using Internet memes as a marketing strategy to stimulate users to share and repost their content. However, it is crucial to acknowledge that the use of memes needs to be done carefully and with a clear understanding of your target audience. Because, while memes can generate positive sharing and interaction, they can also provoke negative reactions if not utilized correctly. By conducting research and gaining a better understanding of food delivery applycations (FDAs) target demographic, businesses can maximize the potential of meme marketing to enhance purchase intent and build closer relationships with their customers.

**Review of literature and research methology**

***Review of literature***

Although the concept of meme has been around for a long time in the field of biology, the concept of meme when applied to marketing has been studied quite little, especially in theory. Typical theoretical studies on the topic of applying memes to business marketing models can include: "The business of memes: memetic possibilities for marketing and management", conducted by Russell Williams in 2000 to operationalize the meme concept for a business audience. The study also discovered that "learnability" and "infectiousness," two other characteristics, are related to meme power. Williams also said that strong memes have a higher chance of surviving, and as a result, marketers and advertisers who are aware of the strength of memes are more inclined to use memes to their advantage. However, the author admits that this study cannot be the most complete to evaluate because this research was conducted at the incipient meme stage and the technology was still limited as well as the customers' personality (Generation X) at that time was not suitable for the innovative and updated elements of Internet as well as digital marketing in general.

Pech (2003) asserted that not all memes are effective, citing "meme fitness" and "cognitive hardwiring" as two essential components. According to Pech, innovation involves more than just creating a new product; it also entails finding creative ways to communicate with target audiences and manage their views.

Regarding the characteristics of meme marketing, there has been a number of studies showing that one of the most important factors is humor. Taecharungroj and Nueangjamnong (2015) made the case that humor is the essential component of the internet meme phenomena. The study identified four humor styles using the source-message-channel-receiver framework: affiliative, self-enhancing, aggressive,

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and self-defeating. Seven categories of humor were also proposed by the study within each comedy style: comparison, personification, exaggeration, pun, sarcasm, silliness, and surprise. This study has clearly shown the factors that create the virality of meme advertising campaigns adequately in terms of entertainment and humor, but still not enough to create the virality of the ad because of the lack of emotional connection as well as factors inside the customer.

On the negative side of meme marketing, Casey (2018) and Sharma (2018) has also highlighted a number of drawbacks of memes' usage in marketing, despite certain arguments in favor of memes and their potential advantages for firms in their research Starting off, Casey suggested that memes might produce harmful material and hence have a detrimental impact, argued that memes are uncontrollable and mostly user-generated, in contrast to traditional media, which enables marketing messages to be strictly managed. This study shows most of the disadvantages of using meme marketing but does not clearly show the relationship between negative customer reactions to marketing activities as well as brand image. Therefore, there is no conclusion for the relationship between the drawbacks of meme marketing and purchase intention.

Triet Minh Ngo's research is such an example as "Meme marketing: How viral marketing adapts to the internet culture" conducted by this author at the university of Northern Iowa in 2021 is one of the rare theoretical studies on this topic. The history of memes, how they relate to viral marketing, and whether or not meme marketing is a viable approach for most businesses are all covered in this thesis, which aims to explain meme marketing in the English- speaking world. It will also be investigated how consumers respond to marketing through memes and how they might help spread the trend. The research also demonstrates that as a sort of viral marketing, meme marketing is susceptible to the benefits and drawbacks of the medium: it is affordable, but once it is made public, its messaging becomes unmanageable. Meme marketing can nonetheless develop into a potent weapon when supported by the influence of word-of-mouth marketing. And to effectively use meme marketing, two skills are necessary: in-depth familiarity with memes and Internet culture, as well as the capacity to recognize and capitalize on the buzz surrounding popular occurrences. As the author mentioned above, this study has not yet clearly shown how meme marketing affects purchase intention and there is not enough time to study more e-commerce related categories death, although this is a new study because it was conducted in 2021.

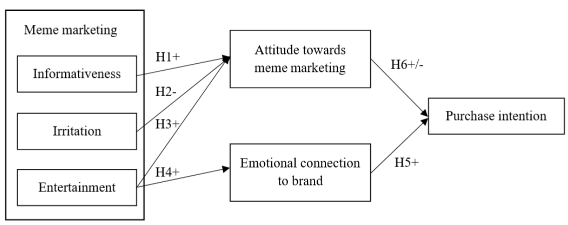
In conclusion, reviewing the extant foreign literature, the author observed that no prior study has identified and presented customers' point of view in both attitude towards meme marketing and emotional connection to brand and how meme marketing impacts on purchase intention by Richard J. Lutz and Scott B. MacKenzie (1989), which marked the importance of the factor in generating profit process via marketing.

Moreover, memes also provide a forum for social interaction and consumer advocacy and can aid marketers in understanding customer mindsets. However, the underlying multi-dimensional elements influencing meme virality have been disregarded in the existing literature. This research makes an effort to fill in these gaps in the literature. On the other hand, as the globe transitions to the Internet era, social media plays a crucial part in the growth of any company's product sales. These results showed that consumers are aware of meme-based viral marketing, which has a significant influence on consumers' purchasing decisions.

***Proposed research model***

Through the process of synthesis, analysis of theories, theoretical models, and experimental models, the authors propose a research model consisting the dependent variable being "Purchase intention"

**Figure 1: Proposed research model and hypotheses**




*Source: Self-deprived by authors, 2023*

***Hypothesis***

**H1.** The perceived informativeness of meme marketing messages generate positive consumers' attitude towards meme marketing.

**H2.** The irritation caused by viral marketing messages has a negative impact on consumers' attitude towards meme marketing.

**H3.** Entertainment positively affects consumer's attitude towards meme marketing.

**H4.** Entertainment offered in meme marketing will positively influence emotional connection between the brands on social media and users.

**H5.** Emotional connection between the brands on social media and users in meme marketing will positively influence the user's purchase intentions.

**H6.** There is a relationship between consumers' attitudes towards meme marketing with consumer purchase intention.

***Research methodology***

Data collection took place over a span of four-month period about young people (Gen Z) between 16 and 30 ages, from March to June, 2023 utilizing online methods by Google Froms. In total, out of the 1.500 responses received, with an 20.13% response rate, 302 email copies are preserved.

**Result and discussion**

***Cronbach's alpha coefficient test***

Regarding Corrected Item - Total Correlation, the results of Cronbach's Alpha coefficient analysis show that all measuring items have a length greater than 0.30, and almost all of them have an index higher than 0.60. The most subordinate Corrected Item - Total Correlation index is 0.40.

Regarding Cronbach's Alpha coefficients, these indexes of 6 variables are all above 0.70, with the most elevated index being up to 0.910 (ATT).

Regarding Cronbach's Alpha if Item Deleted, it should be noted that for FC4, its Cronbach's Alpha if Item Deleted index is higher than FC's Cronbach's Alpha coefficient, 0.85 compared to 0.803. The author chooses not to delete FC4 because its Corrected Item-Total Correlation index (0.40) is higher than the 0.3 benchmark. There are 5 out of 6 variables that have Cronbach's Alpha coefficient within the range of 0.80 – 0.95, particularly, ATT, PI, EN, INF, EC in the descending order. These numbers indicate a very high level of internal consistency of the study model's variables.

Additionally, the lowest Cronbach's Alpha coefficient recorded is as high as 0.794 (TFF), indicating a very high level of reliability.

Additionally, it should be emphasized that no measurement item should be destroyed because the index for "Cronbach's Alpha if Item Deleted" is lower for each measurement item than the aggregate current Cronbach's Alpha.

**Table 1. Cronbach's Alpha coefficients result of the official study**

| Variables | Abbreviations | Cronbach's Alpha | N of Items |
|---|---|---|---|
| Purchase Intention | PI | 0.867 | 5 |
| Emotional connection to brand | EC | 0.838 | 5 |
| Informativeness | INF | 0.839 | 4 |
| Irritation | IRR | 0.750 | 3 |
| Entertainment | EN | 0.869 | 4 |
| Attitude towards meme marketing | ATT | 0.910 | 6 |

*Source: Summarized by the author from SPSS result (2023)*

***Explanatory Factor Analysis (EFA)***

The acquired result also complies with all the requirements in terms of EFA for PI. Table 2 shows that the KMO coefficient is 0.870 (0.5 KMO 1.0), indicating that the factor analysis is sufficient, and that the Sig value of the Bartlett's test of sphericity is similarly 0.000, indicating that the observed variables have qualified correlation.

After Promax rotation, the cumulative percentage of Rotation Sums of Squared Loadings reaches 65.238, which means that one factor (PI) is responsible for 65.238% of the total variation explained. In addition, factor loading for the five observed variables for PI is all higher than 0.6, which is far higher than the acceptable threshold of 0.5.

**Table 2. KMO, Bartlett's test and total variance explained**

| Indicator | | | Value (for variables without CI) | Implication (CI) |
|---|---|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | | .901 | .870 |
| Bartlett's Test ofSphericity | Approx. Chi-Square | | 3408.977 | 657.556 |
| | df | | 231 | 10 |
| | Sig. | | .000 | .000 |
| Total VarianceExplained | Rotation Sums of Squared Loadings | Cumulative % | 68.041 | 65.238 |

*Source: Summarized by the author from SPSS result (2023)*

***Confirmatory Factor Analysis (CFA)***

As specified in table 3, reliability, convergent validity, discriminant validity of the model would be tested through estimates of Standardized Loading Estimates and the indexes of CR, AVE, MSV, SQRTAVE and Inter-Construct Correlations.

As for Standardized Loading Estimates, factor loading values extracted by 27 scale items exceed the acceptance level of 05. Among them, 24 items having factor loading of above 0.7, reaching the ideal value for reliability test. These figures indicate all measurement items in the model are statistically significant.

As for other indices of reliability, convergent validity, CR and AVE indexes of all variables are respectively higher than 0.7 and 0.5, with the highest CR value being around 0.91 (ATT) and the highest AVE being 0.628 (ATT). Hence, the model is validated to have no concerns over reliability and convergent validity.

Furthermore, the square roots of the AVE (SQRTAVE) values of all constructs are greater than Inter-Construct Correlations. Plus, MSV value of a certain construct is also lower than its respective value of AVE. Hence, discriminant validity is established.

**Table 3. Model fit and result of measurement model (CFA)**

| Criterion | Obtained value |
|---|---|
| CMIN/df ≤ 2: Good; CMIN/df ≤ 5: Acceptable | CMIN/df = 1.488 |
| GFI ≥ 0.8: Acceptable; GFI ≥ 0.9: Good; GFI ≥ 0.95: Very good | GFI = 0.904 |
| CFI ≥ 0.9: Good; CFI ≥ 0.95: Very good | CFI = 0.962 |
| TLI ≥ 0.9 | TLI = 0.957 |
| RMSEA≤0.08: Good; RMSEA≤0.03: Very good | RMSEA = 0.040 |
| PCLOSE ≥ 0.01: Acceptable; PCLOSE ≥ 0.05: Good | PCLOSE = 0.985 |
| GFI ≥ 0.8: Acceptable; GFI ≥ 0.9: Good; GFI ≥ 0.95: Very good | GFI = 0.904 |

*Source: Summarized by the author from SPSS result (2023)*

***Structural Equation Modeling (SEM)***

The sequence in which PI, ATT, and EC have an impact on the dependent variables can be inferred from a cursory glance at the table 4. Regarding PI, it is confirmed that among the two components, ATT (=0.342) has the greatest impact, followed by EC (=0.239. In addition, INF shows to have the highest impact on the development of ATT with a value of =0.488, followed by EN (=0.351) and IRR (=0.18). Regarding EC, EN (=0.266) is the only impact on this measure.

**Table 4. Standardized Regression Weights**

| Hypothesized path | Estimate (β) |
|---|---|
| EC <--- EN | 0.266 |
| ATT <--- EN | 0.351 |
| ATT <--- INF | 0.488 |
| ATT <--- IRR | 0.18 |
| PI <--- EC | 0.239 |

*Source: Data from IBM SPSS AMOS 24.0, 2020*

Table 5 exhibits the squared coefficient of multiple correlation, or R2, that indicates how well a given variable can be predicted using a set of other variables. Specifically, for ATT, its R2=0.645 suggested that 64.5% of the total variation in ATT can be explained by the model, particularly by 03 factors (INF, IRR, EN). Furthermore, with R2 being equal to 0.199, the independent EN variable have statistically significant explanations for 7% of the variation of EC. Likewise, when it comes to PI, three variables of ATT and EC can predict around 19.9% of variation within PI, whose R2 stands at 0.199.

**Table 5. Squared Multiple Correlations**

| | Estimate |
|---|---|
| EC | 0.07 |
| ATT | 0.645 |
| PI | 0.199 |

*Source: Data from IBM SPSS AMOS 24.0, 2020*

## Conclusion and implications

***Conclusion of the research***

Regarding the model of factors purchase intention FDAs, there are major points that are worth noticing: (1) Female customers tend to connect more emotionally with advertising or brands than men; (2) Ads containing quick and simple content make it easier for audiences to absorb information; (3) People who are active on social media tend to prefer meme ads and engage with brands more; (4) Informativeness surprisingly dominates the impact besides entertainment factors as expected; Therefore, it is essential to empirically examine how specific factors influence user intention; so that FDAs companies can work on relevant, customer-centric innovations that approach audiences better and thus, promote FDAs.

The demographic analysis provides a clear illustration of the findings from the sample data that was evaluated. Two components in the research model are empirically demonstrated to influence the dependent variable, the buying intentions of Gen Z FDAs in HCMC. The findings of the thesis are generally consistent with earlier studies on the behavior of social media users and the intentions of FDA customers. The proposed research model's factors may account for 87.5% of the dependent variable, demonstrating its statistical significance. The author then goes on to draw pertinent findings and managerial recommendations that businesses can use to modify and improve the elements of the FDA's brand marketing strategy in order to increase purchase intention. With the following conclusions, the thesis's goal is then fully achieved:

In terms of study methodologies, a research model with a trustworthy measuring scale was suggested to identify the variables influencing purchase intention on FDAs of Gen Z in HCMC.

In terms of the importance of the research, the suggested research methodology and the findings will add to the existing literature on meme marketing and general factors influencing purchase intention on FDAs. The thesis can be used as a resource for future pertinent study based on this premise.

In terms of practical significance, the research's conclusion presents pertinent, implementable findings and management implications that managers may use as a guide when developing customer-focused marketing strategies that improve business outcomes. In conclusion, the thesis recommends that FDA companies and agencies should increase the informativeness, entertainment, and avoid irritability of meme marketing in order to create a favorable perception of meme marketing and a strong emotional connection on the app's user value on social media.

The study believes that businesses primarily use amusing material combined with trending current events to create Internet memes, which are effective in engaging customers. Actually, this marketing strategy is what draws customers rather than the products themselves.

***Recommendations***

*Recommendations for marketers to stimulate Gen Z's attitude towards meme marketing*

For informativeness: Anticipated that amusement would be the most important aspect of meme marketing. Since finding entertainment, amusing advertisements, and providing entertainment for the audience are some of the reasons users spend a lot of time on social media, it may help users develop a positive attitude toward advertising and brand advertisers.

For irritation: The use of negative emotions in advertising needs to be done with caution, as when the company causes consumers to experience negative emotions, the offered products should be able to address those emotions, which can lead consumers to purchase and use the brand advertisers' products. Therefore, irritation factor in meme marketing should be developed skillfully and carefully, avoiding too much influence on the marketing campaign and the brand.

For entertainment: Businesses should emphasize this factor which is a potential factor because this can boost consumer preference for the brand and the commercials itself. This factor is crucial for maximizing the advertising's efficacy in order to further impact the company's marketing efforts' revenue and return on investment (ROI). Especially, Internet memes spread quickly within online communities in part because of their funny "punchlines."

*Recommendations for brands to build strong emotional connection by meme marketing*

Through emotions, the relationship between the brand and the customer will become closer and more developed, so brands need to focus on connecting emotionally with customers. Emotional connection to brand mediates between meme marketing and purchase intention which provides us a result that when a brand uses the medium of meme advertisement to advertise their brand, the viewers get a good stimulus of it, which later generates a favorable impact on the brand equity. Emotional connection to brand mediates between meme marketing and buy intention. By being present on social media they can have a dedicated staff to interact and assist the customers, provide the most recent information or updates, and advertise their goods and services for very little money by being active on social media. Additionally, marketers can use social media to introduce their goods and solicit feedback from customers on those goods and services. The customer would feel valued as a result, strengthening their ties to the brand. Additionally, by doing this, the business is able to both keep its current clientele and draw in new customers.

Brand anthropomorphization through mascots, images and text plays a huge role in making meme marketing more important in the process of building an emotional connection between customers and the brand. The cuter and funnier the company's Brand Mascot, the more people will remember them. In addition, the company can completely experiment and reinvent the mascot from time to time to suit its marketing needs at each development milestone.

Memes are a quick and easy way for consumers to respond to company news, which can be hugely beneficial for many brands. By following the company's news, users can quickly get a feel for how it's going by looking at meme responses from consumers. Share any user-generated memes on channels in the most organic way

**References:**

*Casey, A. (2018). The role of Internet memes in shaping young people's health- related social media interactions. In V. A. Goodyear, & K. M. Armour (Eds.), Young People, Social Media and Health (pp. 16–17). Routledg.*

*MacKenzie, S. B., & Lutz, R. J. (1989). An Empirical Examination of the Structural Antecedents of Attitude toward the Ad in an Advertising Pretesting Context. Journal of Marketing. https://doi.org/10.1177/002224298905300204*

*Pech, R. J. (2003). Memes and cognitive hardwiring: Why are somememes more successful than others?. European Journal of InnovationManagement,6(3), 173– 181.*

*Sharma, H. (2018). Memes in digital culture and their role in marketing and communication: A study in India. Interactions: Studies in Communication & Culture, 9(3), 303–318.*

*Taecharungroj, V., & Nueangjamnong, P. (2015). Humour 2.0: Styles and Types of Humour and Virality of Memes on Facebook. Journal of Creative Communications. https://doi.org/10.1177/0973258615614420*

*Triet Minh Ngo (2021). Meme marketing: How viral marketing adapts to the internet culture. UNI ScholarWorks. Available at: https://scholarworks.uni.edu/hpt/484*

*Williams, R. (2000). The business of memes: memetic possibilities for marketing and management. Management Decision, 38(4), 272-279.*

# THE MODERATING EFFECT OF OPERATIONAL PERFORMANCE ON THE RELATIONSHIP BETWEEN QUALITY MANAGEMENT AND CORPORATE FINANCIAL PERFORMANCE: EVIDENCE FROM LISTED FOOD MANUFACTURING COMPANIES IN VIETNAM

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**Abstract:** ***This study examines the effect of quality management on the financial performance of food processing companies listed on Vietnam's stock market. Using OLS estimation and hierarchical regression, results show that firms with ISO 22000 certification perform better financially. Operational performance significantly impacts financial outcomes, with production flexibility and cost efficiency negatively affecting financial performance, while inventory turnover has a positive impact. Additionally, cost efficiency and inventory turnover moderate the relationship between quality management and financial performance, suggesting that ISO 22000-certified firms with efficient costs and faster inventory turnover achieve superior financial results.***

• Keywords: *food manufacturing companies, financial performance, operational performance, quality management.*

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## 1. Introduction

Financial efficiency is crucial for firms in a market economy, especially after the challenges posed by COVID-19. Identifying factors that influence financial performance helps managers take action to improve outcomes. Quality management, particularly in manufacturing, plays a critical role as it impacts both costs and revenue, directly affecting financial performance. Operational performance, as a moderating factor, further influences this relationship. This study focuses on listed food processing companies in Vietnam, where product quality is key to competitiveness. It addresses the gap in research on ISO 22000 certification and its impact on financial performance in Vietnam.

## 2. Literature review

Strong quality management improves financial performance by boosting sales through certifications (Cai, 2018), increasing productivity and cutting costs (Wruck & Jensen, 1994), allowing higher pricing (Dunkers, 1999), enhancing training and customer satisfaction (Ataseven, 2013), and improving cash flow and inventory turnover (Lo, 2009).

This study uses ISO 22000 certification to assess quality management in food processing companies. ISO certification was chosen because it reflects superior quality management practices, making these firms stand out. As a globally recognized standard issued by the International Organization for Standardization, ISO is widely adopted, with over 160 countries acknowledging its importance (Paryani, 2011). ISO standards have had a greater impact on quality improvement worldwide than any other certification (Foster, 2010). Studies show that implementing ISO generally enhances a company's financial performance (Corbett et al., 2008; Han et al., 2007; Jang & Lin, 2008).

In Vietnam, food firms increasingly adopt ISO 22000 certification due to its suitability and effectiveness in improving financial performance, despite the availability of various food safety certifications with different requirements.

Many studies show that adopting quality standards boosts financial performance. Deming (1986) and others found links to better outcomes, profits, and market value (Heras et al., 2002; Corbett et al., 2008; Bhandari, 1988).

***The moderating role of operational performance on the relationship between quality management and firm financial performance.***

Quality management theoretically provides financial benefits, but it must be combined with other factors for success, with operational efficiency being key. This efficiency encompasses aspects like production flexibility, financial efficiency,

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and inventory turnover. Together, operational performance and quality management enhance financial outcomes for firms. According to Chavez et al. (2015), operational performance involves strategic choices that improve competitiveness and customer satisfaction by delivering high-quality products promptly. We focus on production flexibility, cost efficiency, and inventory turnover as measures of operational performance (Chavez et al., 2015; Lau, A.K.W., 2018; Santos, H., 2019).

***Flexibility in production***

Production flexibility refers to a company's ability to shift from one product to another in response to market demand (Shou, 2018). Total quality management emphasizes designing customer-focused products to enhance satisfaction (Duh, R.-R, 2012). Meeting changing customer requirements is crucial for success, as demonstrated by Japanese auto companies in the US. In contrast, firms that struggle to predict demand may allocate resources inefficiently, risking customer loss and competitive failure (Goyal, M, 2012). Today, operational flexibility is essential for market dominance, reflecting how well companies can adjust production within time, effort, and cost constraints (Patel, P.C, 2011). This study focuses on manufacturing flexibility as defined by Cachon and Olivares, which allows firms to produce smaller batches and adapt quickly to market changes. Greater production flexibility leads to faster delivery times and can minimize price reductions, ultimately enhancing profitability (Moreno, A, 2015). It enables companies to adjust production levels and innovate while saving costs and meeting customer needs effectively.

***Cost-effective***

Operating costs are crucial for the performance of any enterprise, prompting firms to seek cost reductions compared to competitors (Chavez et al., 2015). For instance, BMW utilizes an advanced configuration system and modular architecture to produce customized cars within 12 days at competitive costs (Kortmann, S, 2014). Cost efficiency is a significant focus in operations management and is used to evaluate business performance (Chavez, R, 2015). It reflects a company's ability to save time and costs (Kortmann, S, 2014). This study emphasizes cost efficiency by measuring its impact on revenue in the value-creation process (Zhang, G.P, 2012). Achieving cost efficiency through methods like eliminating excess materials can lead to financial benefits, which drive companies toward their goals. Key financial metrics, such as stock returns, Tobin's q, and ROA, are closely linked to cost-based efficiencies, including bottleneck elimination and lot size reduction.

***Inventory turnover speed***

Quality management emphasizes that quick delivery and lean production enhance inventory turnover and reduce inventory costs (Kortmann, S, 2014). A Standard & Poor's survey identifies inventory as a critical asset for companies (Gaur, V, 2008). Higher inventory levels can lead to profit declines (Chen, H, 2005), prompting firms to seek optimal inventory management strategies (Rumyantsev, S, 2007). Inventory turnover measures how often a company's inventory converts to revenue; higher turnover indicates better performance. Excess inventory incurs higher storage and spoilage costs, negatively affecting financial results. Therefore, effective quality management combined with rapid inventory turnover can significantly improve a firm's financial performance.

**3. Methodology**

***3.1. Research model***

** Research hypothesis*

Based on the theoretical content about the relationship between quality management and financial performance of enterprises presented in the above section, we propose hypotheses about the relationship between quality management and financial performance as follows:

*Hypothesis 1:* Food processing enterprises with ISO 22000 certification have better financial performance

*Hypothesis 2:* Operational performance affects the financial performance of the enterprise

*Hypothesis 3:* Operational performance moderates the relationship between quality management and firm financial performance

*Hypothesis 3a:* Manufacturing flexibility moderates the relationship between quality management and firm financial performance

*Hypothesis 3b:* Cost efficiency moderates the relationship between quality management and firm financial performance

*Hypothesis 3c:* Total asset turnover moderates the relationship between quality management and firm financial performance

** Research models*

Based on the research hypotheses, the models proposed in the study are as follows:

$$ROA_{it} = \beta_0 + \beta_1 ISO_{it} + \beta_2 Size_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \beta_5 AT_{it} + \varepsilon_{it} \quad (1)$$

$$ROA_{it} = \beta_0 + \beta_1 ISO_{it} + \beta_2 Size_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \beta_5 AT_{it} + \beta_6 PF_{it} + \varepsilon_{it} \quad (2)$$

$$ROA_{it} = \beta_0 + \beta_1 ISO_{it} + \beta_2 Size_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \beta_5 AT_{it} + \beta_6 PF_{it} + \beta_7 PF_{it} * ISO_{it} + \varepsilon_{it} \quad (3)$$

$ROA_{it} = \beta_0 + \beta_1 ISO_{it} + \beta_2 Size_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \beta_5 AT_{it} + \beta_6 CE_{it} + \varepsilon_{it}$ (4)

$ROA_{it} = \beta_0 + \beta_1 ISO_{it} + \beta_2 Size_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \beta_5 AT_{it} + \beta_6 CE_{it} + \beta_7 CE_{it} * ISO_{it} + \varepsilon_{it}$ (5)

$ROA_{it} = \beta_0 + \beta_1 ISO_{it} + \beta_2 Size_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \beta_5 AT_{it} + \beta_6 IT_{it} + \varepsilon_{it}$ (6)

$ROA_{it} = \beta_0 + \beta_1 ISO_{it} + \beta_2 Size_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \beta_5 AT_{it} + \beta_6 T_{it} + \beta_7 IT_{it} * ISO_{it} + \varepsilon_{it}$ (7)

Where:

ROA: Return on total assets, reflecting the financial performance of the business

ISO: Independent variable - Dummy variable (takes value 1 when the enterprise has an ISO certificate 22000, takes value 0 in the opposite case)

Variables that reflect operational performance include: Cost efficiency (CE), inventory turnover (IT) and production flexibility (PF).

In addition, the model adds the following control variables: Total asset turnover, company size, financial leverage, liquidity.

The variables in the research model are described specifically in the following table:

**Table 1: Variables measurement**

| Type of variable | Name of variable | Measurement |
|---|---|---|
| dependent variable | | |
| ROA | Return on assets | Profit after tax/total assets |
| Independent variable | | |
| ISO | Quality | Dummy variable (takes value 1 when the enterprise has an ISO22000 certificate, takes value 0 otherwise) |
| Moderator variables | | |
| PF | Flexibility in production | $PF = \frac{\lvert I_{it} - I_{it-1} \rvert}{S_{it}}$ Where: $I_{it}$: Inventory of enterprise i in year t; $I_{it-1}$ : Inventory of enterprise i in year t-1; $S_{it}$: Total sales of company i in year t. |
| CE | Cost efficiency | Cost of goods sold/total sales |
| IT | Inventory turnover | Cost of goods sold/average inventory |
| Control variables | | |
| Size | Size | Natural logarithm of total assets |
| LIQ | Liquidity | Current assets/Current liabilities |
| LEV | Leverage | Total debts/Total assets |
| AT | Total asset turnover | Net revenue/Average total assets for the period |

### 3.2. Data and summary statistics

The financial data of the companies in the research sample was collected from the financial reports of food processing companies listed on the Vietnam stock market for the period 2017-2022. Data on quality management in the research sample were collected from management reports and websites of firms during this period.

Table 3 summarizes the statistical results for the model variables as follows:

- The average return on assets (ROA) for the firms in the sample is 3.23%, with a significant standard deviation of 14.6%, resulting in a range from -162.67% to 31.5%.

- Financial leverage averages 61.22%, indicating a high debt-to-equity ratio, with a standard deviation of 33.43% and values ranging from 3.36% to 91.92%, reflecting considerable variability in financial autonomy.

- The size of the firms, measured as the natural logarithm of total assets, averages 27.5 with a standard deviation of 1.56, ranging from 23.55 to 32.46.

Current solvency averages 2.089, indicating adequate liquidity, but the high standard deviation of 3.11 and a range from 0.001 to 29.4 reveal disparities in immediate payment capabilities among firms.

- The ISO dummy variable shows that 59% of firms have ISO certification, with a standard deviation of 0.492.

- Total asset turnover averages 1.498, with a standard deviation of 1.1055 and values ranging from 0.038 to 9.12, indicating significant differences in efficiency.

The production-sales match (PF) averages 0.071 with a standard deviation of 0.119, ranging from 0 to 1.218. Cost efficiency (CE) has an average of 0.869, with a range from 0.196 to 3.69. Lastly, inventory turnover (IT) averages 7.52, with a wide range from 0 to 95.88 and a standard deviation of 9.81, highlighting variability in operational efficiency across firms.

**Table 2: Summary of descriptive statistics**

| Variables | Observation | Mean | Std | Min | Max |
|---|---|---|---|---|---|
| ROA | 264 | 0.0323135 | 0.1461156 | -1.626776 | 0.3150076 |
| LEV | 264 | 0.6122991 | 0.334301 | 0.0336223 | 0.91927 |
| Size | 264 | 27.50112 | 1.559583 | 23.55919 | 32.46804 |
| LIQ | 264 | 2.089369 | 3.107781 | 0.0012212 | 29.40705 |
| ISO | 264 | 0.5909091 | 0.4925999 | 0 | 1 |
| TAT | 264 | 1.498228 | 1.105583 | 0.0377378 | 9.124197 |
| PF | 264 | 0.071135 | 0.1188717 | 0 | 1.217684 |
| CE | 264 | 0.8693449 | 0.2511326 | 0.1960046 | 3.685656 |
| IT | 264 | 7.517144 | 9.805524 | 0 | 95.876 |

*Data source: Stata output*

### 3.4. Research methods

To assess the impact of quality management on financial performance, the research team employed OLS estimation. Additionally, Hierarchical Regression Analysis was used to examine how operational performance moderates this relationship. This method tests whether operational performance influences financial outcomes and moderates the connection between quality management and financial performance. In hierarchical regression, predictors are entered in blocks, with each block representing a step in the analysis, following three regression equations.

$Y = \beta_0 + \beta_1 * X$ (1)

$Y = \beta_0 + \beta_1 * X + \beta_2 * M$ (2)

$Y = \beta_0 + \beta_1 * X + \beta_2 * M + \beta_3 * X.M$ (3)

With $\beta_0$, $\beta_i$: are the regression weights

Regression equation (1) shows the impact of the independent variable on the dependent variable.

Regression equation (2) shows the impact of the independent variable on the dependent variable. In particular, the moderating variable M is included in the model and considered as an independent variable.

Regression equation (3) shows the impact of the independent variable and interaction variable (X*M) on the dependent variable if the interaction variable has a significance level of sig. < 0.05 proves that variable M acts as a moderating variable (Nguyen Dinh Tho, 2011).

## 4. Empirical results

### *4.1. Panel unit root test*

The research of Gujarati (2003) indicates that if the research data is not stationary, regression results will not be accurate. In order to tackle this issue, all variables should be tested panel unit root. Because the data in this research is strongly balanced, the panel unit root test of Levin, Lin & Chu (2002) is chosen. The result shows that the data of all five variables are stationary so that data are suitable to be used in the next research steps.

### *4.2. Correlation analysis*

**Table 3: Correlation matrix between variables**

| | ROA | LEV | Size | LIQ | ISO | TAT | PF | CE | IT |
|---|---|---|---|---|---|---|---|---|---|
| ROA | 1.0000 | | | | | | | | |
| LEV | -0.4210* | 1.0000 | | | | | | | |
| Size | 0.3028* | -0.3123* | 1.0000 | | | | | | |
| LIQ | 0.0800 | -0.1477* | -0.1634* | 1.0000 | | | | | |
| ISO | 0.1405* | -0.1637* | 0.3498* | -0.0883 | 1.0000 | | | | |
| TAT | 0.3248* | -0.2032* | -0.1669* | 0.0556 | 0.0419 | 1.0000 | | | |
| PF | -0.1805* | -0.0680 | -0.1199 | 0.0778 | 0.0266 | -0.2360* | 1.0000 | | |
| CE | -0.4373* | 0.7119* | -0.3096* | -0.0413 | -0.1146 | -0.1059 | 0.1780* | 1.0000 | |
| IT | 0.1702* | -0.0989 | -0.1055 | 0.0142 | -0.1951* | 0.2442* | -0.1097 | 0.0239 | 1.0000 |

*Data source: Stata output*

Table 3 shows the Pearson correlation coefficient between variables. The results indicate that ROA variable has a statistically significant positive correlation with the business size, ISO, total asset turnover, inventory turnover and a negative correlation with the financial leverage, revenue growth, cash flow, the cash conversion cycle and net cash flow. At the same time, the ROA variable has a statistically significant negative correlation with the level of production flexibility and cost efficiency.

### *4.3. Discussion of regression results*

According to the table 4, we can draw the following conclusions:

The results of testing the multicollinearity phenomenon show that the variance inflation factor (VIF) after removing the debt coefficient variable shows that the VIF of all variables in model 1 is low (less than 10), so All variables are suitable for inclusion in the regression model.

The OLS estimation results show that the F statistic value is statistically significant at the 1% level, indicating that the OLS estimation can be an appropriate estimate.

**Table 4: Regression results of the relationship between quality management and financial performance of food processing companies**

| Variables | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|---|---|---|---|---|---|---|---|
| LEV | -0.0149*** | -.01605*** | -0.01602*** | -0.00342 | -0.00628 | -0.01490*** | -0.01498*** |
| | (0.00341) | (0.00344) | (0.00346) | (0.00449) | (0.00461) | (0.00343) | (0.00344) |
| Size | 0.0272*** | 0.02458*** | 0.02457*** | 0.02478*** | 0.0219*** | 0.02722*** | 0.02731*** |
| | (0.00579) | (0.00593) | (0.0059425) | (0.00568) | 0.00575 | 0.00580 | (0.00582) |
| LIQ | 0.00329 | 0.00344 | 0.00347 | 0.00395 | 0.00366 | 0.00327 | 0.00331 |
| | (0.00254) | (0.00253) | (0.00254) | (0.00248) | 0.00246 | 0.00255 | 0.00255 |
| TAT | 0.0415*** | 0.03692 | 0.03681*** | 0.04287*** | 0.0436*** | 0.04174*** | 0.04135*** |
| | (0.00735) | (0.00770) | (0.00773) | (0.00717) | (0.00711) | (0.00757) | (0.00769) |
| ISO | -0.00331 | -0.00001 | 0.00191 | 0.00118 | 0.24873** | -0.00383 | -0.0080 |
| | (0.0168) | (0.01681) | (0.01939) | (0.01642) | (0.10497) | (0.01720) | (0.0223) |
| PF | | -0.12920* | -0.1177 | | | | |
| | | (0.06828) | (0.0893) | | | | |
| PF*ISO | | | -0.0258 | | | | |
| | | | (0.1291) | | | | |
| CE | | | | -0.1653*** | -0.1276*** | | |
| | | | | (0.0438) | (0.04619) | | |
| CE*ISO | | | | | -0.2867** | | |
| | | | | | (0.12012) | | |
| IT | | | | | | 0.0015* | 0.0036** |
| | | | | | | (0.00088) | (0.00175) |
| IT*ISO | | | | | | | 0.00332* |
| | | | | | | | (0.00181) |
| Cons | -0.770*** | -0.682167 | -0.68245 | -0.5741*** | -0.5292*** | -0.7684*** | -0.7693*** |
| | (0.162) | (0.16789) | (0.16822) | (0.16635) | (0.1658) | (0.16283) | (0.16315) |
| R2 | 0.3001 | 0.3123 | 0.3124 | 0.3401 | 0.3548 | 0.3025 | 0.3028 |

*Data source: Stata output*

The estimated results using the OLS model:

Financial leverage negatively affects return on total assets in food processing enterprises. Higher financial autonomy correlates with better performance; increased debt raises financial risk, impairing capital mobilization and reducing profitability. These findings align with prior research by Titman and Wessels (1988), Booth (2001), and Rajan (1995).

Enterprise size has a statistically significant positive relationship with return on total assets, indicating that larger firms enjoy higher profit rates. Companies with greater scale benefit from enhanced reputation, facilitating capital mobilization and smoother sales operations, which leads to increased profitability. These findings are consistent with previous studies by Prasetyantoko and Parmono (2008), Fenn (2008), Flamini et al. (2009), Stierwald (2009), and Yang and Chen (2009).

Total asset turnover has a statistically significant positive relationship with the rate of return on total assets. Therefore, the higher a business's total asset turnover rate, the higher its profitability and vice versa. This positive relationship was also discovered in studies by Prasetyantoko and Parmono (2008), Hardwick (1997) and Fenn (2008).

The ISO variable in this research model does not show a statistically significant relationship with the financial performance of the business.

To test hypotheses H2–H3, the author used hierarchical regression in the study. These hypotheses suggest that companies with excellent operational performance will have the highest financial performance. Due to the existence of a relatively high correlation between variables, the variance inflation factor (VIF) analysis is carried out. According to the VIF results, multicollinearity is not a concern in regression analysis.

The hierarchical regression results:

Model 2 regression results show a significant impact of manufacturing flexibility on financial performance. The regression coefficient reaches a negative value (-0.1292065) and is significant at the 0.1 level. Therefore, flexibility in production has a negative impact on the financial performance of enterprises in the food processing industry.

Comparing the R2 values of models 2 and 3, we see that model 3 has an improved R2 compared to model 2, so model 3 has a higher explanatory power than model 1.

However, when considering the interactive relationship between production flexibility and receiving ISO quality certification (model 3) on financial performance, the regression results show that there is no relationship. Statistical significance. Thus, production flexibility does not play a moderating role in the relationship between ISO and ROA variables.

Model 4 regression results indicate that cost efficiency can significantly affect a business's financial performance (regression coefficient = -0.165376, $p < 0.05$). This result suggests that companies with better production cost efficiency can achieve more excellent financial performance benefits. This research result is also found in the research of Chavez (2015) and Ayaram (2016).

In Model 5, the moderating effect of cost efficiency on the relationship between ISO and ROA variables is confirmed with a regression coefficient of -0.286758 at the 10% significance level. Thus, when firms can save production costs, this will have a positive impact on the relationship between holding an ISO quality certificate and the financial performance of the business.

Comparing the R2 values of models 4 and 5, we see that model 5 has an improved R2 compared to model 4, so model 5 has a higher explanatory power than model 1.

Model 6 regression results show that inventory turnover has a statistically significant positive relationship with ROA (regression coefficient = 0.001525, significance level 10%). The results of this study show that companies can gain more benefits by moving their goods efficiently. In addition, the research results also show a statistically significant interactive relationship between inventory turnover speed and the relationship between ISO variables and the financial performance of the business (regression coefficient = 0 .0033227, $p < 0.1$) (Model 7).

Comparing the R2 values of models 6 and 7, we see that model 7 has an improved R2 compared to model 6, so model 7 has a higher explanatory power than model 6.

In addition, the ISO variable shows a statistically significant positive relationship with profitability on the total assets of firms in the research sample (Model 5). Therefore, it can be affirmed that food processing firms that hold ISO 22000 certification have better profitability than other firms in the industry. This research result coincides with the results of most previous studies on the relationship between quality management and the financial performance of enterprises (Ataseven, 2013; Lo, C.K.Y, 2009; Jay and Peter, 1992).

**Conclusion:** The research indicates that firms with ISO 22000 certification have higher financial performance than those without. Choosing the right food safety certification is crucial for firm development; neglecting this can erode consumer trust, reduce financial efficiency, and lead to loss of market share. Performance factors significantly affect financial outcomes: production flexibility and cost efficiency negatively impact financial performance, while inventory turnover has a positive effect. Cost efficiency and inventory turnover also moderate the relationship between quality management and financial performance. Additionally, financial leverage negatively affects performance, whereas firm size and total asset turnover positively influence profitability.

**References:**

*Booth, L., Aivazian, V., Demirguc-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. The journal of finance, 56(1), 87-130.*

*Cachon, G.P.; Olivares, M. (2010) Drivers of Finished-Goods Inventory in the U.S. Automobile Industry. Manag. Sci., 56, 202–216.*

*Chen, H.; Frank, M.Z.; Wu, O.Q. (2005). What actually happened to the inventories of american companies between 1981 and 2000? Manag. Sci. 51, 1015–1031.*

*Eriksson, H., & Hansson, J. (2003). The impact of TQM on financial performance. Measuring business excellence, 7(1), 36-50.*

*Foster, J. J., Koyama, K., & Adams, A. (2010). Paper and on-line testing of graphical access symbols in three countries using the ISO 9186 comprehension test. Information Design Journal, 18(2), 107-117.*

*Jang, W. Y., & Lin, C. I. (2008). An integrated framework for ISO 9000 motivation, depth of ISO implementation and firm performance: The case of Taiwan. Journal of Manufacturing Technology Management, 19(2), 194-216.*

*Jin, Y.; Vonderembse, M.; Ragu-Nathan, T.; Smith, J.T. (2014). Exploring relationships among IT-enabled sharing capability, supply chain flexibility, and competitive performance. Int. J. Prod. Econ. 153, 24–34.*

*Lau, A. K., Lee, S. H., & Jung, S. (2018). The role of the institutional environment in the relationship between CSR and operational performance: An empirical study in Korean manufacturing industries. Sustainability, 10(3), 834.*

*Nadkarni, S.; Narayanan, V.K. (2007). Strategic schemas, strategic flexibility, and firm performance: The moderating role of industry clockspeed. Strateg. Manag. J., 28, 243–270.*

*Naser, K., Karbhari, Y., & Zulkifli Mokhtar, M. (2004). Impact of ISO 9000 registration on company performance: evidence from Malaysia. Managerial auditing journal, 19(4), 509-516.*

# CURRENT STATUS AND SOLUTIONS FOR DEVELOPMENT OF VIETNAM'S STOCK MARKET

PhD. Do Thi Dien*

**Abstract:** ***After 24 years of formation and development, the Vietnamese stock market has developed relatively strongly, but also revealed limitations and weaknesses stemming from many different causes. In this article, the author mainly assesses the current situation and focuses on proposing a number of solutions to develop the Vietnamese stock market sustainably in the coming time.***

• Keywords: *stock market, number of accounts, market capitalization…*

*JEL codes: G30*

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## 1. Introduction

The stock market plays an important role in the modern economy, is an effective capital mobilization channel for businesses and creates investment opportunities for individuals and organizations. In Vietnam, the stock market has been operating for 24 years, with strong development steps since its establishment, contributing significantly to the country's economic growth. The birth of the stock market is a symbol marking a new development of the Vietnamese economy and is an important factor promoting economic development as well as the process of economic and social integration of Vietnam.

Based on the developments of the market, it can be generalized into 6 stages:

1. The stage of preparing for the formation of the stock market in Vietnam (before July 2000);

2. The initial stage of the Vietnamese stock market (2000-2005);

3. The stage of remarkable development of the Vietnamese stock market (2006-2007);

4. The stage of decline of the Vietnamese stock market (2008-2011);

5. The stage of market restructuring (2012-2020) on the basis of the Stock Market Development Strategy for the period 2011-2020 issued by the Prime Minister with Decision No. 252/QD-TTg dated March 1, 2012;

6. The stage of restructuring market operations towards professionalism and sustainability (Phase 2020 - 2030).

To move towards a modern, transparent and effective stock market, implementing solutions to improve the legal system, improve the quality of listed enterprises and strengthen the supervisory role of management agencies is extremely necessary. At the same time, raising investor awareness and developing financial technology will also help the market operate more effectively. This article will analyze in depth the current situation of the Vietnamese stock market and propose solutions to promote sustainable development.

## 2. Development status of Vietnam's stock market

After 24 years of growth and development, the Vietnamese stock market has recorded major changes in both breadth and depth with a growth rate considered the fastest among the frontier and emerging markets. Specifically as follows:

- The scale of the Vietnamese stock market has grown strongly and steadily, gradually playing the role of an important medium and long-term capital channel, contributing positively to sustainable development. If in the period 2000 - 2005, the average market capitalization only reached about 1% of GDP, in the period 2006 - 2010 it reached double digits, especially in 2007 when the market exploded, reaching more than 43% of GDP and by the end of December 2024, reaching 62.5% of GDP.

- Diversifying the supply of the primary stock market and the total amount of mobilized capital is constantly increasing.

Capital mobilization activities on the stock market actually started in 2006 with 44 joint stock companies offering more than 203 million shares and by 2007, there were nearly 200 issuances by 192 companies and 4 commercial banks registered with the State Securities Commission with a total mobilized capital of nearly 40,000 billion VND. In 2008, the total mobilized capital reached only more than 14,300 billion VND through more than 100 public securities offerings. The market recovery in 2009 created favorable conditions

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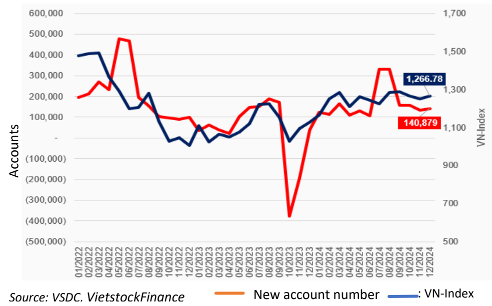
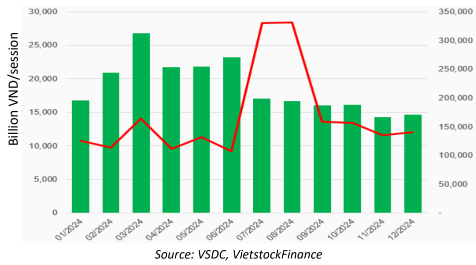
for issuance activities on the stock market, especially the issuance of shares. The total capital mobilized through stock issuance in 2009 increased by more than 50% compared to 2008, reaching 21,724 billion VND. Capital mobilization through the stock market grew strongly and reached VND 151,494 billion in the period 2011 - 2015, of which VND 71,667 billion was issued to the public and VND 79,827 billion was issued to private shares. The period 2016 - 2020 reached VND 196,930 billion, of which VND 54,785 billion was issued to the public and VND 142,145 billion was issued to private shares. Bond issuance through the Stock Exchange has gradually become an important capital mobilization channel for the Government and enterprises. The outstanding balance of Government bonds (G-bonds) as of the end of 2009 was about 16.9% of GDP. The average growth rate of the government bond market in the period 2011 - 2020 reached about 22.1%/year, reaching 47.83% of GDP at the end of 2020, 6.6 times higher than in 2011. The average issuance term has also been continuously extended, in 2020 it was 13.83 years, while in 2010 it was only about 4.3 years. Corporate bonds are issued mainly in the form of private issuance, so the number of corporate bonds listed on the stock exchange is not much. Linking the equitization of state-owned enterprises (SOEs) with capital mobilization from the investing public, share auctions and listing and trading on the stock exchanges, contributing to accelerating the arrangement of the SOEs sector according to the Government's economic reform process. In the period 2011 - 2015, the successful equitization and divestment rate was only 53% but improved and remained at a relatively high level in the period after 2016 - 2019 at 68%. The average success rate for the entire period 2011 - 2020 was 61%. In the period 2016 - 2020, the total value of shares sold was 8.5 times higher; the total number of shares sold was more than 2 times higher than in the period 2011 - 2015. In 2024, the total capital mobilization in the Vietnamese stock market will reach about VND 496,052 billion. Specifically, as of November 30, 2024, public companies have mobilized VND 173,052 billion through stock and bond offerings. In the first 11 months of 2024, government bond auctions raised about VND323,000 billion for the state budget, up 5.8% over the same period last year.

Listed and traded securities market In the stock market, with 02 listed companies on the Ho Chi Minh City Stock Exchange, now the Ho Chi Minh City Stock Exchange (HOSE), which came into operation in 2000, the stock market had a rapid growth in price due to the scarce supply of goods, the VN Index continuously increased and reached its peak of 571.04 points on June 25, 2001. After that, the market continuously declined during the following 3 years, before increasing strongly again at the end of 2003. In 2005, after the Hanoi Stock Exchange (HNX) came into operation, the total number of listed companies on both markets was 44 companies with a total listed value of 4.94 trillion VND. However, in general, the period 2000 - 2005 was a period of quite quiet activity for the Vietnamese stock market. The period 2006 - 2009 also witnessed records for the Vietnamese stock market. In March 2007, stock indexes reached their highest levels since the Vietnamese stock market began operating, with the VN Index reaching 1,170.67 points and the HASTC Index reaching 459.36 points. After that, despite ups and downs, the Vietnamese stock market broke through and gradually set records throughout the 24 years of market operation. The VN Index reached a record high when it reached 1,528.57 points on January 6, 2022 (up nearly 50% compared to the end of 2020). The number of enterprises listed and registered for trading on the Stock Exchange has continuously increased, attracting more and more large-scale enterprises to participate in the stock market. The stock market capitalization scale by the end of 2020 reached nearly VND 5.3 million billion, equivalent to 84.1% of GDP in 2020, 7.3 times higher than in 2010, exceeding the target of 70% of GDP in 2020. At the end of December 2024, the total listed scale on the market had 705 stocks with a listing value of nearly VND 1,827 trillion, an increase of 9.34% compared to the end of 2023. From 2010 to present, the secondary stock market has established 3 market segments with different capital sizes: (i) HOSE is the listing market for large-scale enterprises from VND 120 billion or more; (ii) HNX is the listing market for medium and small-sized enterprises from VND 30 billion or more; (iii) the registered trading market for shares of unlisted public companies (UPCoM system). In the bond market, during the period 2000 - 2002, government bonds were the main listed commodity on HOSE with nearly 40 codes, relatively illiquid, the average trading value was also very low, with about 2% of the value of listed government bonds. In the period 2004 - 2007, the value of listed bonds compared to GDP increased significantly, up to 11.3% of GDP, many new regulations were applied such as: no limit on the holding ratio for bonds of foreign organizations and individuals; removal of price fluctuation range; negotiated transaction mechanism; shortening the payment period T+1, market liquidity also gradually increased. Recently, due to fluctuations in interest rates, the issuance of government bonds was not as expected, leading to a decrease in the listed value ratio compared to GDP and only about 10.81% at the end of 2009. However, if compared with the total outstanding outstanding bonds issued at 16.9% of GDP, there is still a large amount of bonds that have not been listed and traded on the stock exchanges. These bonds are mostly corporate bonds issued recently. Before 2006, government bonds were traded simultaneously at HOSE and HNX and since September 24, 2009, a specialized government bond trading system with nearly 30 members, including many commercial banks and large securities companies, has officially operated. In the period 2011 - 2020, the government bond market had an average outstanding loan growth rate of about 22.1%/year, reaching 47.83% of GDP by the end of 2020, 6.6 times higher than in 2011 (exceeding the target set in Decision No. 1191/QD-TTg of the Prime Minister on the Roadmap for the development of the Vietnamese bond market in the period 2017 - 2020, with a vision to 2030 of 38% of GDP by 2020). By the end of 2024, the entire market will have 466 listed bond codes, with a total listed value of more than VND 2,304 trillion, an increase of 13.5% compared to 2023, equivalent to 22.5% of estimated GDP in 2023. Currently, the outstanding debt of the corporate bond market is over 15% of GDP. Meanwhile, the Financial Strategy sets a target of 20% of GDP for the corporate bond market by 2025 and at least 25% of GDP by 2030. The derivatives market has become an attractive investment channel for the market during the period of strong fluctuations in the underlying market, helping investors diversify their investment cash flow. Since its opening (August 10, 2017), the derivatives market has had 3 derivative products listed and traded, namely VN30 Index Futures Contracts, 5-year Government Bond Futures Contracts and 10-year Government Bond Futures Contracts. Trading and payment activities on the derivatives market are always guaranteed to be safe and smooth. The demand side structure is increasingly improved and growing sustainably, the number of investors participating in the stock market is increasing. The number of individual and institutional investors, domestic and foreign, is increasing: from nearly 3,000 investor accounts participating when the market first opened in 2000, by the end of December 2024, the market had added 140,879 securities accounts in December 2024, of which the increase in the number of domestic investor accounts mainly came from 140,559 individual investor accounts, while organizations had 138 more accounts. For foreign investors, there was an increase of 162 individual accounts and 20 institutional accounts, with average liquidity improving from VND 14,235 billion/session to VND 14,615 billion/session, thereby in 2024, more than 2 million securities accounts were opened, bringing the total number of accounts in the market to nearly 9.3 million, continuing the journey to reach 11 million accounts by 2030, according to the Stock Market Development Strategy to 2030 approved by the Government at the end of 2023. Number of securities accounts increased by 140,879 accounts in December.

Up to now, the total number of domestic investor securities accounts is equivalent to more than 9% of the population, which also shows that the Vietnamese stock market still has a lot of potential to attract the participation of domestic investors. However, our investor system is not diverse, the current investment demand structure does not ensure sustainable growth. The underdeveloped institutional investor system limits the development of the stock market, especially the government bond market.




In the early stages of the stock market's development from 2000 to 2005, there were only 6 fund management companies. Up to now, the market has 43 fund management companies operating in Vietnam, with total profits increasing by nearly 40% compared to the same period in 2023, operating normally, 04 companies are in the form of restructuring. The total value of investment trust portfolios at the end of 2020 was 435 trillion VND, more than 4 times higher than in 2011 at 98 trillion VND and increased to 511 trillion VND at present.




- Regarding infrastructure organization and the system of intermediary financial institutions

Regarding market organization: market restructuring has initially overcome the lack of synchronization, but the Vietnamese stock market still has many limitations. Regarding the organizational structure, separating the Stock Exchange and VSD from the State Securities Commission helps to separate the functions of stock market management and operation. Dividing the concentrated market into two parts according to listing conditions has expanded the market and attracted businesses, but increased social costs and is not in line with the international consolidation trend. On December 23, 2020, the Prime Minister issued Decision No. 37/2020/QD-TTg to establish the Vietnam Stock Exchange (VNX) under the parent-subsidiary model, restructuring the HNX and HOSE to improve efficiency and competitiveness. Securities companies have also grown strongly in terms of quantity, capital scale, personnel, services and operational capacity. The number of securities companies by the end of 2024 will be 78 companies compared to 105 companies at the end of 2010, and 83 at the end of 2022. This decrease reflects the restructuring and rearrangement of the Vietnamese stock market to improve the quality and efficiency of securities companies. According to VNX's report, the total number of securities company members approved by VNX is currently 78 securities companies, specifically: (i). Listed securities market, 78 securities companies; (ii). Debt instruments market 34 securities companies; (iii). Derivatives market is 23 securities companies. Total revenue in 2024 of member securities companies is expected to reach more than VND 23.4 trillion, an increase of 32%. This reflects the general upturn in the market. Intermediary institutions are not only growing in quantity but also improving in quality. Competition encourages these organizations to improve their operational efficiency and services. They focus on improving management capacity, applying IT, investing in modern equipment and expanding online transactions. Thanks to that, the service is increasingly diverse, transparent and meets the needs of domestic and foreign investors. It can be said that during 24 years of operation, the goals and solutions set out in the Vietnam Stock Market Development Strategy for the period 2011 - 2020 (Decision No. 252/QD-TTg dated March 1, 2012) have basically been achieved. Despite many challenges due to the impact of the world geopolitical situation, with flexible direction and timely policies to support the economy of the Government and the Ministry of Finance, the Vietnam Stock Market in 2024 will still maintain its growth momentum.

*In addition, Vietnam's stock market also has limitations and weaknesses, specifically:*

*First,* the legal system for Vietnam's stock market is still overlapping and lacking in synchronization, causing difficulties in implementation. Some regulations have not kept up with the development of the market, especially with new products such as derivatives and fintech. The monitoring and handling mechanism for violations is not strict, affecting transparency. The policy to attract foreign investment is still limited, not creating strong motivation for foreign capital flows.

*Second*, market information still lacks transparency and is not organized, managed and monitored in a timely manner, so the possibility of risks such as insolvency, fraud, and stock manipulation is very high. Supervision, inspection and examination activities still face many difficulties, due to increasingly sophisticated and complicated violations of the law in the market.

*Third*, products on the stock market are not really diverse and the quality of goods needs to continue to be improved. The basic stock market still focuses mainly on traditional products such as stocks and government bonds.

*Fourth*, the number of investors in the Vietnamese stock market is still low, mainly individuals (over 99%), while institutional investors account for a small proportion, affecting market efficiency. The bond market lacks long-term and professional investors. Some large foreign investors have opened accounts but have not participated, while foreign investment funds mainly invest in equitized enterprise stocks through personal trust accounts.

*Fifth*, stock pricesfluctuate erratically, the stock market in recent times has not ensured sustainable development. Especially now, the psychology of investors is still unstable, which clearly shows the fluctuations of the VN stock price index - Index in recent times.

*Sixth*, the structure of the stock market is not really balanced between components and within each component. The size of the listed bond market is only equivalent to about 30% of the size of the listed stock market (this ratio in ASEAN countries is on average 47.9%). The size of the corporate bond market issued to the public is much smaller than the size of the corporate bond market issued individually. Capital mobilization activities are concentrated in the group of enterprises in the banking, real estate and securities sectors while other business sectors still account for a low proportion.

*Seventh*, facilities, technology and information technology infrastructure are still limited: the trading system is not synchronized, the ability to process orders is slow and easily overloaded when the market fluctuates strongly. Market management and monitoring technology has not kept up with international standards, making it difficult to detect and prevent unusual transactions. The payment and clearing system is not optimal, reducing operational efficiency. The application of new technologies such as blockchain and AI is still limited, not fully meeting the development needs of the market.

*Eighth*, the quality of human resources is uneven: The team of professional personnel with professional licenses, especially the quality of company leaders, is still lacking and weak in securities trading expertise as well as legal advice on business transformation. The team of personnel with high professional qualifications in asset management is not many, mainly concentrated in a few large companies.

*Ninth*, the scale of the Vietnamese stock market compared to other countries in the region is still small. The number of listed and registered enterprises is large but the scale is small and uneven. Only a few large companies have stable growth, while the majority do not represent the economy and contribute significantly to GDP. The transaction value is not commensurate with the market capitalization. The stock turnover rate of the whole market is low, averaging 41.6%, of which UPCoM only reaches 11.5%.

### 3. Some solutions for sustainable development of Vietnam's stock market

With the desire for sustainable development of Vietnam's stock market, the author recommends some solutions as follows:

***First***, continue to improve the legal framework for the Stock Exchange and securities companies.

Continue to improve decrees and documents guiding the implementation of amendments and supplements to the Securities Law in Law No. 56/2024/QH15; synchronously deploy solutions set out in the Stock Market Development Strategy to 2030 approved by the Prime Minister to promote the stock market to develop deeply and widely in a transparent and synchronous manner, ensuring the rights and legitimate interests of investors; at the same time, synchronously issue new regulations on transactions, information disclosure, listing and registration for transactions. Supplement and improve mechanisms and policies (including financial policies and tax policies) in the direction of supporting the effective development of component markets and in accordance with international standards.

***Second***, strengthen the inspection and supervision of the activities of organizations participating in the market, strictly handle violations of individuals, organizations and enterprises using the media (newspapers, news sites, etc.) to provide false information, incomplete information, and distort information. At the same time, strengthen propaganda and dissemination of knowledge about securities, the stock market and prevent risks and fraud in the market, encourage long-term investors, contributing to the stability and sustainable development of the market. In addition, it is necessary to enhance the role of the State Securities Commission (SSC) in state management of securities activities and the stock market.

***Third***, increase the supply of goods to the market, improve the quality of supply.

Strengthening the equitization of state-owned enterprises (SOEs) associated with listing to create quality goods for the stock market. Encouraging enterprises to conduct IPOs associated with listing and registering for trading on the stock market; Developing government bond products; Developing corporate bond products; Developing derivative securities products and other products.

***Fourth***, developing and diversifying the investor base. Strongly developing domestic and foreign capital supply channels for the market, expanding the system of investors, especially institutional investors; fully developing intermediary institutions; diversifying the services provided, ensuring all the elements that constitute a developed capital market in the region. Developing legal regulations to develop money market funds; Diversifying the types of public funds such as funds of funds, leveraged ETFs, etc. It is necessary to develop a number of market-making organizations such as insurance companies and pension funds.

***Fifth***, build a coordination mechanism in managing policies related to the stock market. Macro policies that have a strong impact on the stock market are fiscal policy and monetary policy. Therefore, it is necessary to control inflation (CPI) well, this is one of the very important conditions and premises for the Vietnamese stock market to develop healthily, effectively and stably. Closely combine monetary policy and fiscal policy in macroeconomic management.

***Sixth***, develop the capital market in a modern direction, complete in structure (including concentrated stocks, OTC management market, bond market operating according to international best practices with the ability to link with regional and international markets) to enhance the image and position of Vietnam, towards upgrading the market in 2025; actively participate in international cooperation forums.

***Seventh***, modernize infrastructure, information technology and reform administrative procedures for the stock market.

Increase investment and application of information technology to organize transactions and manage and supervise the stock market; Build a system of core application software for centralized processing, synchronize applications and have management capabilities; Build a system to ensure network security and safety. In addition, it is necessary to consider eliminating administrative procedures and unnecessary licenses, but also ensure the requirements of state management for the healthy development of the stock market.

***Eighthly***, improve the quality of human resources to meet the requirements of sustainable development of the stock market. It is necessary to strengthen training of management, supervision and investors to improve the level of operation in the stock market, focusing on political qualities and professional ethics to develop a sustainable market. The State Securities Commission needs to promote streamlining the apparatus according to the Party and Government.

***Ninth***, continue to actively cooperate and learn from experiences from parties (domestic and foreign) in the process of building strategies and development to ensure the stock market operates effectively, meeting the requirements of stock market management and development according to international practices.

**References:**

*HH, (2024) "Mobilizing 500 trillion VND through the stock market in 2024" State Tax Electronic Magazine*

*Stock Magazine (2024), "Summary of the stock market in 2024"*

*Uyen To (2024) "In 2024, stock market liquidity reached 21,100 billion VND/session, up 19.9%", Financial and Monetary Market Magazine*

*Ha Linh, (2025), "VN-Index hits historic peak of 1,528.57 points", stockbiz.vn*

*Hai Bang (2024), "Improving transparency to increase value and attractiveness of the stock market",*

*https://vsd.vn/vi/ (Viet Nam Securities Depository and Clearing Corporation)*

*https://finance.vietstock.vn/*

# FACTORS AFFECTING THE APPLICATION OF DIGITAL TRANSFORMATION IN ACCOUNTING AT ENTERPRISES

PhD. Nguyen Thi Thuy*

**Abstract:** ***Digital transformation (DT) has substantially changed enterprises' decision-making processes and information management. However, Vietnamese enterprises in general, especially small and medium enterprises, still do not have a correct understanding of the role of DT and the application of DT in all aspects of enterprise operations. So, what is the cause of this situation? This issue has attracted the research attention of scholars; however, the influencing factors have not been consistent among studies, and there have not been many empirical studies in enterprises. In addition, the issue of how the quality of accounting information provided will change when enterprises apply digital transformation in accounting has not been mentioned by many authors. Therefore, this article synthesizes related studies, thereby building a research model to predict the factors affecting the application of digital transformation in accounting at enterprises and its impact on the quality of accounting information provided as a basis for conducting quantitative research in the future.***

• Keywords: *system, information system, accounting information system, quality of accounting information system.*

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## 1. Introduction of the research problem

The 4.0 industrial revolution poses enormous challenges for businesses in innovating and changing business models. Digital technology transformation has dramatically changed the decision-making process and business information management. The Prime Minister signed Decision No. 749/QD-TTg dated June 3, 2020, approving the National Digital Transformation Program to 2025, with a vision to 2030, striving for Vietnam to become a digital nation. Digital Nation Digitalization for businesses plays a vital role. With the Government's policy and the challenges posed, Vietnamese companies need to create momentum for their development, with the core being the digitalization of companies in all aspects, including the application of digital transformation in accounting.

In Vietnam, digital transformation has occurred in most enterprises at many levels, especially in education, finance, transportation, and tourism. However, Vietnamese enterprises in general, especially small and medium enterprises, have not yet adequately recognized the role of digital transformation in the Industrial Revolution 4.0. Specifically, according to the Vietnam Federation of Commerce and Industry (VCCI), currently, small and medium enterprises in Vietnam account for about 97% of the total number of enterprises, and the level of science, technology, and innovation is still low, 80% to 90% of machinery used in Vietnamese enterprises is imported, nearly 80% is old technology from the 1980s - 1990s. Therefore, innovation is a matter of survival for these enterprises (Le, C. T., 2022).

Digital transformation in general and digital transformation in accounting have been and are being studied by domestic and foreign scholars. Lombardi, R., & Secundo, G. (2020) conducted a systematic literature review through 163 published works on Scopus on the relationship between innovative and digital technology as well as the reporting process of organizations. In accounting, Aguiar, G., and Gouveia, L. (2020) conducted a comprehensive study with 88 articles collected from Scopus and Web of Science data from 1974 to 2019, with 2019 being the year with the highest number of studies. The most extensive study on Digital Transformation in Accounting is that of Feghali, K., et al. (2022), who examined the impact of the level of digitalization and changes caused by COVID-19 on accountants' behavior. A survey was collected from 568 accountants working in private companies, and the study found that the level of digitalization positively impacts accountants' behavior. Tiron-Tudor, A. et al. (2022) examined how emerging technologies such as blockchain, cloud computing, and Big Data affect the digital transformation of accounting firms. Recently, Hung, et al. (2023) conducted the study "Factors Affecting Digital Transformation in Accounting: The

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Case of Vietnamese Enterprises" to measure the factors affecting digital transformation in the accounting field in Vietnamese enterprises. In Vietnam, research on digital transformation in enterprises has also attracted the attention of many scholars, especially after the Covid-19 pandemic. Regarding digital transformation in accounting, Pham, T. H. (2023) pointed out the difficulties and challenges. Hoang, K. O. (2023) pointed out the current situation and proposed solutions for digital transformation in the accounting field of Vietnamese enterprises and issues related to legal corridors, technology infrastructure, business awareness, IT skills of accountants, and security.

Although there have been studies on factors affecting the application of digital transformation in accounting at enterprises, the findings show no consensus on the influencing factors, perhaps due to different contexts, scopes, and research subjects. Therefore, this study will synthesize domestic and foreign studies related to the research problem and propose a tentative research model on factors affecting the application of digital transformation in accounting at enterprises.

In addition to the summary and introduction of the research problem, the article is structured into three parts: Research overview, research methods, research results, conclusions, and references.

**2. Literature review**

In the world, the issues of digital transformation, digital transformation application, the impact of digital transformation, and factors affecting the application of digital transformation in accounting in enterprises have also been studied by scientists. Lombardi, R., & Secundo, G. (2020) conducted a systematic literature review (SLR) on the relationship between innovative and digital technology as well as the reporting process of organizations. The authors analyzed studies in the past two decades to answer the research questions. The Scopus database was used as the primary source of access to the articles. After reading the abstracts of 163 relevant works, the authors selected 43 priority publications for analysis and classification to obtain significant results. The study highlights the following emerging research streams on digital transformation in corporate reporting: digital technologies for decision-making and corporate information management; digital technologies as a tool for stakeholder engagement and sustainability reporting practices; and finally, digital technologies as a way to address earnings management, corporate social responsibility, accountability, and transparency.

More specifically, Rachinger, M., et al. (2019) studied digitalization and its impact on business model innovation in two industries, specifically communications and automotive. Qualitative empirical data were collected from 12 key informants working in these two industries. An investigation examined the differences and similarities between how digitalization affects the creation, proposition, and capture of corporate value and how companies deal with the challenges posed by increasing digitalization. The study's findings suggest that, although digitalization is often considered necessary, the value proposition and the value network's position will determine the options available for business model innovation (BMI) through digitalization. Furthermore, organizational capabilities and employee capabilities were identified as future challenges that both industries will face. The findings of this study revealed that representatives of the communications and automotive sectors are aware of both the pressures and opportunities of digitalization in business model innovation; however, its application and exploitation remain challenging. This study contributes to the existing knowledge base by providing empirical insights about digitalization and business model innovation.

Tiron-Tudor, A., et al. (2022) conducted a qualitative study and thematic analysis of academic literature to explore the combined impact of the most disruptive emerging technologies on accounting firms.

In China, Xin, Z. et al. (2022), in the study "Research on Successful Factors and Influencing Mechanism of the Digital Transformation in SMEs," this study identified six key factors from three aspects of technology, organization, and environment, and based on the resource-based view and resource dependence theory to build an action mechanism model. Structural equation modeling was used to analyze data collected from 180 SMEs in China. The results showed that technological and environmental factors positively impact organizational capabilities, thereby promoting the success of digital transformation in SMEs. Organizational capability plays a mediating role in the influence of technological and environmental factors on digital transformation. In addition, employee skills positively moderate the relationship between organizational capability and digital transformation success. This study contributes to the conceptual framework and managerial implications of digital transformation. This study also provides practitioners with insights into enterprise digital transformation. It suggests that enterprises attach importance to enhancing organizational capability and use strategy and talent as essential resources to promote the success of enterprise digital transformation.

Recently, Hung, et al. (2023) conducted a study called "Factors Affecting Digital Transformation in Accounting: The Case of Vietnamese Enterprises" to measure the factors affecting digital transformation in the accounting field at Vietnamese enterprises. The quantitative research results showed that six factors affect the application of digital transformation in the accounting work of Vietnamese enterprises, with the correlation level arranged in descending order, including technology infrastructure (0.492), strategic goals of the enterprise (0.427), and policies of business leaders. (0.413), employee technology usage (0.405), corporate culture (0.396), and corporate pressure to implement digital transformation (0.269). This result can be a valuable reference for promoting digital transformation in business operations in general and the accounting sector.

In 2023, Le, V. H., & Dang, Q. H. conducted a study, "The Factors Affecting Digital Transformation in Vietnam Logistics Enterprises," to analyze the factors affecting digital transformation and the current situation in Vietnamese logistics enterprises. The qualitative (through expert interviews) and quantitative research results showed that five factors, including managers, digital transformation human resources, information technology, investment costs, and digital transformation support services, affect digital transformation activities in logistics enterprises. The research team then proposed solutions to promote this activity in Vietnamese logistics enterprises, contributing to the government's implementation of crucial digital transformation tasks.

In Vietnam, there have been many studies on digital transformation and the impact of digital transformation in the field of accounting and auditing in recent years. Dang, V. T. (2018), in the study "Innovation of accounting processes in the digital age," pointed out 7 impacts of the 4.0 industrial revolution on the accounting field. In addition, Nguyen V.T. (2018) also proposed requirements and some tasks to meet the requirements of regional and international financial and accounting integration.

Duong, T. T. H. (2021), with the research "Application of artificial intelligence in accounting and auditing - a new direction in the 4.0 industrial Revolution," has summarized the theoretical basis of the origin, concepts of artificial intelligence, the application of artificial intelligence in accounting and auditing at companies around the world. From there, businesses see the importance of applying artificial intelligence in accounting and auditing.

Recently, Pham, T. H. (2023), with the research "Digital transformation in the field of accounting - auditing," discussed the current status of digital transformation in the field of accounting - auditing in the context of the impact of digital technology in general and the 4th Industrial Revolution in particular, thereby proposing several solutions to promote digital transformation in the field of accounting - auditing in Vietnam in the coming time. Many accounting and auditing enterprises have promoted applying information technology (IT) in professional activities. Many digital technology applications have been applied by many enterprises in the field of accounting - auditing, such as electronic invoice software, electronic accounting software, electronic sales software, electronic office software, etc. In addition, enterprises have invested in technology and training human resources to serve professional activities and service provision best. According to the author's assessment, the digital transformation process in the field of accounting and auditing faces many difficulties and challenges, such as Inadequate IT infrastructure, Shortage of high-quality financial and accounting personnel, Concerns about data security, Incompatibility between old-fashioned thinking and corporate culture with digital technology innovation. From there, the author recommended management agencies, enterprises, and universities.

In addition, several studies have been conducted on factors affecting the application of digital transformation in business management in general and the application of digital transformation in accounting in particular. Specifically, Chu, B. Q. (2021) conducted "Research to explore factors affecting the successful digital transformation of enterprises in Vietnam." The study identified seven factors affecting the successful digital transformation of enterprises in Vietnam, ranked in decreasing order of influence: (i) Government policies and support; (ii) Enterprise information security and confidentiality; (iii) Digitalization process; (iv) Enterprise digital transformation strategy; Factors (v) Human resources of the enterprise; (vi) Organizational structure and business processes of the enterprise; and (vii) Online customer support services have equally low impact on the success of digital transformation of the enterprise. Next, Nguyen Hoang Nam (2021) conducted quantitative research, processing survey data on 200 employees and managers working in accounting and auditing to identify factors affecting the application of technology in the field of accounting and auditing in Vietnam. The research results showed that there was a positive relationship between the Favorable Conditions factor and Technology Application Behavior in the field of accounting and auditing in Vietnam, which is consistent with the research results of Venkatesh et al. (2003) and Ebrahim (2016) And the Effort Expectancy factor also has an impact on the application of technology in the field of accounting and auditing in Vietnam - this is different from the research results of Ebrahim (2016). The Effort Expectancy factor is "the ease of using the tool." Facilitating conditions are defined as the extent to which an individual believes that the technical and organizational infrastructure exists to support the use of the system (Venkatesh et al., 2003). In addition, the two hypotheses, "Performance Expectancy and Social Influence have a positive impact on Technology Application in the field of accounting and auditing in Vietnam," are not accepted, which is contrary to the research results of Venkatesh et al. (2003). Performance Expectancy refers to the extent to which an individual believes that using this tool can help achieve work efficiency; Social Influence is understood as the extent to which an individual perceives that essential others believe that they should use the new tool (Venkatesh et al., 2003).

In summary, through an overview of domestic and foreign research related to the research topic, we see that the digital transformation issue has attracted scientists' attention. The studies mainly evaluate and analyze the impact of digital transformation and the application of digital transformation in the management and operation of enterprises' business activities. In addition, several domestic and foreign studies seek and discover factors affecting the application of digital transformation in enterprises (such as managers, digital transformation human resources, information technology, investment costs, and digital transformation support services, etc.) the application of digital transformation in accounting in some types of enterprises (technology infrastructure, strategic goals of enterprises, policies of business leaders, employees' ability to use technology, corporate culture, pressure on enterprises to implement digital transformation, etc.). However, the influencing factors are not yet consistent among studies, and there are few empirical studies on Vietnamese travel businesses. This is the research gap that needs to be filled.

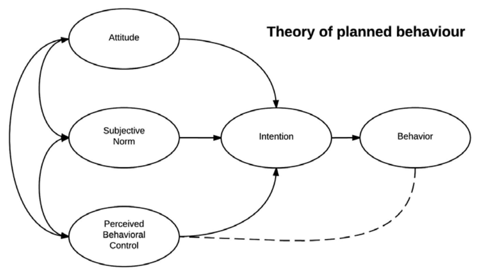
**3. Background theory**

The Theory of Planned Behavior (TPB) was developed by Ajzen from the Theory of Reasoned Action (TRA) in 1991, assuming that a behavior can be predicted or explained by behavioral tendencies to perform that behavior. Behavioral tendencies include motivational factors that influence behavior and are defined as the effort people exert to perform that behavior (Ajzen, 1991).

In the TPB model (Figure 1), the factors that affect an individual's "attitude" are still based on the factors given by the TRA model. However, to further explain the tendency to perform a behavior, Ajzen added a third factor to the model: "Perceived behavioral control." The cognitive behavioral control component reflects the ability to perform a specific behavior, which is the internal and external factors that prevent or facilitate the performance of the behavior, such as resources and conditions nature, economic conditions, etc. The factor "perceived behavioral control" plays a vital role in the TPB model because it has created a difference with the TRA theory of reasoned action, overcoming the limitations of this model in cases where the applicant has no control over their choices. Ajzen proposed that "perceived behavioral control" directly affects the tendency to perform the behavior. If the individual accurately perceives their level of control, behavioral control also predicts the behavior.

Therefore, we used this theory to explain the dependent factor items in the research model.

**Figure 1: The theory of intended behavior (TPB) model**




*Source: Ajzen, I. and Fishbein, M. (1975)*

**4. Research methodology and model building**

***4.1. Research methodology***

This study aims to overview studies on factors affecting the application of digital transformation in accounting at enterprises, thereby providing a proposed research model for conducting quantitative studies to verify these relationships in the future; therefore, qualitative research methods were used. Specifically, the process of using this method is used in 04 steps:

Step 1 - Search for relevant data sources: Search for relevant documents by searching for keywords on Google Scholar, articles in the Scopus and Web of Science categories, doctoral theses from the website of the National Library, proceedings of national and international scientific conferences,...

Step 2 - Extract data: In the results of research works obtained from data searching, we only filter quality articles, e-books, and doctoral theses closely related to the research content (references are specifically cited in the Reference List).

Step 3 - Overview of the research through the combination of research results of previous research works.

Step 4 - Propose a research model to predict factors affecting the application of digital transformation in accounting at enterprises.

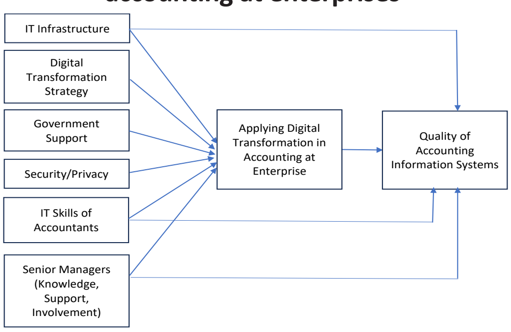
### *4.2. Research model building*

**Table 1: Summary of factors affecting the application of digital transformation in accounting at enterprises**

| No. | Factors | Source |
|---|---|---|
| 1 | IT Infrastructure | Xin, Z., et al. (2022), Pham, T. H. (2023), Hoang, K. O. (2023), Hung, et al. (2023), Le, V. H., & Dang, Q. H. (2023), Nguyen, H. N. (2021). |
| 2 | Digital Transformation Strategy | Chu, B. Q. (2021), Xin, Z., et al. (2022). |
| 3 | Government Support | Chu, B. Q. (2021), Xin, Z., et al. (2022). |
| 4 | Security/Privacy | Chu, B. Q. (2021), Pham, T. H. (2023), Hoang, K. O. (2023), Hung, et al. (2023). |
| 5 | IT Skills of Accountants | Chu, B. Q. (2021), Hoang, K. O. (2023), Hung, et al. (2023), Le, V. H., & Dang, Q. H. (2023). |
| 6 | Senior Managers (Knowledge, Support, Involvement) | Xin, Z., et al. (2022), Hung, et al. (2023), Le, V. H., & Dang, Q. H. (2023), Nguyen, H. N. (2021). |

*Source: Compiled by the group of authors*

**Figure 2: Research model predicts factors affecting the application of digital transformation in accounting at enterprises**




The overall results of studies related to the research topic show that many factors have a positive and strong influence; some have a negligible impact on the application of digital transformation in enterprises in general and the application of digital transformation in accounting at companies in particular. The studies that may explain it were conducted in different countries and contexts. So, instead of using factors in a specific model full of factors, we combine and choose suitable factors, as shown in Table 1. Moreover, no study has been conducted to check the influence of applying DT on the quality of accounting information. On that basis, we build a research model to predict the factors affecting the application of digital transformation in accounting at enterprises and its influence on the quality of accounting information, as outlined in Figure 02.

## 5. Conclusion and future research directions

Although the overall research shows that there are more than six factors affecting the application of digital transformation in accounting at enterprises, such as IT infrastructure, Digital transformation strategy, Government support, Security/confidentiality, IT level of accountants, and Senior managers, we only choose the above six factors because they are proven to affect the application of digital transformation in enterprises in general, and in accounting at enterprises in particular. Thus, this research has built a model to predict the factors affecting the application of digital transformation in accounting at enterprises. Still, there are no results to test the level of impact of these factors. Therefore, in the future, a quantitative study needs to be conducted to examine the level and direction of their effect on the application of digital transformation in accounting at a specific type of enterprise.

## References:

*Cichosz, M., et al. (2020). Digital transformation at logistics service providers: Barriers, success factors, and leading practices. International Journal of Logistics Management, 31(2), 209–238. https://doi.org/10.1108/IJLM-07-2019-0208.*

*2. Chu, B. Q. (2021). Research to explore factors affecting the successful digital transformation of enterprises in Vietnam. Journal of Banking Science & Training, (233), 57–70.*

*3. Dang, V. T. (2018). Innovation of accounting processes in the digital age. Securities Investment Newspaper. Retrieved from https://www.tinnhanhchungkhoan.vn/doi-moi-quy-trinh-ke-toan-trong-thoi-dai-cong-nghe-so-post195781.html.*

*Duong, T. T. H. (2021). Applying artificial intelligence in accounting and auditing: A new direction in the 4.0 industrial revolution. Journal of Industry and Trade - Results of Scientific Research and Technology Application, (23).*

*Ebrahim, M. (2016). Factors affecting the adoption of computer-assisted audit techniques in the audit process: Findings from Jordan. Business and Economic Research, 6(1), 248–271. https://doi.org/10.5296/ber.v6i1.8996.*

*Feghali, K., et al. (2022). Digital transformation of accounting practices and behavior during COVID-19: MENA evidence. Accounting and Management Information Systems, 21(2), 236–269.*

*Hoang, K. O. (2023). Digital transformation solutions in the accounting field in the context of the 4.0 industrial revolution. Industry and Trade Journal - Results of Scientific Research and Technology Applications, (8), April 2023.*

*Hung, et al. (2023). Factors affecting digital transformation in accounting: The case of Vietnamese enterprises. Journal for Re Attach Therapy and Developmental Diversities, 6(9s2), 934–945.*

*Le, C. T. (2022). Digital transformation: Solutions for business development in the fourth industrial revolution. Banking Journal, (6).*

*Lombardi, R., & Secundo, G. (2020). The digital transformation of corporate reporting: A systematic literature review and avenues for future research. Meditari Accountancy Research. https://doi.org/10.1108/MEDAR-04-2020-0870*

*Nguyen, H. N. (2021). Factors affecting the application of technology in the field of accounting and auditing in Vietnam. Proceedings of the National Scientific Conference - CFACT2021.*

*Nguyen, T. M. H., & Bui, T. S. (2021). Factors affecting the intention to implement digital transformation in small and medium enterprises in Hanoi. Journal of Science and Technology - Thai Nguyen University, 226(18).*

*Pham, T. H. (2023). Digital transformation in the field of accounting and auditing in Vietnam. Finance Magazine. Retrieved from https://tapchitaichinh.vn/chuyen-doi-so-trong-linh-vuc-ke-toan-kiem-toan-tai-viet-nam.html.*

*Pham, T. T. O. (2018). Accounting and auditing in Vietnam in the 4.0 industrial revolution. Finance Magazine. Retrieved from https://tapchitaichinh.vn/nghien-cuu--trao-doi/trao-doi-binh-luan/ke-toan-kiem-toan-viet-nam-trong-cuoc-cach-mang-cong-nghiep-40-141199.html.*

*Prime Minister of Vietnam. (2020). Decision No. 749/QD-TTg, dated June 3, 2020, approving the "National Digital Transformation Program to 2025, with a vision to 2030." Hanoi.*

*Tiron-Tudor, A., et al. (2022). Technologies' contribution to the digital transformation in accountancy firms. Electronics, 11(3818). https://doi.org/10.3390/electronics11223818.*

*Xin, Z., et al. (2022). Research on successful factors and influencing mechanism of the digital transformation in SMEs. Sustainability, 14(2549). https://doi.org/10.3390/su14052549*

# LAW ON BUSINESS VALUATION IN BUSINESS ACQUISITION AND MERGER IN VIETNAM

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Phan Tue An - Doan Thi Kim Dung - Dinh Viet Khoa

**Abstract:** ***Business valuation activities in business mergers and acquisitions (M&A) transactions are complex activities, requiring high accuracy and coordination of relevant parties. This activity is regulated by the legal system prescribed by the State. The legal framework and regulatory documents on valuation activities in general in Vietnam have been built relatively completely. However, with the complexity of M&A activities and the rapid development of economics and finance, while the legal system on valuation in M&A has not yet kept up with that complexity and development, leading to a number of inadequacies and limitations in this activity. To address those limitations and inadequacies, there needs to be appropriate solutions to improve the legal system to improve the quality of business valuation in M&A of businesses providing business valuation services. industry and the number of successful M&A transactions in Vietnam.***

• Keywords: *law, business, business valuation; M&A.*

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**The role of business valuation in M&A?**

Valuation in M&A is considered the first step in the entire M&A process. This activity plays a huge role for all stakeholders such as business owners (buyers, sellers, investors); suppliers, state management agencies, businesses providing price appraisal services.

First of all, business valuation in M&A helps parties involved in the transaction determine the fair value of the business. For business owners (sellers), appraising the price of their business before conducting M&A will help them see the current value as well as the possibility of increasing/decreasing value in the near future, avoiding losses. For investors (buyers), it helps to accurately determine the total current and near future value of the business, evaluate the appropriate price and investment level, and avoid buying at too high a price, causing waste. financial fees. From there, we can verify the legality of the business, determine its feasibility as well as minimize risks when making financial investments in M&A projects. Based on the results of valuation with different valuation methods (at least two valuation methods are used, unless otherwise prescribed by law), both buyers and sellers will have a solid basis. to offer prices consistent with the value of the business, reducing disputes and disagreements about prices.

The process of performing business valuation activities in M&A is influenced by many factors such as: Database system on business mergers and acquisitions; Legal system and legal environment on valuation; Transparency and stability of the M&A market; Professional capacity and professional ethics of the appraiser; Applied business valuation method in M&A; State management of enterprise valuation activities in M&A; Organization of price appraisal activities.

This factor is expressed in two aspects: the ability to choose and build a mechanism or model to organize the activities of a business valuation company and the ability to organize and build a business valuation process in M&A. scientific way.

**The need to adjust the law in M&A valuation?**

Business valuation in M&A is an objective activity in the market economy. To harmoniously resolve the interest relationships between those entities, the Government and relevant competent agencies are the agents that must regulate business valuation activities in general and business valuation activities. in M&A in particular by law.

Besides, commodity prices are formed and move under the influence of the objective rules of the market economy, but it is also the spontaneous movement of market prices that can have an impact. negatively affect activities in the socio-economy, To prevent, suppress and minimize the spontaneous impacts of market rules, contributing to encouraging investment , develop production and export, protect the legitimate interests of

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the parties, the State must manage enterprise valuation activities in M&A by law

On the other hand, stemming from the unique properties of law (universal normativity, strict formal determination, and state-guaranteed nature), the State has used law as a tool. Adjust valuation activities in M&A. Therefore, the law needs to specifically stipulate the purposes, principles, valuation methods, valuation process, implementing entities and procedures, and legal value of the project. The results are given,... and institutionalized by laws and regulations to regulate business valuation activities in M&A.

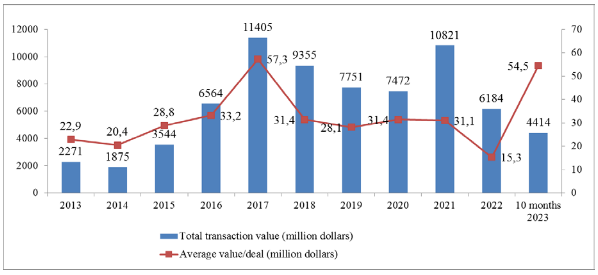
**Current status of M&A and business valuation in Vietnam?**

In recent years, mergers and acquisitions (M&A) activities have become an important part of business activities in Vietnam in recent years and have grown significantly. M&A is carried out for businesses in fields such as real estate, banking, information technology, pharmaceuticals, manufacturing and services. Vietnam has a rapidly growing economy, growth potential and large consumer market, which creates attractive opportunities for investors in M&A activities. The number and value of M&A deals have increased, especially in sectors such as banking, real estate, energy, food and beverages.

Since the economic transformation until now, Vietnam's M&A market has grown very strongly, demonstrated by many successful large M&A deals and transactions, such as in 2016, Thailand's Central Group acquired Big C Supermarket for 1.14 billion USD, in 2017, Thai Baverage Group acquired Sabeco for 4.8 billion USD, or in 2019 there was a 1 billion USD investment deal in Vingroup of Korean SK Group, the deal merger and share swap between VinCommerce and VinEco with Masan Comsumer (Masan Group), KEB Hana Bank (Korea) acquired 15% of charter capital (878 million USD) of BIDV; KKR&Temasek acquired shares of Vinhomes with a value of 652 million USD... or deals related to large Vietnamese corporations, typically Masan, Thaco, Gelex, Vinamilk; REE, PAN Group... Accordingly, the average value/transaction also increases over the years, such as from 22.9 million USD in 2013 to 54.5 million USD/transaction in the first 10 months of 2023. The peak of the average deal value fell in 2017, with 57.3 million USD/transaction (Capital IQ, VIR, KPMG, Kirin Capital, 2023).

The performance results of the M&A market in Vietnam in recent years are shown in the chart below.

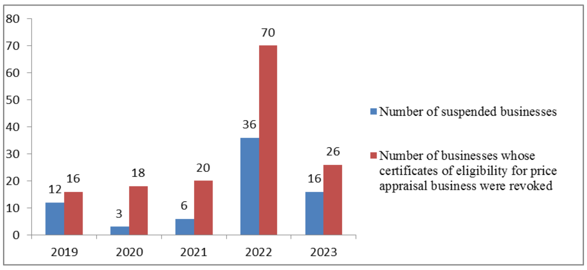
**Figure 1: Total value and average value of M&A transactions in Vietnam in the period 2013-2023**




*Source: Research by Capital IQ, VIR, KPMG, Kirin Capital*

In recent times, Vietnam's M&A market has recorded remarkable changes, from a new field, M&A has become a tactic applied by many investors to grow. Along with that, consulting and business valuation activities also participate and develop more strongly to accompany M&A activities, contributing to facilitating successful and effective M&A transactions. Therefore, in recent times, the field of valuation in general and business valuation services in particular have developed quite quickly and complicatedly, reflected in the number of valuation enterprises and appraisers growing and developing. expand rapidly. Since the Price Law took effect and Project 623 on "Improving the capacity of Vietnam's SA activities in the period 2013-2020" (Decision 623/QD-BTC dated March 28, 2014 of the Ministry of Finance) was approved. promulgated, the valuation industry has developed "explosively" in the number of valuation enterprises granted business eligibility certificates and the number of appraisers granted practice cards. However, the rapid development of economic and financial activities, including M&A activities, also leads to the "hot" development of the field of valuation. Specifically, the number of valuation businesses increased by an average of 15.6% in the period 2013-2022, with some years reaching a rate of over 20%/year such as the period 2015-2017 and 2020 with 298 businesses, equivalent to 298 businesses. equivalent to an increase of 31.5% compared to the previous year. The number of appraiser cards issued also increased rapidly. To date, the Ministry of Finance has issued 2,352 price appraiser cards, twice as many as in 2013. Regarding the number of appraisers qualified to practice, in 2022 there will be 1,464 appraisers qualified to practice appraisal. price. Thus, after about 13 years, the number of valuation businesses granted certificates of eligibility for valuation business and the number of appraiser cards has increased many times (Ministry of Finance, 2022). This also shows that valuation activities have undergone a strong transformation, forming professional valuation businesses and a team of competent and qualified price appraisers to serve the needs of asset valuation. products in many different fields. Thanks to the appearance and increase of the force of companies providing appraisal services and consulting on business valuation in M&A activities, there have been many successful M&A transactions, contributing to increasing the total M&A transaction value for the economy in Vietnam.

**Figure 2: Number of businesses suspended operations and withholding certificates of eligibility for business valuation over the years**




*Source: Price Management Department (Ministry of Finance)*

From the above situation, it can be seen that the role of consultants, appraisers, and valuation service businesses in M&A is very important, being the agent that connects and supports businesses (customers) successfully carried out M&A.

**Current status of the law on business valuation in M&A in Vietnam?**

As mentioned above, M&A activities are also a complex process, containing many risks and challenges, while business valuation activities in M&A are affected by many factors such as M&A data system; legal system and legal environment; Valuation methods used by businesses; organization; information system; ….. In particular, legal factors are important factors that have a significant impact on the success or failure of M&A transactions. This factor's impact is reflected in two main aspects: (i) the legal system promulgated to regulate business valuation activities in M&A; (ii) the process by which consulting and valuation businesses and their teams of consultants and appraisers apply the legal system to perform business valuation in M&A.

To create favorable conditions for M&A activities in Vietnam, especially for international M&A deals, Vietnam has also signed free trade agreements and investment protection with many countries. Other countries and territories, such as:

- Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP): This is a multilateral free trade agreement that Vietnam has signed with 10 CPTPP member countries, including Australia, Brunei, Canada, and Chile. , Japan, Malaysia, Mexico, New Zealand, Peru and Singapore. CPTPP expands markets, reduces taxes and creates favorable conditions for M&A activities with member countries.

- Comprehensive Economic Agreement with the European Union (EVFTA): This is a free trade agreement between Vietnam and the European Union (EU). EVFTA has expanded the scale and scope of the market, reduced taxes and promoted M&A activities between the two sides.

- Vietnam - Korea Free Trade Agreement (VKFTA), Vietnam - Japan Free Trade Agreement (VJEPA): These agreements have created favorable conditions for M&A activities between countries and promoted economic cooperation, economic relations, trade and investment.

- Comprehensive Economic Agreement with the European Union (EVFTA): This is a free trade agreement between Vietnam and the European Union (EU). EVFTA has expanded the scale and scope of the market, reduced taxes and promoted M&A activities between the two sides.

- Vietnam - Korea Free Trade Agreement (VKFTA), Vietnam - Japan (VJEPA): These agreements have created favorable conditions for M&A activities between countries and promoted economic cooperation. , economic relations, trade and investment.

- Other free trade and investment protection agreements with other countries and territories such as the US, Australia, New Zealand, Canada, Chile, ASEAN, and countries in the BRICS bloc (Brazil, Russia, India , China and South Africa).

For business valuation activities, there is also regulation by legal documents such as Price Law No. 32/2023/QH15 dated June 19, 2023 regulating price appraisal services; Decree No. 89/2013/ND-CP dated August 6, 2013 of the Government regulating Vietnam's valuation standard system; Circular No. 122/2017/TT-BTC dated November 15, 2017 regulating Valuation Standard No. 12 on Enterprise Valuation; Circular No. 36/2024/TT-BTC dated May 16, 2024 regulating valuation standards on enterprise valuation,... The legal system of valuation is issued including regulations and standards providing complete professional guidance for valuation services of diverse types of assets such as real estate, movable property, businesses, and assets. Intangibility, brand, etc. In particular, the Valuation industry is also interested in developing through the promulgation and implementation of Project 623 on "Improving the capacity of Vietnam's valuation activities in the period 2013-2020".

In general,The legal framework system related to business valuation activities is increasingly improving, contributing to meeting practical needs in business valuation in general and in the field of M&A in particular. However, besides that, the legal system on business valuation in M&A still has certain limitations, specifically:

- Vietnam does not have a separate law on M&A and business valuation in M&A; The legal framework is still incomplete. Regulations related to M&A activities of enterprises in general only stop at establishing the form of M&A activities. There is no clear, specific document guiding procedures and processes for business valuation in M&A, while legal documents have different regulations, making M&A difficult to establish transactions. , status of each buyer and seller, management consequences after purchase...

- The system of legal documents on M&A and valuation in corporate M&A is not centralized and unified on a common law but is also scattered in many documents. In fact, an M&A transaction with a business in Vietnam is governed by many different laws and regulatory documents, such as: Civil Law, Enterprise Law, Investment Law, Competition Law, Securities Law. Securities, Environmental Law, Price Law, Real Estate Law; Intellectual property law; The system of asset valuation standards, ... not to mention circulars and decrees that can be issued at any time to supplement the above laws and regulations. Specifically:

+ + The Securities Law 2019 only regulates forms of division, separation, merger, and consolidation of securities companies and fund management companies without mentioning division, separation, merger, and consolidation in the fields other area. (Article 35, Securities Law 2019).

+ Although the 2020 Enterprise Law does not provide a specific definition of enterprise M&A, there are some quite specific regulations on M&A for each type of enterprise, mentioning many regulatory regulations. Social relationships arise related to M&A. These regulations have been effective in creating a safe legal corridor for M&A transactions to develop. However, the business information element is not strictly regulated, so searching for information about target businesses in the Vietnamese market is very limited and there are no useful search tools with reliable data sources. reliable so investors can collect information. Meanwhile, companies that want to be merged or sold often hide unfavorable business information, debts or disputes and lawsuits, causing investors to face many risks when they do not know the information from the side. company in which they intend to invest.

+ The Investment Law 2020 mentions two forms of M&A: merger and acquisition of businesses. Corporate M&A activities are considered one of the forms of direct investment. According to the provisions of this Law, business acquisition can be carried out in the form of partial or complete acquisition of an enterprise or branch. Accordingly, investors have the right to contribute capital, buy shares, and contribute capital to economic organizations (Article 24. Investment Law 2020); Foreign investors can invest in the form of capital contribution, purchase of shares, or capital contribution to economic organizations (Article 25, Article 26 of the Investment Law 2020).

+ Regarding enterprise brand valuation, although there is a legal corridor for the brand, there are still many problems, from conflicts between documents to illegalities. within current regulations. This causes many difficulties for individuals and organizations directly implementing such as: According to the provisions of Accounting Standard No. 04, only some objects of Intellectual Property rights are considered Assets. Intangible fixed assets such as inventions, copyrights, trademarks (in cases where the trademark is not created within the enterprise such as being acquired, contributed capital, etc.). But Circular 45/2013/TT-BTC in Clause 2, Article 4 stipulates that all objects of Intellectual Property rights are considered intangible fixed assets and that is the basis for valuation and calculation. value of the business. Point b, Clause 1, Article 6 of Circular 45/2013/TT-BTC considers "geographical indications" to be a type of intangible fixed asset of an enterprise, which conflicts with the provisions of Clause 4, Article 121 of the Department of Law. Intellectual property: "The owner of Vietnam's geographical indications is the State"…..

- The above legal documents regulate social relationships that arise during the process of the parties conducting M&A activities. In addition, although they are based on the majority of international commitments that Vietnam has participated in, some provisions in international conventions and treaties regulating M&A can also create unpredictable impacts on the completion of M&A. an M&A transaction.

- Many issues directly related to business valuation in M&A that Vietnamese law has not yet specifically regulated such as auditing, valuation, taxes, consulting, brokerage, security, information, mechanisms Dispute resolution... Meanwhile, M&A is a commercial and financial transaction, requiring specific regulations and a market mechanism to offer and buy businesses, prices, and provide information. information, transfer and establishment of ownership, transfer of legal status, shares, stocks, financial obligations, employees, brands...

- Currently, there are no specific regulations or instructions on business valuation in M&A. Enterprise valuation in general is being guided in a number of legal documents on valuation such as Price Law No. 32/2023/QH15 dated June 19, 2023 regulating valuation services; Decree No. 89/2013/ND-CP dated August 6, 2013 of the Government regulating Vietnam's valuation standard system; Circular No. 122/2017/TT-BTC dated November 15, 2017 regulating Valuation Standard No. 12 on Enterprise Valuation; Circular No. 36/2024/TT-BTC dated May 16, 2024 regulating valuation standards on enterprise valuation, ... However, currently, there is no separate legal document regulating Decision on business valuation in M&A. M&A deals take place mainly because the parties involved agree on price, so the price set is often subjective and inaccurate.

In addition, some appraisers still lack experience in valuation and do not have a deep understanding of the appraised assets and the market of the appraised assets, so they do not have the necessary assessments and arguments in the process. Appraisal to reach appropriate conclusions about the value of the appraised asset. In addition, consultants and appraisers lack professional support, such as: comparative data sources and lack of updated knowledge and skills, as well as lack of sharing of practical experience.

From the above limitations, in order to improve the quality of business valuation and develop M&A activities, Vietnam needs to build a unified legal corridor system for this activity, thereby creating peace of mind for investors. related parties in the process of implementing M&A deals.

**Recommendations and proposed solutions to improve the law on business valuation in M&A in Vietnam?**

***On the part of the Government***

- Build and complete the legal framework and support from the Government on business M&A activities and business valuation in M&A.

Accordingly, it is necessary to establish an agency to manage or monitor the unified law enforcement of M&A activities, as well as be responsible for providing unified professional guidance for M&A activities.

- It is necessary to unify regulations on M&A activities in legal documents. In the Investment Law, M&A activities are considered a form of direct investment by foreign investors. However, when performing M&A in the form of buying and selling shares, this activity is regulated by the Securities Law and documents related to the securities sector. This can cause conflicts in law enforcement for the same investor's activities. The Investment Law is the premise for determining the legal rights and obligations of investors in M&A deals; However, the conduct, implementation method, and operating mechanism of the M&A market should be governed by securities law.

- There should be policies to support legal, administrative and tax procedures for M&A related activities that need to be applied. State conditions and policies need to be reformed in the direction of reducing capital barriers, simplifying administrative procedures, and creating openness in investment mechanisms and policies; Apply tax incentives for research and development activities, encouraging innovation in businesses.

- The Government needs to improve the investment environment with a transparent and competitive orientation; improve investment policies through a combination of various market liberalization measures, such as reducing conditional business lines and removing requirements for duplicate approvals and licenses Assembling each other is causing many difficulties.

- Promote administrative procedure reform and modernization in the financial sector, with a focus on taxes, customs, and the State treasury, contributing to improving the business environment and encouraging startups; At the same time, improve the competitiveness of the economy through organizing the implementation of the Government's resolutions on administrative reform, improving the business environment, and developing businesses in the direction of expanding the application of information technology. information, modernize management methods, expand the scope of electronic tax refunds, electronic invoices and electronic customs systems.

- There needs to be specific and unified regulations on business valuation methods in M&A; There needs to be a unified guiding document on enterprise valuation to serve the M&A process, avoiding the situation of self-negotiation on enterprise value as at present. Regulations on business valuation must ensure the correct determination of business value according to Accounting Law and the brand value of the business. From there, ensuring the transparency of the M&A market, avoiding abuse of power by managers and executives of businesses participating in M&A.

- It is necessary to supplement legal regulations in the direction of improving the conditions for being granted a certificate of eligibility to conduct business in price appraisal services for organizations and individuals providing price appraisal services; Regulations on classifying valuation businesses and appraisers according to areas of expertise in valuation service business activities such as: appraisal of real estate prices, machinery and equipment and common goods and services. normal and appraisal of business prices, financial assets, intangible assets; regulations on capital ratios ensure the ability to control the enterprise for capital contributing members who are price appraisers practicing at the enterprise; The provisions from the Decree on standards for appraisers who are legal representatives, directors or general directors of valuation enterprises... need to be raised into Law.

- Need to strengthen the role of State management; The management of valuation enterprises is based on respecting the business autonomy of enterprises and respecting the principles of independence, objectivity, and honesty in the practice of appraisers. Strengthen management, inspection, supervision, and timely correction to ensure that valuation activities comply with the law, improve service quality and utility, and better meet appraisal needs. prices in general and business valuation in M&A in particular for customers. In addition, focus on strengthening control over the activities of foreign valuation organizations in Vietnam.

- It is necessary to review, supplement, amend and complete the legal system on valuation in accordance with Vietnamese practice and international practice (according to signed agreements).

- It is necessary to continue to monitor and publish the results of assessing the quality of valuation activities of M&A valuation enterprises, contributing to motivating valuation enterprises to make efforts to improve service quality.

- It is necessary to build an information control channel and transparency in M&A activities in general, and business valuation activities in M&A in particular, because information such as price, brand, market, Parts, management... are very necessary for parties involved in M&A transactions (buyers, sellers, consultants, appraisers, state management agencies, ...). If information is not controlled and transparent, it can cause a lot of damage to all parties, and at the same time greatly affect other markets such as commodities, stocks, and banks.

***On the part of businesses providing consulting and business valuation services***

- Need to focus on being better equipped on legal issues, mastering regulations in M&A activities and business valuation in M&A.

M&A is a complex process, containing many risks and challenges. Consulting parties need to clearly understand their rights to participate in businesses. M&A can be conducted in many different forms: repurchasing shares, capital contributions, capital transfers, not to mention the participation of foreign organizations. governed by other legal regulations.. Therefore, consultants need to clearly understand the legal regulations and procedures when conducting business M&A

- Improve the capacity of the team of appraisers and consultants in valuation in general and M&A enterprise valuation in particular, to meet the requirements of business valuation services, through Organize classes to foster knowledge and skills in valuation; Send appraisers to study and receive advanced training at home and abroad.

- There needs to be a more comprehensive and proactive survey strategy to access information from the seller. At the same time, during the negotiation process, the parties must have clear regulations on the issue of providing information during the transaction process so that survey and appraisal can be carried out in the most convenient way, helping M&A transactions take place. as quickly as the parties had expected.

- Need to improve competitiveness through building and branding position in the marketplace, building trust in customers, and constantly improving service quality. Limit unfair competition, do not compete for customers in the form of preventing, threatening, manipulating, bribing, colluding with customers and other unfair competitive acts.

**Conclude**

Global corporate M&A activities in general and Vietnam's M&A market in particular have had a very strong growth rate in recent times in both quantity and value. Along with that, business valuation activities in M&A will also be equally exciting in the coming time. With the situations analyzed above, having a legal system as well as applying it to business valuation activities in M&A is not a simple and easy process in a short time. This requires the coordination of all parties from the Government, valuation businesses, teams of consultants, experts and appraisers; seller and buyer; Investors; The State management agency in charge of this activity, related entities, etc. are united and determined to synchronously implement the above solutions to improve quality, promote and develop valuation activities. valuation in further M&A in Vietnam.

**References:**


*Ministry of Finance (2020, Project "Improving Vietnam's SA operational capacity in the period 2013-2020", Decision 623/QD-BTC dated March 28, 2014 of the Ministry of Finance.*

*Ministry of Finance (2017), Valuation standard No. 12 on Enterprise valuation, Circular No. 122/2017/TT-BTC dated November 15, 2017.*

*Ministry of Finance (2024), Valuation standards on Enterprise valuation, Circular No. 36/2024/TT-BTC dated May 16, 2024.*

*Ministry of Finance (2024), Regulations on training, fostering, updating knowledge and granting certificates of valuation operations, Circular 39/2024/TT-BTC.*

*Ministry of Finance (2022), Report on inspection of price appraisal work of the Price Management Department.*

*Government (2013), Vietnam's valuation standard system, Decree No. 89/2013/ND-CP dated August 6, 2013 of the Government.*

*https://www.brandsvietnam.com/24077-Suc-hut-va-goc-khuat-nhung-thuong-vu-M-A*

*National Assembly (2014), Enterprise Law No. 59/2020/QH14 dated June 17, 2020*

*National Assembly (2014), Investment Law No. 61/2020/QH13 dated June 17, 2020*

*National Assembly (2017), Law on Credit Institutions No. 17/2017/QH14 dated 22/20/2017*

*National Assembly (2023), Price Law No. 32/2023/QH15 dated June 19, 2023*

# CUSTOMS PROCEDURES FOR ON-THE-SPOT IMPORT AND EXPORT GOODS IN THE CONTEXT OF PROCESSING ACTIVITIES FOR FOREIGN TRADERS IN VIETNAM

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**Abstract:** ***The processing of goods for foreign traders in Vietnam has been widely expanding and developing, providing significant "advantages" for Vietnamese enterprises. In order to maximize the benefits of processing activities for foreign traders and to encourage the development of international processing activities in Vietnam, the regulations on tax policy and customs procedures for import-export goods play a vitally critical role. The practice of on-the-spot import and export has been widely implemented in Vietnam's processing activities for foreign traders, contributing to the foundational establishment of seamless supply chains within the country. This practice significantly facilitates and benefits trading activities between Vietnamese enterprises and foreign entrepreneurs who do not physically present in Vietnam. To further streamline international processing activities in Vietnam while ensuring uniform state management in customs, it is necessary to analyze and evaluate the regulations on customs procedures for on-the-spot imported or exported goods in processing activities for foreign traders. From the researching result, proposals for improvement should ensure the alignment of these regulations with legal frameworks governing trade, foreign trade management, and import-export taxation laws.***

• Keywords: *on-the-spot export, on-the-spot import; customs procedures for on-the-spot export and import; international processing; processing activity for foreign trader.*

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## 1. Characteristics of processed goods and the importance of processing activities for foreign traders in Vietnam

### *1.1. Definition of goods processing activity for foreign traders*

According to Article 178 of the Commercial Law No. 36/2005/QH11, "Processing in trade refers to a commercial activity whereby the processor uses part or all of the materials or supplies provided by the ordering party to perform one or several stages of production as required by the ordering party for remuneration."

Processing goods for foreign traders encompasses international processing activities, including production, processing, assembly, and packaging, to transform raw materials, auxiliary materials, or semi-finished products according to the ordering party's specifications. The ordering party, in this context, is a foreign legal entity or individual (including enterprises within export processing zones), while the processor is a Vietnamese enterprise (including foreign-invested enterprises and enterprises in industrial or high-tech zones…). The ordering party may provide (rent out, lease…) machinery, equipment, raw materials, auxiliary materials, semi-finished products, and production standards to the processor. The domestic processor organizes production and delivers all finished goods to the ordering party.

### *1.2. Characteristics of processed goods for foreign traders*

Processed goods for foreign traders can be approached from two perspectives; in which according to a narrow concept, "Processed goods" are the outputs of processing activities, including semi-finished or finished products, that have undergone at least one stage of production.

In broad perspective, "Processed goods" include all goods entering or leaving the customs territory for processing purposes. This includes raw materials, auxiliary materials, processed products (semi-finished or finished), waste, scrap, and machinery or equipment used in processing…

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In Vietnam, the distinctive features of processed goods for foreign traders include:

- Ownership of both raw materials and finished goods remains with the ordering party (foreign trader).

- The relationship between the processor and the ordering party is governed by a commercial processing contract. (processing contract).

- Processed goods must undergo at least one stage of production, regardless of whether the input factors of the processing process are raw materials or semi-finished products provided by the ordering party or the processing party authorized to self-supply.

- Specifications, quality standards, and material consumption rates for processed goods are determined by the ordering party and stipulated in the processing contract.

- Delivery of processed goods is subject to the ordering party's instructions as outlined in the processing contract.

***1.2. Importance of processing activities for foreign traders in Vietnam***

Processing goods for foreign traders has been offering significant advantages for Vietnamese enterprises by leveraging abundant labor resources, existing factory infrastructure, machinery, and locally or internationally (imported) sourced materials. Vietnamese companies also benefit largely from using the established "Trademarks" and distribution networks of the foreign traders and enterprises. These advantages allow domestic processors to gain great experiences and gradually increase the proportion of self-manufactured goods for direct export. Therefore, the volume of goods processing activities are expected to continuously increase, and the proportion of processed goods may not decrease in the near future. Furthermore, processing activities are predominantly concentrated in light industries such as textiles, footwear, and electronics, which require proactive development. Hence, uniform state management of customs procedures for export and import goods within international processing activities is essential. This alignment ensures consistency with trade management, foreign trade regulation, and tax policies, thereby facilitating international processing and trade.

**2. Regulations on export, import of goods and on-the-spot export, import goods in processing activities for foreign traders**

***2.1. Regulations on export and import of goods***

According to Article 28 of the Vietnamese Commercial Law No. 36/2005/QH11, export and import of goods are regulated as follows:

*"1. Exportation of goods refers to goods being moved out of Vietnam's territory or into designated special zones within Vietnam's territory that are treated as separate customs territories under the law.*

*2. Importation of goods refers to goods being moved into Vietnam's territory from abroad or from designated special zones within Vietnam's territory that are treated as separate customs territories under the law."*

According to Clause 4, Article 3 of the 2017 Foreign Trade Management Law: *"A customs territory is a geographically defined area within the territory of Vietnam, established in accordance with the laws of Vietnam as a member; it engages in the buying and selling, and exchange of goods with other parts of the territory and foreign countries, which constitutes export and import activities."*

According to Clause 4, Article 26 of Decree No. 35/2022/ND-CP dated May 28, 2022, issued by the Government on the management of industrial zones and export processing zones: " *The exchange of goods between export processing enterprises and other areas within the territory of Vietnam, excluding non-tariff areas, constitutes export and import activities, except for cases specified in item c of this clause and cases not required to undergo customs procedures as prescribed by the law on customs."*

According to Clause 6, Article 4 of the Vietnamese Customs Law in 2014: *"Goods include movable assets with names and codes listed in the Vietnam Export-Import Commodity List that are exported, imported, in transit, or stored within the customs operational area."*

The scope of the customs operation territory is specifically defined in Decree No. 01/2015/ND-CP dated January 2, 2015, as amended and supplemented by Decree No. 12/2018/ND-CP dated January 23, 2018, issued by the Government.

However, in reality, existing legal documents still lack a clear definition and distinct characteristics for on-the-spot export and import, making it difficult to differentiate them from conventional export and import activities.

***2.2. Regulations on on-the-spot export and import goods in processing activities for foreign traders***

According to current legal regulations, there is no specific provision regarding the concept of goods for on-the-spot export or import. However, related provisions concerning on-the-spot export and import are reflected in various aspects of different legal documents such as: customs procedures for goods subject to on-the-spot export and import; the rights and obligations of the receiving party in processing, who must complete on-the-spot export procedures for certain types of goods; and tax policies regarding goods for on-the-spot export and import.

Article 182 of the Commercial Law No. 36/2005/QH11 dated June 14, 2005, regarding the rights and obligations of the receiving party in processing, states that: *"In the case of processing for foreign organizations or individuals, the receiving party is allowed to carry out on-the-spot export of processed products, leased or borrowed machinery and equipment, raw materials, accessories, surplus materials, scrap, and waste according to the authorization of the contracting party."*

Article 42 of Decree No. 69/2018/ND-CP dated May 15, 2018, on the rights and obligations of the contracting and receiving parties in processing, clearly specifies: *The receiving party in processing must complete the on-the-spot export procedures for processed products; leased or borrowed machinery and equipment; raw materials, accessories, surplus materials; scrap and waste according to the authorization of the contracting party.*

Article 35 of Decree No. 08/2015/ND-CP dated January 21, 2015, concerning on-the-spot export and import goods, states that the on-the-spot export and import goods in the processing activity for foreign traders include: goods ordered for processing in Vietnam and sold by foreign organizations or individuals to entities within Vietnam.

Clause 1, Article 86 of Circular 38/2005/TT-BTC dated March 25, 2015, mentions that on-the-spot export and import goods in the processing activity for foreign traders include: *processed products; leased or borrowed machinery and equipment; raw materials, surplus materials; scrap and waste under the processing contract.*

In conclusion, on-the-spot export and import goods in the processing activity for foreign traders are currently regulated inconsistently across various legal documents, such as the Commercial Law No. 36/2005/QH11 dated June 14, 2005; the Law on Foreign Trade Management No. 05/2017/QH17 dated June 12, 2017; the Customs Law No. 54/2014/QH13 dated June 23, 2014; the Export and Import Tax Law No. 107/2016/QH13 dated April 6, 2016; Decree No. 69/2018/ND-CP dated May 15, 2018; Decree No. 08/2015/ND-CP dated January 21, 2015; and Circular 38/2005/TT-BTC dated March 25, 2015.

***3. Customs procedures for on-the-pspot export and import goods in the processing activity for foreign traders in Vietnam***

According to current regulations, the concept of customs procedures for on-the-spot export and import goods is not clearly defined in legal documents. Based on the concept of customs procedures as stipulated in the Customs Law No. 54/2014/QH13 dated June 23, 2014, and the regulations regarding on-the-spot export and import goods, the customs procedures for on-the-spot export and import goods in the processing activity for foreign traders can be summarized as the tasks that customs declarants and customs officers must perform according to the Customs Law for processed products; leased or borrowed machinery and equipment; raw materials, surplus materials; scrap and waste under the processing contract.

The detailed customs procedures for on-the-spot export and import goods in the processing activity for foreign traders are specified in Article 86 of Circular 38/2015/TT-BTC, amended and supplemented by Circular 39/2018/TT-BTC, which outlines:

*Exporter's responsibilities:*

+ Declare export customs information and transportation details, clearly stating in the "Destination for tax exemption transport" field the customs office's code for import procedures, and in the "Internal management number of the enterprise" field on the export declaration as #&XKTC or in the "Other remarks" field on the paper customs declaration;

+ Perform export procedures according to regulations;

+ Notify that export customs procedures have been completed so the importer can carry out import procedures and deliver goods;

+ Receive the import declaration after on-the-spot customs procedures are completed for further processing.

*Importers' responsibilities:*

+ Declare import customs information within the required time limit, indicating the corresponding export customs declaration number in the "Internal management number of the enterprise" field as #&NKTC#&export declaration number or in the "Other remarks" field on the paper customs declaration;

+ Perform import procedures as required;

+ Notify the exporter when the import procedures are completed to proceed with further customs procedures;

+ Goods may only be used in production or for sale after customs clearance for import is completed.

According to Article 10 of Decree 134/2016/ND-CP dated September 1, 2016, amended by Decree 18/2021/ND-CP dated March 11, 2021: *"Scrap and waste generated during processing, when moved for domestic consumption, are exempt from import tax. Taxpayers do not need to complete customs procedures but must declare and pay VAT, special consumption tax, and environmental protection tax (if any) to tax authorities as per tax laws."*

Therefore, scrap and waste generated during processing, when transferred for domestic consumption, are subject to on-the-spot export and import customs procedures as per Circular 38/2015/TT-BTC. However, this regulation is inconsistent with Decree 18/2021/ND-CP dated March 11, 2021.

**4. Evaluation of current regulations on customs procedures for on-the-spot export and import goods in the processing activity for foreign traders**

***4.1. Advantages***

The current regulations on customs procedures for on-the-spot export and import goods in the processing activity for foreign traders in Vietnam show the following advantages:

*Firstly, the regulations guiding customs procedures for goods ordered for processing in Vietnam and sold to entities within Vietnam by foreign organizations or individuals has significantly facilitated trade activities for foreign traders without their physical presence in Vietnam; hence, greatly benefited Vietnamese enterprises.*

In the activity of receiving processing orders from foreign traders in Vietnam, the processed products are owned by the principal overseas. When domestic businesses need to purchase products, the principal instructs the processor to deliver goods in Vietnam after the contract ends. The domestic business will make payments to the principal abroad or through the processor, and the goods do not move through Vietnamese territory. This is a common international trade activity in Vietnam. In this scenario, instead of the goods needing to be exported from Vietnam or exported to a bonded warehouse and re-imported into Vietnam, the goods are transferred directly between the processor in Vietnam and the local entity. This eliminates transportation costs associated with moving goods out of the country, optimizes logistics costs, and shortens the transfer time of ownership, thus creating advantages for foreign traders without a physical presence in Vietnam and enhancing the competitiveness of processing activities for foreign traders in Vietnam.

*Secondly, the on-the-spot export and import have created a seamless supply chain in Vietnam.*

In cases where the principal authorizes the processor in Vietnam to purchase goods or receive goods from export-processing enterprises or businesses in bonded zones, the on-the-spot export and import procedures allow businesses to utilize available materials, shorten production time, save on costs, and ensure better quality of goods due to shorter transport distances…

*Thirdly, performing on-the-spot export and import procedures makes international payments more convenient for businesses.*

Except the cases in which the foreign trade contract specifies payment terms before delivery, completing the on-the-spot export and import procedures helps businesses with international payments, as the customs declaration for export and import has been confirmed by customs authorities.

***4.2. Limitations***

Despite the advantages, the current regulations on customs procedures for on-the-spot export and import goods in the processing activity for foreign traders have some limitations, including:

*Firstly,* there is a lack of consistency in the general regulations regarding on-the-spot export and import goods in the processing activity for foreign traders.

In reality, the current regulations on goods exported and imported on-site do not include provisions on: the definition of terms such as "on-the-spot export" and "on-the-spot import"; classification of on-the-spot export and import goods; characteristics of on-the-spot export and import goods; and distinguishing on-the-spot export and import goods from regular export and import goods. The absence of clear regulations on on-the-spot export and import goods in legal documents leads to dire difficulties in performing customs procedures for on-the-spot export and import goods in general, and on-the-spot export and import goods related to the processing of goods for foreign traders in particular.

*Secondly*, Inconsistent regulations across legal documents such as the Commercial Law, Customs Law, Foreign Trade Management Law, and various decrees and circulars lead to unclear and conflicting procedures for customs. As a result, the regulations on customs procedures for on-the-spot export and import goods related to the processing of goods for foreign traders have not been developed based on a unified legal framework across the current legal documents.

*Thirdly*, customs procedures for scrap and waste generated during the processing process when transferred for domestic consumption have not been regulated and uniformly implemented according to the current legal provisions, leading to inconsistencies in the implementation by processing enterprises and customs authorities across the industry.

**5. Proposals to enhance regulations on customs procedures for on-the-spot export and import goods in the processing activity for foreign traders in Vietnam**

In Vietnam, processing goods for foreign enterprises has consistently increased over the years, contributing to economic growth, creating more jobs for workers, increasing foreign exchange earnings, and helping businesses diversify production. Therefore, to maximize the advantages of processing activities for foreign traders in Vietnam, in addition to measures to attract foreign investment, apply modern technology in production management, and improve the skills of workers, the customs procedures for on-the-spot export and import of processing goods for foreign traders in Vietnam need to be improved promptly to facilitate customs procedures, further supporting international trade, and enhancing the integration of logistics activities.

Based on the above analysis and evaluation, the regulations on customs procedures for on-the-spot export and import of processing goods for foreign traders in Vietnam need to be updated in line with the following proposals:

***Firstly,*** incorporate regulations on on-the-spot export and import actitvities in legal documents, including definitions for on-the-spot export and import, classification of on-the-spot exported and imported goods, and distinguishing these from regular exported and imported goods. This will create a foundation for unified customs procedures for on-the-spot export and import of goods processed for foreign traders in Vietnam, aligning with related legal documents.

***Secondly*,** establish consistent regulations for on-the-spot export and import in relevant laws, such as the Commercial Law, Customs Law, Foreign Trade Management Law, Export-Import Tax Law, and lower-level legal documents (Decrees, Circulars). This ensures a unified implementation of customs procedures for on-the-spot export and import of goods processed for foreign traders in Vietnam.

Within this proposed improvement, the unified regulations will include:

- Goods processed in Vietnam and sold by foreign organizations or individuals to entities in Vietnam.

- Processed products; rented or borrowed machinery and equipment; surplus raw materials or supplies from processing contracts when donated, sold, or given away in Vietnam. Alternatively, consider removing existing regulations on on-the-spot export and import in current laws, with these goods subject to standard export and import procedures under applicable trade and tax laws.

***Thirdly,*** remove the customs procedure regulations for scrap and waste generated during processing and transferred for domestic consumption as outlined in Circular 38/2015/TT-BTC, in line with the provisions of Decree 134/2016/ND-CP. This will facilitate processing enterprises when there are cases of transferring scrap and waste for domestic consumption.

***Fourthly,*** increase penalties to ensure that on-the-spot import procedures are completed within the required timeframe (within 15 working days from the date of export customs clearance, the importer must complete on-the-spot import procedures). To ensure compliance with customs procedures, additional regulations should be included to suspend customs procedures for shipments where the export declaration exceeds the 15-day deadline and there is no corresponding on-the-spot import declaration.

***Fifthly,*** establish an advanced information management system for the processing of goods for foreign traders by industry, contributing to improved state management efficiency in customs for foreign processing goods, creating a healthy business environment, increasing foreign investment in Vietnam, and improving the conditions for international processing activities in the country.

**References:**

*Commercial Law No. 36/2005/QH11 dated June 14, 2005*

*Foreign Trade Management Law No. 05/2017/QH17 dated June 12, 2017*

*Customs Law No. 54/2014/QH13 dated June 23, 2014*

*Export Tax, Import Tax Law No. 107/2016/QH13 dated April 6, 2026*

*Decree No. 69/2018/NĐ-CP dated May 15, 2018; Decree No. 08/2015/NĐ-CP dated January 21, 2015; Decree No. 01/2015/NĐ-CP dated January 2, 2015; Decree No. 12/2018/NĐ-CP dated January 23, 2018; Decree 134/2016/NĐ-CP dated September 1, 2016; Circular 38/2005/TT-BTC dated March 25, 2015; Circular 39/2018/TT-BTC dated April 20, 2018*

*Assoc. Prof. Nguyễn Thị Thương Huyền (Editor) (2019), "Customs Inspection and Supervision Textbook"*

*Phd. Nguyễn Thị Kim Oanh, Academy of Finance Research Project (2012), "State Management of Customs for Goods Processed for Foreign Traders"*

*Official Letter 2587/TCHQ-GSQL from the General Department of Customs dated May 29, 2023, on suggestions for amending and supplementing Article 35 of Decree 08/2015/NĐ-CP*

# FACTORS AFFECTING THE APPLICATION OF STRATEGIC MANAGEMENT ACCOUNTING AND THE IMPACT ON PERFORMANCE: A CASE STUDY OF MANUFACTURING ENTERPRISES IN VIETNAM

**PhD. Nguyen Tuan Anh***

**Abstract:** ***This study aims to examine the factors affecting the application of strategic management accounting and the impact of this application on the performance of manufacturing enterprises in Vietnam. The results of this study show that firm size, competition, management decentralization, technology level, and business strategy positively impact the application of strategic management accounting in manufacturing enterprises in Vietnam, and applying strategic management accounting helps improve and enhance the performance of these enterprises.***

• Keywords: *manufacturing enterprises, management accounting, performance, strategic management accounting.*

*JEL codes: M41*

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## 1. Introduction

In the trend of global economic integration and trade liberalization, Vietnam has signed many free trade agreements (FTAs) and committed to integration at all levels. The process of integration and participation in FTAs opens up many opportunities for the Vietnamese business community to develop their business. However, enterprises face many challenges and difficulties in production and business activities. To meet this problem, applying strategic management accounting (SMA) is considered one of the appropriate solutions to support and serve enterprise managers in making decisions that focus on strategy in today's modern business environment.

In recent years, many studies have delved into examining the factors affecting the application of SMA and its influence on the performance of enterprises. However, the results of the studies are still mixed and inconsistent. Moreover, previous studies on this issue were mainly carried out in developed countries with synchronous infrastructure and a complete system of guidelines. Empirical studies on this issue in countries with economies in transition, like Vietnam, are still modest. The results of this study can be an essential reference source for policymakers, professional associations, and training institutions in developing programs, plans, and training program guidelines to promote the application of SMA in manufacturing enterprises in Vietnam. In addition, this result can help enterprises realize the important role of SMA in the performance of the enterprise, thereby, early planning to apply the SMA in the enterprise.

## 2. Theoretical basis, hypothesis building and research model

### *2.1. The concept of strategic management accounting*

SMA is a management accounting system that provides information outside the enterprise, and the information source is created from within the enterprise to serve the process of strategic analysis, strategy selection, management strategy implementation, and assist managers in strategic decision-making in an integrated and competitive economy through the direction and control of strategic operations. SMA represents a group of techniques and methods that support an entity's goals within its strategy to inform organizational strategy formulation and support implementation, by encouraging behavior integrated with strategy and through MA techniques to reduce costs, increase product quality, and measure organizational performance.

### *2.2. The concept of performance*

Performance is understood as a measure of the most critical factors for the success of an entity, and performance is understood as the extent to which the entity's objectives are achieved. To measure performance, it is necessary to use financial and non-financial measures. Many studies suggest that the key measures of financial performance include market share, return on assets, return on investment, profit margin,

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and profitability (e.g., Ojra, 2014), critical measures of non-financial performance include attitudes, ethics and employee performance, buyer satisfaction, and quality of goods/services (Ojra, 2014).

***2.3. Research hypotheses***

*2.3.1. Firm size*

Larger enterprises often have more complex structures, so control and management tools also become more complex, and the costs and time of information processing also increase. To meet the management requirements of the complex structure, enterprises need to apply new information systems more effectively, and it is necessary to choose the application of SMA. Many studies have also confirmed that firm size has a significant impact on the use of MA in the organization and business process of enterprises (e.g., Abdel-Kader & Luther, 2008) or using SMA techniques for decision making (e.g., Cadez & Guilding, 2008; Ojra, 2014). Based on the above arguments, the first hypothesis is formulated as follows:

H1: Firm size positively impacts the application of SMA in manufacturing enterprises.

*2.3.2. Competition*

In the context of the modern business environment with fierce competition, the actions and reactions of competitors can be very unpredictable in entering the market. Therefore, organizations must maintain an effective MA system to increase competitive advantage when the market is increasingly fierce or improve their application of SMA techniques. In addition, the higher the level of competition in the unit's industry, the higher the need to apply SMA to the unit's decision-making. In other words, the industry's competition level affects the implementation of SMA operations in enterprises. Based on the above arguments, the second hypothesis is formulated as follows:

H2: The competition positively impacts the application of SMA in manufacturing enterprises.

*2.3.3. Management decentralization*

Management decentralization refers to the degree of decentralization, assigning responsibility and authority for planning, operational control, and information to managers. Abdel-Kader & Luther (2008) argue that management decentralization will change the application of MA and SMA in enterprises. When authorized, managers at all levels in the enterprise will be more responsible for planning, implementing and controlling all enterprise activities. According to Chenhall (2008), management decentralization is of particular importance and is considered the focus of SMA. In other words, management decentralization influences the adoption of SMA (Ojua, 2016). Based on the above arguments, the third hypothesis is formulated as follows:

H3: Management decentralization has positive effects on applying SMA in manufacturing enterprises.

*2.3.4. Technology level*

When the technological process is complex, the accounting system is very likely to become more difficult (Ojra, 2014) because new production technology causes the cost structure to change, and as technology continues to evolve, MA can become complex and needs to be further developed to adapt to technology, so the speed of technological change increases, affecting the MA system. In other words, there exists a significant relationship between the level of production technology and the information provided to management by MA, and the use of advanced production technology significantly affects the ability to implement SMA (Kariuki & Kamau, 2016). Based on the above arguments, the fourth hypothesis is formulated as follows:

H4: The technological level significantly and positively impacts the application of SMA in manufacturing enterprises.

*2.3.5. Business strategy*

According to the contingency theory framework, strategy impacts the implementation of SMA. Implementing SMA helps advise managers in strategic planning, implementation, and analysis. In addition, many studies support the view that strategic factors significantly impact the implementation of SMA (e.g., Ojra, 2014). MA is also designed to support a firm's strategy to increase performance. Types of business strategies in enterprises play an important role in implementing SMA (Cadez & Guilding, 2008). Based on the above arguments, the fifth hypothesis is formulated as follows:

H5: Business strategy has a positive impact on applying SMA in manufacturing enterprises.

*2.3.6. Applying strategic management accounting affects performance*

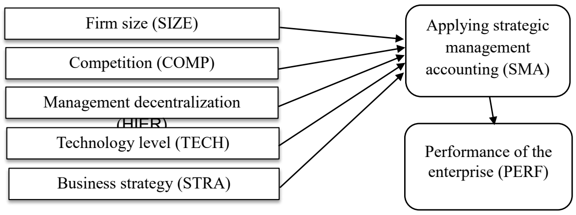
In the modern business environment, to survive and develop, organizations must pay attention to maintaining an effective performance measurement management system through SMA. Using SMA in an organization will make decision-making more efficient and help improve operational performance and competitive advantage for enterprises, positively impacting financial and non-financial performance. Many studies support the view and confirm that there is a positive relationship between the application of SMA and performance or that the implementation of SMA has helped organizations improve their performance (e.g., Cadez & Guilding, 2008; Ojra, 2014). Based on the above arguments, the sixth hypothesis is formulated as follows:

H6: Applying SMA positively influences the performance of manufacturing enterprises.

### *2.4. Research models*

Based on the review of the studies discussed above, six hypotheses were formulated for this study and described through the research model in Picture 1.

**Picture 1. Proposed research model**




## 3. Research Methods

Sampling method: according to Tabachnick & Fidel (2001), using SEM analysis is recommended to use a sample size of 300 to 1,000 observations. In this study, due to using SEM to test the relationship between investigated structures, the author selected a sample size of 300 observations, which is entirely appropriate.

Data collection method: The data of this study were collected through a survey questionnaire with a 5-point Likert scale (from 1: Strongly disagree to 5: Strongly agree) using interviews, direct consultation, or sent by email or post to 350 manufacturing enterprises. The survey subjects are managers (directors, deputy directors, chief accountants) with knowledge of SMA in manufacturing enterprises in provinces and cities of Vietnam. The survey results collected 300 valid questionnaires (response rate 85.7%) and were used for inclusion in this study. The survey period is from October 2023 to February 2024.

## 4. Research results

### *4.1. Cronbach's Alpha test and EFA analysis*

The results of testing the reliability of Cronbach's Alpha scale of variables (independent and explanatory variables) are presented in Table 1 shows that all variables have Cronbach's Alpha coefficient > 0.6, so the scales are significant, and the component variables in the scale are reliable, used for EFA analysis. The results of EFA analysis (Table 1) show that the Kaiser-Mayer-Olkin coefficient (KMO) meets the criteria of 0.5 ≤ KMO ≤ 1, so it is satisfactory; Barlett's test with Sig < 5% shows that these observed variables are closely related and suitable for EFA analysis. The total variance extracted > 50% at Eigenvalues > 1, so it is satisfactory (Anderson & Gerbing, 1988). Thus, after testing the reliability of Cronbach's Alpha scale and analyzing the EFA, it can be confirmed that the scales are reliable, the variables all satisfy the conditions of the EFA analysis, and the research data is entirely suitable for CFA analysis and SEM analysis.

**Table 1. The results of Cronbach's Alpha test and EFA analysis of variables**

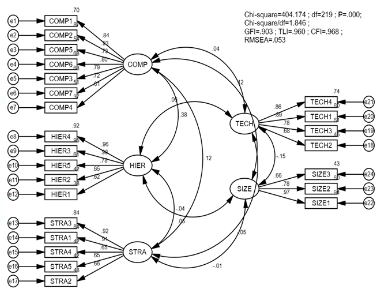
| Variable | N of items | Cronbach's Alpha coefficient | EFA analysis |
|---|---|---|---|
| SIZE | 3 | 0.831 | KMO = 0.781; Sig. = 0.000; Total = 1.956; Cumulative % = 71.796 |
| COMP | 7 | 0.918 | |
| HIER | 5 | 0.921 | |
| TECH | 4 | 0.817 | |
| STRA | 5 | 0.894 | |
| SMA | 5 | 0.840 | KMO = 0.768; Sig. = 0.000; Total = 3.095; Cumulative % = 61.896 |
| PERF | 7 | 0.919 | KMO = 0.698; Sig. = 0.000; Total = 1.044; Cumulative % = 82.510 |

*Source: research results*

### *4.2. Confirmatory factor analysis - CFA*

The results of CFA analysis (Picture 2) show that the model achieves good compatibility with the data, as demonstrated by indicators such as Chi-square is 404,174 with 219 degrees of freedom (df), p-value = 0.000 < 0.05 (Kaplan & Atkinson, 1989). If adjusted for degrees of freedom, Chi-square/df = 1.846 < 3, different criteria such as GFI = 0.903, TLI = 0.960, CFI = 0.968 (Tabachnick & Fidel, 2001) and RMSEA = 0.053 are less than 0.080 (Taylor et al, 1993) all met the compatibility requirements.

**Picture 2. The results of confirmatory factor analysis CFA**




*Source: research results*

The research results in Picture 2 shows that the observed variables' normalized weights are all greater than 0.5. The weights (unnormalized) are statistically significant (at a 1% significance level), so the scales achieve unidirectionality and convergent value (Anderson & Gerbing, 1988). The correlation coefficient between the factors' components (observed variables) < 1, statistically significant at 1%. Therefore, the above concepts all gain discriminant value. The composite reliability (CR) and average variance extracted (AVE) of each factor are greater than 50% (Table 2), so the concepts are satisfactory.

**Table 2. Composite reliability and average variance extracted test results**

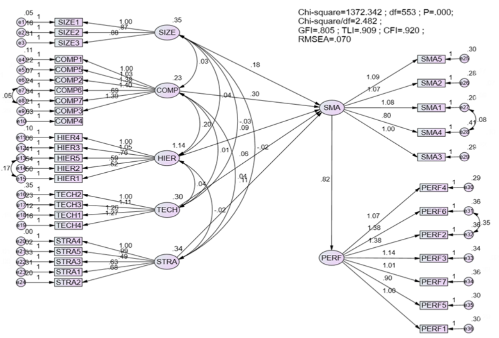
| Indicator | Variable | | | | |
|---|---|---|---|---|---|
| | SIZE | COMP | HIER | TECH | STRA |
| Composite Reliability (CR) | 0.849 | 0.910 | 0.903 | 0.882 | 0.875 |
| Average Variance Extracted (AVE) | 0.657 | 0.601 | 0.658 | 0.653 | 0.590 |

*Source: research results*

### *4.3. Structural Equation Model Analysis - SEM*

SEM analysis results (Picture 3) show that this model is suitable for market data, shown through statistical values such as Chi-square of 1372,342 with 553 degrees of freedom (df), p-value = 0.000 < 0.05. If adjusted for degrees of freedom with Chi-square/df = 2.482 < 3, other criteria such as GFI = 0.805, TLI = 0.909, CFI = 0.920, and RMSEA = 0.070 (< 0.080) all meet the similarity requirements.

**Picture 3. Structural equation model analysis results**




*Source: research results*

The estimated results in Table 3 show that the relationships are statistically significant at 5% (P-values < 0.05), which proves that the variables of this study, including SIZE, COMP, HIER, TECH, STRA, which demonstrates that the variables of this study include SIZE, COMP, HIER, TECH, and STRA all have a positive effect on the SMA variable, and the SMA variable has a positive impact on the PERF variable. Furthermore, the research results confirm that all the study's 06 (six) hypotheses, including H1, H2, H3, H4, H5, and H6, are accepted at the 5% significance level.

**Table 3. The results of testing the research hypotheses**

| Impact | | | Estimate | S.E. | C.R. | P-value |
|---|---|---|---|---|---|---|
| SMA | <--- | SIZE | 0.181 | 0.033 | 5.580 | *** |
| SMA | <--- | COMP | 0.299 | 0.048 | 6.214 | *** |
| SMA | <--- | HIER | 0.094 | 0.018 | 5.314 | *** |
| SMA | <--- | TECH | 0.060 | 0.024 | 2.442 | .015 |
| SMA | <--- | STRA | 0.108 | 0.027 | 4.058 | *** |
| PERF | <--- | SMA | 0.816 | 0.162 | 5.033 | *** |

*Note: ***: Statistical significance is 1%, S.E.: Standard Error, C.R: Critical Ratio.*

*Source: research results*

## 5. Discussing research results

### *5.1. Firm size*

Research results show that firm size positively impacts the application of SMA in manufacturing enterprises (Estimate = 0.181). This implies that the larger the enterprises, the more favorable the conditions to apply SMA to the enterprise. Therefore, the large scale can be an advantage for manufacturing enterprises to apply SMA successfully. This result is consistent with the expectations built by the contingency theoretical framework and is similar to the findings of Cadez & Guilding (2008) and Ojra (2014). Firm size relates to how organizations design and apply MA techniques to decision-making and the sophistication and complexity of MA systems used in the unit. Larger organizations will generally have more complex MA systems to meet their governance needs as well as develop business strategies to improve operational efficiency.

### *5.2. Management decentralization*

Research results show that management decentralization positively impacts the application of SMA in manufacturing enterprises (Estimate = 0.094). This indicates that in manufacturing enterprises, the higher the management decentralization, the more motivated these enterprises are to implement SMA. This finding is consistent with the expectation developed by the theoretical framework of contingency on the important role of an organizational structure affecting the implementation of SMA in manufacturing enterprises; and similar to the research results of Chenhall (2008), Abdel-Kader & Luther (2008). In the current period of globalization, enterprises face increasingly fierce competition, so the management structure needs to be organized according to a decentralized model to decentralize department decision-making.

### *5.3. Technology level*

Research results continue to find that technology level positively impacts the application of SMA in manufacturing enterprises (Estimate = 0.060). This implies that the more advanced technology is, the more it will promote the application of MA in manufacturing enterprises. This finding is consistent with research results of Ojra (2014) and Kariuki & Kamau (2016). The level of advanced production technology will penetrate all aspects of production and business activities of enterprises, so it positively affects the respective MA information system and management system. The use of advanced production technology means that the information needed to serve managers' decision-making will change. Therefore, the MA system must change the direction of SMA to support management activities, creating great motivation for manufacturing enterprises to apply SMA.

### *5.4. Competition*

The results show that the competition positively impacts SMA's application in manufacturing enterprises (Estimate = 0.299). This means that the higher the level of competition, the greater the need to apply SMA for manufacturing enterprises. This result is entirely consistent with the comments of Kariuki & Kamau (2016). Therefore, any enterprise engaged in producing and trading specific goods on the market must accept competition. Considering the current context that Vietnam's economy is transitioning to integrate into the global economy, the issue of competitiveness is one of the difficulties and challenges facing the business community, especially the manufacturing enterprises have to compete in terms of quality, product prices, raw materials, human resources, meeting customer needs, etc. To solve this problem, the collection, analysis, and handling of Information related to competitiveness both inside and outside the enterprise are essential, and the SMA plays a vital role in providing this information.

***5.5. Business strategy***

Research results show that business strategy positively impacts the application of SMA in manufacturing enterprises (Estimate = 0.108). This means the higher the awareness of the business environment fluctuations, the more SMA techniques are used. This result is consistent with the comments in the studies of Cadez & Guilding (2008), Ojra (2014). Manufacturing enterprises in Vietnam have great opportunities to expand their potential markets in the period of integration with the world economy. However, they also face challenges due to the economic environment's instability, with solid competition in price and product quality when many manufacturing enterprises from other countries penetrate the Vietnamese market. Therefore, Vietnamese manufacturing enterprises must develop and plan appropriate and effective business strategies through SMA techniques to maintain market share, penetrate and expand new markets, and improve competitiveness.

***5.6. Applying SMA influences the performance***

Research results show that applying SMA positively affects the performance of manufacturing enterprises in Vietnam (Estimate = 0.816). This means that changing the level of application of SMA will change the performance of manufacturing enterprises positively. The findings of this study are consistent with the the research results of Cadez & Guilding (2008) and Ojra (2014). This explains that Vietnam's economy is transitioning to a market economy to integrate with the world economy, so manufacturing enterprises in Vietnam face competition pressure that is increasingly fierce from domestic and foreign competitors, and the requirements of customers for product quality are increasingly high for all production fields. The SMA system is considered suitable for the enterprise's organizational and environmental factors to achieve better results in management, production, and business activities.

**Conclusion**

The findings of this study confirm that: (i) the larger the scale of the manufacturing enterprise, the more favorable the application of SMA; (ii) the higher the level of competition, the greater the need to apply SMA for manufacturing enterprises; (iii) business strategy impacts SMA's application in Vietnam's manufacturing enterprises; (iv) management decentralization authority to departments in decision-making will help enterprises respond quickly to changes in the business environment, seize opportunities and distribute organizational structures management level by the organization and implementation of SMA; (v) manufacturing enterprises in Vietnam have advanced technology, the more the application of SMA; and (vi) enterprises that change SMA's application level will positively change their performance.

Although this study has achieved certain results, there are still some limitations, and future follow-up studies need to consider and expanded to provide more valuable results. Firstly, the data used in the study is collected through surveys of many different types of enterprises, so it is not representative of every kind of business. Therefore, further studies should examine the impact of enterprise type on SMA adoption. Secondly, other factors can affect the application of SMA in enterprises, such as customer resources, environmental instability, etc., which have yet to be considered in this research. Therefore, further studies should examine other factors that may influence the application of SMA. Thirdly, the sample size is small, so the generalizability could be higher, affecting the quality of the study. Therefore, further studies should consider increasing the sample size so that the research results are highly valued.

**References:**

*Abdel-Kader, M., & Luther, R. (2008), 'The impact of firm characteristics on management accounting practices: A UK-based empirical analysis', The British Accounting Review, 40(1), 2-27.*

*Anderson, J. C., & Gerbing, D. W (1988), 'Structural equation modeling in practice: A review and recommended two-step approach', Psychological Bulletin, 103(3), 411-423, from https://doi.org/10.1037/0033-2909.103.3.411*

*Cadez, S., & Guilding, C. (2008), 'An exploratory investigation of an integrated contingency model of strategic management accounting', Accounting, organizations and society, 33(7-8), 836-863.*

*Chenhall, R. H. (2008), 'Accounting for the Horizontal Organization: A review essay', Accounting, organizations and society, 33(4-5), 517-550, from http://doi.org/10.1016/j.aos.2007.07.004*

*Kaplan, R. S., & Atkinson, A. A. (1989), Advanced management accounting, Prentice-Hall Inc, UK.*

*Kariuki, S. N., & Kamau, C. G. (2016), 'Organizational contingencies influencing the adoption of strategic management accounting practices among manufacturing firms in Kenya', International Journal of Advanced Research in Management and Social Sciences, 5(4), 167-182.*

*Ojra, J. (2014), 'Strategic management accounting practices in Palestinian companies: application of contingency theory perspective', Doctoral dissertation, University of East Anglia, UK, from https://core.ac.uk/download/pdf/29107927.pdf*

*Tabachnick, B. G., & Fidel, L. S. (2001), Using multivariate statistics (4th ed.), Pearson, UK.*

*Taylor, S. A., Sharland, A., Cronin, J. J., & Bullard, W. (1993), 'Recreational service quality in the international setting', International Journal of Service Industry Management, 4(4), 68-86, from https://doi.org/10.1108/09564239310044316*

# SEVERAL SOLUTIONS TO IMPROVE STATE MANAGEMENT POLICY ON LOGISTICS SERVICES IN VIETNAM

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**Abstract:** ***In recent times, Vietnam's logistics industry has achieved several positive results, and logistics infrastructure has been increasingly improved. For further development, in line with the development trend of logistics in the world, Vietnam's logistics industry needs to have more changes in state management policy to facilitate the development of logistics services. This study aims to propose solutions to improve state management policy to facilitate the development of logistics services in Vietnam.***

• Keywords: *state management policy, logistics, development of logistics services.*

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**1. Global logistics development trends**

The forecast for the global logistics development trends in the coming time is as follows:

- The global logistics industry will continue to be directly influenced by fluctuations in the world situation related to politics and socio-economics. In terms of politics, the Russia-Ukraine military conflict, the sanctions between the United States, the West and Russia will impact the sanctions between the parties, as well as the disruption of some maritime, air and rail transport routes. In terms of socio-economics, the ability to recover production and business activities and the global supply chain in the post-Covid-19 period, the energy crisis (oil, gas,...) and global economic inflation will push up the prices of goods and services, especially logistics costs; the expanding greening trend and the explosion of digital transformation, e-commerce will promote the trend of using micro-warehousing services, last-mile logistics, green logistics and automation.

- Leading countries and regions in the logistics sector continue to promote development on the basis of ensuring close linkages between three factors: sustainable development, service diversification and technology modernization, in which technology is the foundation and driving force for development.

- E-commerce continues to be one of the main growth drivers of the world logistics market. The rapid emergence of e-commerce as an important channel for cross-border trade. E-commerce volume has increased sharply over the past decade. By 2030, cross-border e-commerce of goods is expected to increase from the current US$300 billion to US$1-2 trillion in goods value, leading to significant changes in the supply chain. Most cross-border e-commerce relies on parcel services - parcels provided by members of the Universal Postal Union (a specialized agency of the United Nations) or a network of global express delivery operators (DHL, FedEx, UPS…). Members of the Universal Postal Union handle two-thirds of all cross-border mail (up to 2 kg).

- The warehousing industry is expected to transform significantly with automation to meet the rapid growth of cross-border e-commerce and the growing demand for integrated supply chain solutions.

- Green logistics and transport trends continue to be a key focus. Changes in regulations, standards on sustainability and occupational safety will directly impact businesses' service delivery strategies.

**2. Current state management policies on logistics services in Vietnam**

In recent years, the Vietnamese Government has made great efforts to build a legal framework, creating a healthy and open business environment for logistics activities in Vietnam. However, in practical implementation, management agencies at the Department, branch, local level and enterprises still face many difficulties and shortcomings. The main reason is that some regulations are still overlapping, giving rise to many inappropriate

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procedures. Currently, Decree No. 163/2017/ND-CP is a document that directly regulates the conditions for logistics service business, however, logistics service enterprises must also comply with the provisions of many other specialized legal documents. These regulations only focus on related aspects such as import and export business, customs warehousing, etc. (Law on Foreign Trade Management and guiding Decrees), and conditions for transportation business. Decree No. 163/2017/ND-CP has reclassified 17 logistics services to comply with Vietnam's commitments to the WTO. However, some services such as warehousing services under the services supporting all modes of transport, freight forwarding agency services, etc. do not have clear regulations on investment conditions, especially for foreign enterprises. Conditions for conducting business in technical analysis and inspection services are also unclear. Licensing for non-WTO member countries is also not clearly regulated, which is a problem for foreign enterprises. It can be seen that separate and detailed regulations for the logistics service industry are an issue that needs to be considered.

On the other hand, policies to support logistics service enterprises are not detailed. Regulations and policies to support have also been issued, such as the Law on Support for Small and Medium Enterprises, but there are no clear regulations for logistics services. This is a noteworthy point because the number of small and medium-sized logistics enterprises is very large, with capital of less than 10 billion VND accounting for 41%, and capital of 10-50 billion VND accounting for 26% (Ministry of Industry and Trade, 2017). These enterprises will need support from state policies and programs. In addition, logistics infrastructure still has shortcomings, lacks connectivity, limits development and leads to high logistics costs, reducing the competitiveness of Vietnamese logistics enterprises. The coordination of research and implementation of planning by ministries, branches and localities has not really promoted efficiency and effectiveness. Some provinces and cities have potential but commercial infrastructure and transport infrastructure have not been invested in proportion, so logistics services in general have not developed.

The weakness of Vietnamese enterprises is that service costs are still high, the quality of some services is not high, in the current competitive service market in Vietnam. The main reasons are limitations in enterprise scale and capital, experience and management level, the ability to apply information technology as well as the level of human resources that do not meet the requirements of international operations and another important reason is the lack of a source of goods because Vietnam mainly exports FOB and imports CIF, in addition to limitations in logistics infrastructure and road transport costs, port surcharges imposed by foreign ship owners. The logistics service market is still very limited, operating mainly in the domestic market, and development is not commensurate with the country's potential and advantages.

In addition, the implementation and coordination of national logistics development tasks still face many difficulties due to the characteristics of the logistics industry, which includes many fields under the management of many different ministries and branches. The coordination and information mechanism between ministries, branches and localities is still slow. The staff in charge of state management of logistics is still lacking, mainly holding concurrent positions, so the efficiency is not high. In the past, although the competent authorities have issued many documents to guide the solution, there has not been a comprehensive assessment of the implementation of management and development policies for the logistics industry to promptly amend them to suit the specific characteristics of logistics activities in practice. To improve the efficiency of the logistics industry and reduce logistics costs, reforming legal regulations, reforming administrative procedures, innovating management methods of state agencies, promoting the application of e-government, etc. is extremely necessary.

In the first months of 2024, the Vietnamese Government has resolutely directed overall and specific measures for logistics services to stabilize the macroeconomic environment, facilitate the circulation of goods and ensure the people's demand for goods and services. Many international organizations continue to positively assess and forecast Vietnam's economic growth in 2024. This is confirmed when the general economic results, production, business and logistics activities in Vietnam have made many improvements. Specifically, the Government issued Resolution No. 82/NQ-CP dated June 5, 2024 at the regular Government meeting in May 2024, requiring research on policy packages with a large enough scale, suitable and feasible to support businesses and promote new growth drivers, new industries and fields such as chips, semiconductors, digital transformation, green transformation. Some of the contents related to logistics are as follows:

- Restructuring the economy associated with innovation of growth models, improving productivity, quality, efficiency and competitiveness.

- Continue to promote the synchronous and comprehensive implementation of 3 strategic breakthroughs (improving institutions, training human resources, developing infrastructure systems); promptly complete and put into use important and key national infrastructure projects and works.

- Effectively deploy traditional growth drivers (consumption, investment, export), strongly promote new growth drivers, such as developing digital economy, green economy, circular economy, sharing economy, emerging industries and fields.

**3. Several solutions to improve state management policy on logistics service in Vietnam**

Firstly, Management agencies at all levels should issue legal documents, develop policies, strategies, planning, and plans for logistics service development. Logistics services should be considered as one of the key high-quality service sectors in the strategic orientation for service sector development in particular and the socio-economic development strategy in general. Practical experience in developing logistics services in other countries shows that logistics services are one of the important service sectors in the national economy and the development of logistics services will contribute significantly to promoting the development of many other economic sectors. In addition, the state management apparatus for logistics services must be improved, the effectiveness and efficiency of coordination between management agencies, between the public and private sectors in implementing tasks of developing national logistics services must be enhanced.

Secondly, the state management of logistics services should be oriented to form an electronic logistics service model (E-logistics), on the basis of thoroughly applying information technology and the achievements of information technology to improve the efficiency of logistics services. This is a common trend of countries around the world in the strategy of developing logistics services and is also a prerequisite for improving the competitiveness of logistics service enterprises. The information technology data system serving state management of logistics services must be complete, accurate, and updated, serving as the basis for the management and policy making of central and local state agencies, as the basis for business and investment decisions of enterprises, and as a bridge between state management levels of logistics services with import-export enterprises and logistics service enterprises nationwide.

Thirdly, ministries and branches at all levels, and all provinces and cities should pay attention to investment resources to create a breakthrough in innovating state management of logistics services. In particular, ministries and branches need to prioritize investment in creating a logistics service infrastructure system. The State focuses on investment, and creates conditions to improve service quality and competitiveness in domestic, regional, and international markets; form and develop reputable logistics service centers and gather large, multi-owned companies operating in logistics services.

Fourthly, Continuing to train and develop human resources for state management of logistics services. State management levels should research and develop programs to open training courses to equip in-depth knowledge of the logistics field for operational staff, invest in equipping skills and modern production thinking for human resources in state management to create an industrial style, grasp and use advanced machinery and equipment, meeting the needs of state management in the process of integration and development. State management levels need to orient and invest in training programs, improve skills for the human resources of enterprises to meet the requirements of current logistics services, which need to be carried out at 3 levels: (1) at official training institutions such as universities and colleges; (2) training according to training programs organized by associations; (3) internal training in enterprises. In the long-term strategy, the city government and relevant agencies need to increase attention and support in developing and planning policies related to logistics services. Seek domestic and international funding sources for short-term training programs at home and abroad, coordinate and cooperate with FIATA, IATA and other non-governmental organizations to have more regular training funding.

**References:**

*Ministry of Industry and Trade. (2018). Vietnam Logistics Report 2018. Industry and Trade Publishing House.*

*Guide. Industry and Trade Publishing House.*

*Ministry of Industry and Trade. (2019). Vietnam Logistics Report 2019. Industry and Trade Publishing House.*

*Ministry of Industry and Trade. (2020). Vietnam Logistics Report 2020. Industry and Trade Publishing House.*

*Ministry of Industry and Trade. (2021). Logistics Performance Index Report.*

*Ministry of Industry and Trade. (2021). Vietnam Logistics Report 2021. Industry and Trade Publishing House.*

*Ministry of Industry and Trade. (2022). Vietnam Logistics Report 2022. Industry and Trade Publishing House.*

*Ministry of Industry and Trade. (2024). Report on Improving Vietnam Logistics Performance Index in 2023.*

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# RESEARCH OVERVIEW ON THE IMPACT OF FACTORS ON THE QUALITY OF INFORMATION ON FINANCIAL STATEMENTS OF SMALL AND MEDIUM ENTERPRISES IN VIETNAM

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**Abstract:** ***This study investigates factors influencing financial reporting quality in Vietnamese SMEs, crucial for economic growth and stakeholder confidence. The research addresses gaps in understanding complexity, environmental influences, and unique organizational characteristics impacting reporting accuracy, reliability, and transparency. To have a comprehensive overview, the article applies a systematic literature review method with some articles selected from the Scopus database based on specific criteria of the PRISMA process. In addition, some relevant studies in Vietnam are also used to provide specific perspectives for Vietnam. This study contributes a nuanced understanding of drivers affecting financial reporting quality in Vietnamese SMEs. The findings offer practical implications for policymakers to enhance standards and promote economic growth. Addressing complexities within a Vietnamese framework helps to strengthen SMEs while establishing a strong accounting environment.***

• Keywords: *financial statements, quality of information, small and medium enterprises, Vietnam.*

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## 1. Introduction

The crucial role of Small and Medium-sized Enterprises (SMEs) in Vietnam's economic landscape is undeniable. This paper investigates the factors influencing the quality of financial reporting within these SMEs, acknowledging that accurate and reliable financial statements are critical for informed decision-making by various stakeholders and for sustaining the growth of this vital sector. Extensive research, both globally and within Vietnam, has focused on identifying factors that affect financial reporting quality. This introduction reviews seminal works in the field to highlight the current state of knowledge and to underscore the need for further investigation within the Vietnamese SME context.

Early research by Jonas and Blanchet (2000) emphasizes the importance of developing comprehensive frameworks for assessing the quality of financial statements. The need for an understanding of the information has been expressed in terms of factors like relevance, reliability, comparability, consistency, and clarity. Other authors such as Nelson and Skinner (2013) highlighted accuracy and completeness as critical characteristics of the information quality.

However, the study of van Beest et al. (2009) focused on measuring the quality based on the viewpoint of the organization like FASB and IASB. The authors developed 21 factors that cover presentation, comprehensibility, comparability, and timeliness. Within Vietnam, researchers have investigated factors specific to the local context. In particular, Nguyen Thi Phuong Hong and Duong Thi Khanh Linh (2014) examined the measurement of financial reporting quality in Vietnamese enterprises using the comprehensive characteristics of the information published by the IASB and FASB. Another study by Doan Thi Hong Nhung and Vu Thi Kim Lan (2014) focused on constructing a process for assessing the quality of financial reporting in Vietnamese enterprises. Nguyen Trong Nguyen (2016) also looked into the governance in SMEs affect the financial report. While existing studies provide valuable insights, gaps remain. More research is needed to identify more factors affecting financial reporting quality and examine in more details. This paper aims to address this need by examining the impact of specific factors on the quality of financial reporting in Vietnamese SMEs. By focusing on the unique context of these enterprises, this research seeks to provide actionable insights for improving the reliability and utility of financial reporting in this critical sector of the Vietnamese economy.

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**2. Literature review**

***2.1. Theoretical foundations and conceptualizations of financial reporting quality***

The pursuit of defining and achieving quality in financial reporting has been a long and intricate journey, marked by evolving conceptual frameworks and rigorous empirical investigations. For decades, academics, standard-setters, and practitioners have grappled with the challenge of identifying the essential characteristics that make financial information not just compliant, but truly useful and trustworthy for a diverse range of stakeholders. The significance of this endeavor lies in the fundamental role financial reporting plays in capital allocation, investment decisions, and the overall stability of the financial system. When financial reporting is of high quality, it fosters trust, reduces information asymmetry, and ultimately contributes to more efficient markets. Conversely, poor quality can lead to misallocation of resources, investor distrust, and potentially even systemic risk.

Early contributions to the debate, exemplified by the work of Jonas & Blanchet (2000), emphasized the need for comprehensive frameworks that acknowledged the multifaceted nature of quality. They moved beyond a simplistic view of compliance and instead advocated for a holistic understanding encompassing several key elements: relevance, reliability, comparability, consistency, and clarity. These were not seen as independent attributes, but rather as interconnected components that collectively contribute to the overall quality of financial information. Relevance, for instance, ensures that the information is capable of influencing users' decisions, while reliability guarantees that the information is free from material error and can be depended upon. Comparability allows users to assess the performance of different companies, and consistency ensures that the same accounting principles are applied over time, facilitating trend analysis. Finally, clarity is paramount, ensuring that the information is understandable to reasonably informed users. Jonas & Blanchet's contribution was pivotal in setting a benchmark against which subsequent research and reporting practices could be evaluated, underscoring the need to move beyond mere regulatory compliance and focus on the genuine utility of financial statements.

Building on this foundation, Nelson and Skinner (2013) delved deeper into the specific characteristics that drive perceptions of information quality among data users. Their research, based on a survey, provided empirical evidence supporting the notion that accuracy, completeness, and understandability are critical determinants of perceived quality. Accuracy, of course, refers to the degree to which the information reflects the underlying economic reality. Completeness ensures that all relevant information is presented, preventing misleading omissions. Understandability, again, highlights the importance of clear and concise communication, making the information accessible to a wide range of users, from professional analysts to individual investors. The strength of Nelson and Skinner's work lies in its user-centric approach. By directly surveying data users, they provided valuable insights into what information attributes are most valued and influential in shaping investment and resource allocation decisions. This reinforces the idea that financial reporting quality is not merely a technical exercise, but rather a crucial element in fostering trust and confidence among stakeholders. Their findings highlight that even meticulously prepared financial statements that are technically compliant may be deemed of low quality if they lack accuracy, completeness, or are difficult to understand.

The practical measurement of these qualitative characteristics has also been a significant area of research. Van Beest et al. (2009) directly addressed this challenge by developing a comprehensive framework consisting of 21 factors spanning five key dimensions: relevance, faithful representation (closely related to reliability), understandability, comparability, and timeliness. This framework, informed by the guidelines established by accounting standard-setting bodies like the FASB (Financial Accounting Standards Board) and the IASB (International Accounting Standards Board), offered a more granular and operationalized approach to assessing financial reporting quality. By analyzing annual reports from companies in the United Kingdom, the United States, and the Netherlands, they provided empirical insights into the practical application of these qualitative characteristics in diverse reporting environments.

The work of Van Beest et al. is particularly valuable because it attempts to bridge the gap between abstract conceptual frameworks and the practical realities of financial reporting. Their detailed analysis of specific factors, such as the clarity of footnotes or the extent of segment reporting, provides a more concrete understanding of how qualitative characteristics can be assessed and improved. Furthermore, by examining annual reports from different countries, they shed light on the potential influence of different regulatory environments and accounting standards on financial reporting quality.

In conclusion, the quest for quality in financial reporting is an ongoing process, informed by a rich body of research that continues to refine our understanding of the key attributes that contribute to its usefulness and trustworthiness. From the early emphasis on holistic frameworks to the more recent focus on user perceptions and practical measurement, the field has evolved significantly. While achieving perfect quality may remain an elusive goal, the continued focus on these essential characteristics will undoubtedly lead to more informative, transparent, and reliable financial reporting, ultimately benefiting investors, markets, and the wider economy.

***2.2. Drivers of financial reporting quality: global insights***

Financial reporting quality is not a given; it's the product of a complex interplay of factors that influence the accuracy, reliability, and overall credibility of the information presented to stakeholders. Understanding these drivers is crucial for policymakers, regulators, and corporate managers alike, as they provide insights into how to foster a more transparent and trustworthy financial reporting environment. Research consistently points to three key determinants: robust corporate governance mechanisms, the assurance provided by high-quality external audits, and a strong regulatory and legal framework. Key determinants that have consistently emerged include:

*(1) Corporate Governance Mechanisms:* The structure and effectiveness of corporate governance mechanisms are paramount. A well-governed company is more likely to produce high-quality financial reports. This stems from the fact that effective governance creates a culture of accountability and transparency. Key elements include the independence and expertise of board members. Independent directors are less susceptible to management influence, ensuring objective oversight of financial reporting processes. Similarly, board members with financial expertise are better equipped to understand and challenge management's accounting choices. The presence of a strong and active audit committee is also vital. This committee, composed of independent directors, is responsible for overseeing the financial reporting process, selecting the external auditor, and reviewing internal controls. Furthermore, robust internal controls are essential for preventing and detecting errors and fraud. Heidi (2001) emphasizes the critical role of these governance structures in upholding the integrity of financial reporting, suggesting that a weak governance framework can significantly undermine the reliability of reported information.

*(2) External Audit Quality:* The quality of the external audit serves as another crucial pillar supporting financial reporting quality. The external audit provides an independent assessment of whether a company's financial statements are fairly presented in accordance with applicable accounting standards. An audit conducted by experienced and independent auditors provides assurance to stakeholders that the financial statements are free from material misstatements. This independence is paramount; auditors must be free from any conflicts of interest that could compromise their objectivity. The auditor's expertise is also critical, as they must possess the technical knowledge and industry understanding to effectively scrutinize the company's financial reporting practices. The external audit acts as a vital check on management's assertions, contributing significantly to the credibility of financial information (Heidi, 2001).

*(3) Regulatory and Legal Environment:* The strength and enforcement of the regulatory and legal environment play a significant role in shaping financial reporting behavior. Stringent regulatory requirements, such as those imposed by securities regulators, provide a framework for acceptable accounting practices and disclosure requirements. Effective enforcement mechanisms, including penalties for non-compliance and legal recourse for investors, encourage companies to adhere to these standards. When companies perceive a high risk of detection and punishment for financial misconduct, they are more likely to invest in robust internal controls and produce accurate financial reports. Soderstrom & Sun (2007) highlight the positive impact of strong regulatory oversight in promoting financial reporting integrity, suggesting that a weak regulatory environment can create opportunities for opportunistic behavior and reduce the overall quality of financial information.

***2.3. Financial reporting quality in Vietnamese SMEs: Specific factors***

Recognizing the unique characteristics of SMEs, numerous Vietnamese researchers have focused on identifying factors that influence financial reporting quality within this specific context. For instance, Nguyen Thi Phuong Hong and Duong Thi Khanh Linh (2014) examined the measurement of financial reporting quality in Vietnamese enterprises using the comprehensive characteristics of the information published by the IASB and FASB. Similarly, Doan Thi Hong Nhung and Vu Thi Kim Lan (2014) constructed a process for assessing the quality of financial reporting in Vietnamese enterprises. Furthermore, Nguyen Trong Nguyen (2016) explored the impact of corporate governance characteristics on financial reporting quality in listed companies in Vietnam.

Other studies have delved into the impact of specific factors on financial reporting quality in Vietnamese SMEs, including: *(i) Application of Accounting Software:* Tran Phuoc (2007) examined the application of accounting software and found that it increased the satisfaction of the information presented in financial statements; *(ii) Company Size:* Cao Nguyen Le Thu (2014) found that larger companies had improved financial reporting quality; *(iii) Internal Controls:* Pham Thanh Trung (2016) found that SMEs with better internal controls had higher quality of financial reporting.

**3. Research gaps and opportunities**

The extensive research has been dedicated to understanding financial reporting quality, but significant gaps persist, particularly concerning the unique context of Vietnamese SMEs. Applying established theories and models developed primarily in developed economies to Vietnamese SMEs without careful consideration of their specific characteristic risks yielding incomplete and potentially misleading insights. Future research must address these gaps by focusing on the inherent complexity of financial statements in this sector, the pervasive influence of environmental factors, and the myriads of other factors specific to the Vietnamese SMEs landscape. Addressing these areas will lead to a more nuanced and accurate understanding of the drivers and impediments to high-quality financial reporting in this critical segment of the Vietnamese economy.

***Firstly,*** future research needs to delve into the inherent complexities of financial statements within Vietnamese SMEs. Existing studies often treat financial reporting quality as a monolithic concept, failing to acknowledge the practical challenges faced by these enterprises in preparing and interpreting financial information. SMEs in Vietnam typically operate with limited resources, including a shortage of specialized accounting personnel and limited access to sophisticated accounting software and systems. Furthermore, these businesses often struggle to navigate complex accounting standards and comply with evolving regulatory requirements, particularly when those requirements are directly translated from international standards without adequate contextualization. Therefore, future investigations should focus on how these resource constraints, the level of accounting expertise available within Vietnamese SMEs, and the specific nuances of Vietnamese accounting standards collectively impact financial reporting quality. This might involve exploring whether simpler, more tailored reporting frameworks, designed specifically for the needs and capabilities of SMEs, would be more effective in promoting accuracy and transparency than a direct and wholesale application of full-blown international standards. For instance, a study could compare the quality of financial reporting under the current system with that under a simplified system focusing on core metrics and disclosures. Such research could also assess the effectiveness of targeted training programs aimed at enhancing the accounting skills of SME personnel.

***Secondly,*** a more rigorous investigation into the influence of environmental factors is warranted. Prior studies tend to concentrate on internal firm characteristics, often overlooking the significant and potentially dominating impact of external factors on financial reporting quality. In the Vietnamese context, a range of environmental factors, including the regulatory environment, the prevailing economic climate, and deeply ingrained cultural norms, can exert a profound influence on how SMEs approach financial reporting. For example, levels of corruption, which are known to exist in some sectors of the Vietnamese economy, could significantly distort financial reporting practices. Government policies, such as tax incentives or subsidies, can also influence how SMEs present their financial performance. Furthermore, the prevalence of informal economic activity, which is common in many developing economies, may incentivize SMEs to underreport their income or engage in other forms of financial manipulation. Future research should consider incorporating these environmental factors into empirical models to provide a more holistic and accurate understanding of the determinants of financial reporting quality in

Vietnamese SMEs. This could involve examining the influence of specific tax policies, the level of regulatory oversight exerted by different government agencies, or the documented presence of corruption in specific industries on the reliability and transparency of SMEs financial statements.

***Finally,*** there is a pressing need for research to identify and explore factors that are unique to Vietnamese SMEs. Existing literature, often based on studies conducted in Western or developed Asian contexts, may not fully capture the nuances of organizational culture, management practices, and employee motivation that are prevalent within the Vietnamese SME landscape. For instance, the dominance of family-owned businesses is a significant characteristic of the Vietnamese SME sector. This can lead to unique dynamics, where personal relationships and family ties often supersede formal accounting procedures. The role of personal relationships in business dealings, often referred to as "guanxi," and the influence of traditional cultural values on ethical behavior can also significantly affect how SMEs approach financial reporting. Future research should therefore explore these unique factors, perhaps through qualitative investigations such as in-depth case studies or interviews with SME owners and managers. These qualitative methods can provide a richer and more nuanced understanding of the drivers of financial reporting quality within this specific cultural and economic context. For instance, a study could examine how family ownership influences the level of transparency in financial reporting or how cultural values affect the implementation of internal control systems. Such research could also explore the impact of social networks and personal relationships on the credibility of financial information provided by SMEs. By addressing these research gaps, we can gain a more comprehensive and accurate understanding of financial reporting quality in Vietnamese SMEs, which can inform the development of more effective policies and practices to promote transparency and accountability in this vital sector.

## 4. Conclusion

The existing body of literature on financial reporting quality presents a rich tapestry of insights, examining diverse factors that shape the accuracy, reliability, and transparency of financial information. From foundational theoretical frameworks to empirical investigations across various contexts, significant progress has been made in identifying key determinants of reporting quality, especially within SMEs. However, the application and relevance of these findings to specific contexts, particularly developing economies like Vietnam, requires careful consideration and further investigation. Several research opportunities remain in refining the comprehension of aspects relating to financial reporting quality. First of all, the SMEs are often resource-constrained and have unique governance structures, but more in-depth analysis can uncover novel perspectives. Investigating the interplay between these factors in the specific economic and institutional conditions of Vietnam is crucial for developing effective interventions. Furthermore, it is also critical to consider how external factors influence the statements in SMEs.

The implications of addressing the identified research gaps extend beyond academic understanding. By improving our understanding of the factors that influence financial reporting quality, future research can contribute to more transparent, accountable, and economically robust operations in Vietnam. A higher quality information can drive economic growth. For all stakeholders can make decisions based on reliable information. Ultimately, future research efforts should focus on developing tailored approaches to financial reporting that are both practical and effective for Vietnamese SMEs. By embracing a context-sensitive perspective and leveraging both quantitative and qualitative methods, we can unlock new insights that lead to improved transparency, accountability, and sustained economic growth in this dynamic sector of the Vietnamese economy.

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**References:**

*Beest, F. V., Braam, G. J. M., & Boelens, S., 2009. Quality of Financial Reporting: measuring qualitative characteristics. Working paper. Retrieved from https://repository.ubn.ru.nl/bitstream/handle/2066/74896/74896.pdf*

*Cao Nguyen Le Thu (2014). Evaluating internal factors of enterprises affecting the quality of accounting information presented in financial statements of enterprises listed on the Ho Chi Minh City Stock Exchange. Master's thesis in economics, Ho Chi Minh City University of Economics.*

*Doan Thi Hong Nhung and Vu Thi Kim Lan (2014). Methods for assessing the quality of information in financial statements of enterprises. Accounting & Auditing Journal, November 2014 issue.*

*Heidi (2001). What factors influence financial statement quality? A framework and some empirical evidence. The Euroconference on Financial Reporting and Regulatory Practices in Europe Palermo, Italy, May 20-23, 2001.*

*Jonas, G. J., & Blanchet, J. (2000). Assessing quality of financial reporting. Accounting horizons, 14(3), p353.*

*Nelson, M. W., & Skinner, D. J. (2013). How should we think about earnings quality? A discussion of "Earnings quality: Evidence from the field". Journal of Accounting and Economics, 56(2-3), 34-41.*

*Nguyen Thi Phuong Hong and Duong Thi Khanh Linh (2014). Viewpoints on the quality characteristics of financial statements of Vietnamese enterprises today. Accounting & Auditing Journal, No. 6/2014.*

*Nguyen Trong Nguyen (2016). The impact of Quality Management on Financial Statement Quality at Vietnamese listed companies. PhD thesis, University of Economics, Ho Chi Minh City.*

*Pham Thanh Trung (2016). Measuring the impact of factors on the quality of information presented in financial statements of small and medium enterprises in Ho Chi Minh City. Master's thesis in economics. Ho Chi Minh City University of Economics.*

*Soderstrom, N. S., & Sun, K. J. (2007). IFRS adoption and accounting quality: a review. European accounting review, 16(4), 675-702.*

*Tran Phuoc (2007). Some solutions to improve the quality of organization using accounting software for Vietnamese enterprises. Doctoral thesis, University of Economics, Ho Chi Minh City.*

# CUSTOMERS MODERATE THE IMPACT OF TAX AVOIDANCE ON FIRM VALUE IN VIETNAM

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**Abstract:** ***The study examines the moderating role of customers on the impact of corporate income tax avoidance on firm value in Vietnam. The data sample includes 397 companies listed on the Vietnamese stock market from 2015 to 2022, with 3,176 observations. The research results show that the customer factor weakens the positive impact of tax avoidance on firm value. Furthermore, the findings indicate that the customer factor reduces the positive impact of tax avoidance on firm value in high-risk tax avoidance and medium-risk tax avoidance zones. However, in low-risk tax avoidance zones, the customer factor enhances the positive impact of tax avoidance on firm value. Based on the research results, the authors propose several recommendations for investors and corporate managers to optimize investment and business performance.***

• Keywords: *customers, firm value, stakeholders, tax avoidance, tax risks.*

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## 1. Introduction

Factors such as tax avoidance and customers all affect businesses. Normally, if a business successfully avoids taxes, it will have more after-tax cash flow, leading to an increase in firm value. Similarly, customers are very important to businesses because they determine the revenue, survival, and development of any business. However, when a business generates revenue from customers that is not at market price or incurs many costs related to this revenue, firm value will decrease. In this case, the business will incur many tax risks from buying and selling at prices that do not reflect the market. Businesses will likely be subject to tax inspections related to this issue. Therefore, company administrators are very interested in factors such as customers, tax avoidance, and firm value when planning tax strategies.

The relationship between customers, tax avoidance, and firm value has been proven in fundamental theories. Traditionally, firm value increases due to higher after-tax cash flow when a business successfully avoids taxes. However, according to agency theory, when a business successfully avoids taxes, the after-tax cash flow is greater and may serve the personal interests of the manager, which can result in a decrease in firm value (Jensen and Meckling, 1976). Furthermore, Hill and Jones (1992) propose that business managers and stakeholders will reach an implicit agreement, demonstrating a stronger relationship. Therefore, when an enterprise engages in sales or service provision transactions with these related parties (referred to as customers) under special agreements regarding the interests of the parties, it will affect the business results of the enterprise.

Empirical results from Desai and Dharmapala (2009) show that tax avoidance positively affects firm value when the enterprise is well managed. This finding highlights the moderating role of corporate governance in the relationship between tax avoidance and firm value. However, Wong et al. (2015) and Cao et al. (2020) show that the moderating role of customers reduces the positive relationship between tax avoidance and firm value. The results indicate that customers can cause tax risks and reduce firm value when businesses avoid taxes. Neuman et al. (2020) believe that sales with foreign customers represent a tax risk factor for businesses. The research results of Guedrib and Marouani (2023) show that tax risk weakens the relationship between tax avoidance and firm value.

Many scholars have not considered tax risk factors when studying the impact of tax avoidance on firm value, particularly the sales factor with related parties as a tax risk factor in Vietnam. In Vietnam, businesses' tax risks not only depend on sales with foreign customers but also on sales with domestic customers

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due to their special relationships. Therefore, this study aims to use sales factors (foreign and domestic sales) with related parties as tax risk factors to moderate the relationship between tax avoidance and firm value. It is essential to clearly identify the tax risk factor that moderates this relationship and to clarify the moderating role of this risk factor on the impact of tax avoidance on firm value in different tax avoidance contexts in Vietnam. Based on this, the authors proposes several recommendations for investors and business administrators to optimize investment and business efficiency.

**2. Literature review and research hypotheses**

The results of pioneering empirical research by Desai and Dharmapala (2009) show that corporate governance factors increase firm value when businesses avoid taxes. However, Drake et al. (2019), and Guedrib and Marouani (2023) indicate that tax risk reduces firm value when businesses engage in tax avoidance.

Drake et al. (2019) used a sample of 40,357 observations of firms listed on the US stock exchange during the period from 1992 to 2014 and analyzed the data using regression to examine the moderating role of tax risk on the impact of tax avoidance on firm value. The main result of their study is that tax risk diminishes the relationship between tax avoidance and firm value.

Furthermore, Guedrib and Marouani (2023) utilized a sample of 290 observations of businesses listed on the Tunisian stock exchange from 2008 to 2020, also analyzing the data using regression to explore the moderating role of tax risk on the impact of tax avoidance on firm value. Their research results similarly indicate that tax risk diminishes the positive impact of tax avoidance on firm value. In addition, the authors found that at high levels of tax risk, tax risk negatively impacts firm value when businesses avoid taxes. However, at low levels of tax risk, tax risk does not moderate firm value when businesses engage in tax avoidance.

The studies by Drake et al. (2019) and Guedrib and Marouani (2023) indicate that tax avoidance must be considered alongside tax risk when studying its impact on firm value, as tax risk factors reduce firm value when businesses engage in tax avoidance. They view tax risk as the dispersion of tax savings in future cash flows (investing in tax avoidance that generates future cash flows is considered an investment), and tax risk is measured by the standard deviation of the effective cash tax rate over the time period from t - 4 to t, where larger standard deviations indicate greater tax risk.

In contrast to these studies on tax risk, Neuman et al. (2020) believe that foreign customers are one of the factors contributing to tax risks for businesses. Some related studies, such as those by Wong et al. (2015) and Cao et al. (2020), show that customer factors also cause tax risks for businesses and reduce firm value when companies avoid taxes. Wong et al. (2015) used a sample of 565 enterprises listed on the Shanghai Stock Exchange during the period from 2002 to 2009 to examine the moderating role of customers on the effects of tax avoidance on firm value. Their results demonstrate that sales with related parties positively impact firm value. However, they also show that the impact of sales with related parties on firm value decreases as the level of tax avoidance changes.

Additionally, Cao et al. (2020) analyzed 8,642 observations of businesses listed on the Chinese stock exchange from 2009 to 2014 to examine the effect of customer concentration on the relationship between tax avoidance and firm value. Their findings reveal that moderating customer concentration reduces the negative impact of tax avoidance on firm value. Both studies by Wong et al. (2015) and Cao et al. (2020) indicate that customers are significant contributors to tax risks for businesses and reduce firm value when firms engage in tax avoidance.

In Vietnam, current research results on the impact of tax avoidance on firm value consider moderating factors, often using two moderating factors: characteristics of the board of directors, state ownership to moderate this relationship as researched by Oanh and Gan (2022), Le et al. (2022). These studies have made a certain contribution to studying the impact of tax avoidance on firm value in Vietnam. However, current research has not considered customer factors as tax risk factors when studying the impact of tax avoidance on firm value in Vietnam. Neuman et al. (2020) said that foreign revenue is a factor that measures a business's tax risk. Based on the tax risk measure of Neuman et al. (2020) and specific conditions in Vietnam, the authors build sales with related parties as a tax risk factor to moderate the impact of avoiding taxes on firm value in Vietnam. Similar to the studies of Drake et al. (2019), Guedrib and Marouani (2023) authors propose research hypotheses that revenue with related parties reduce the positive relationship between tax avoidance and firm value, specifically:

*H1: The scale of revenue with related parties reduces the positive relationship between tax avoidance and firm value.*

The research results of Wong et al. (2015) show that revenue with related parties positively impacts firm value. Furthermore, the results indicate that the positive impact of sales with related parties on firm value decreases when the level of tax avoidance changes. Building upon the research of Wong et al. (2015), this study will establish a suitable tax avoidance zone in Vietnam to examine the impact of revenue with related parties on firm value within each different tax avoidance zone. Accordingly, the hypothesis is:

*H2: The direction of the impact of revenue scale with related parties on firm value varies across different tax avoidance zones.*

### 3. Data and methodology

#### *3.1. Data*

The study uses annual balance sheet data from audited financial statements provided by Vietstock and collected manually from notes to audited financial statements from businesses listed on the Vietnamese stock market (HOSE and HNX) from 2015 to 2022. The research sample was selected as follows: (1) After excluding businesses operating in the financial and banking sectors, insurance or investment fund, the remaining sample is 665 enterprises (358 enterprises on HOSE, 307 enterprises on HNX) with 7,890 observations. (2) Then the research data is removed from observations with a negative numerator or negative denominator in calculating tax avoidance variables, or the calculated value of tax avoidance variables is greater than or equal to 1; Excluding companies that do not have complete and continuous data from 2015 to 2022, the result is a sample of 397 businesses (205 businesses on HOSE, 192 businesses on HNX). (3) Based on this research sample, the authors manually collected revenue with related parties from audited financial statements. Thus, the final research sample included 397 listed companies with 3,176 observations and used Stata 16 statistical software to test the impact of tax avoidance on firm value through the moderating role of customers.

#### *3.2. Methodology*

Based on the previous research model of Wong et al. (2015), the authors propose the following research model to test the moderating role of customers on the impact of tax avoidance on firm value:

$$FV = \alpha_0 + \alpha_1 * TA + \alpha_i * TA * TAXRISK + \sum_1^n \beta_n * Control\ variable_n + \epsilon \qquad (1)$$

The variables are summarized specifically in Table 1. In particular, the dependent variable firm value FV is measured by Tobin's Q. The independent tax avoidance variable TA is measured by the GAAP ETR effective tax rate, which is multiplied by (-1) to make it easier to interpret the results. Accordingly, the larger the TA, the more tax is avoided. The moderating variable is TAXRISK calculated as the ratio of revenue to related parties divided by total revenue. Then TA multiplied by TAXRISK creates the interaction variable TA*TAXRISK. To test the influence of customers on the relationship between tax avoidance and firm value in different tax avoidance zones, the research model changes the variable TA into the dummy variable $TA\_Dummy_i$. $TA\_Dummy_i$ is a binary variable 1 or 0, representing tax avoidance zones. TA_Dummyi includes: (1) High-risk tax avoidance zone (Enterprises declare actual tax rates of 15% or less, showing that enterprises avoid more taxes because they apply more tax avoidance measures and apply corporate income tax incentives are higher, so tax risk is higher): equal to 1 if TA is less than or equal to 15%, otherwise equal to 0; (2) Medium risk tax avoidance zone: equal to 1 if TA is greater than 15% and less than 20%, otherwise equal to 0. (3) Low risk tax avoidance zone (Enterprises declare the actual tax rate paid according to the legal tax rate of 20% or more, it shows that the business has less tax risk): equal to 1 if TA is greater than or equal to 20%, otherwise equal to 0.

**Table 1. Summary of variables in the model**

| Variable name | Symbol | Measurement | Author | Expected |
|---|---|---|---|---|
| **Dependent variable FV** | | | | |
| Firm value | Tobin's Q | (Business market value + total debt)/ Total assets | Guedrib and Marouani (2023) | |
| **Independent variable** | | | | |
| Tax avoidance | TA | GAAP ETR = Total tax cost/Accounting income before tax | Drake et al. (2019) | + |
| **Moderating variable** | | | | |
| Customer | TAXRISK | Ratio of revenue with related parties/ total revenue. | Research inherits and builds from Neuman et al. (2020) | |
| **Control variables** | | | | |
| Enterprise scale | SIZE | Ln (Total assets) | Chen et al. (2014) | |
| Investment | INV | (Fixed assetst - Fixed assetst-1) | Assidi và cộng sự (2016) | |
| Operating time | YEAR | Number of years in operation | Oanh and Gan (2022) | |
| Profit rate | ROA | Income after tax/total assets | Chen et al. (2014) | |
| Debt structure | DEBT | Total debt divided by equity | Chen et al. (2014) | |
| Revenue growth rate | GROWTH | (Net salest - Net salest-1)/Net salest-1 | Chen et al. (2014) | |
| Economic growth | GDP | Annual GDP growth rate | Aggarwal and Padhan (2017) | |
| Inflation | INF | Annual inflation rate | Aggarwal and Padhan (2017) | |

*Source: Author's compilation*

### 4. Results and discussion

Table 2 shows the results of descriptive statistics, showing that the Tobin's Q variable has an average value of 1.2071, all > 1, indicating that the market value of the enterprise is higher than the book value. Statistical description of the remaining variables shows the agreement of mean value, standard deviation, minimum and maximum value.

**Table 2. Descriptive statistics of variables in the model**

| Variable | Obs | Mean | Standard deviation | Minimum | Maximum | Measurement unit |
|---|---|---|---|---|---|---|
| Tobin's Q | 3,176 | 1.2071 | 0.6883 | 0.2694 | 9.0439 | Proportion |
| TA | 3,176 | -0.1975 | 0.0991 | -0.9863 | 0 | % |
| TAXRISK | 3,176 | 17.3879 | 29.2324 | 0 | 100 | % |
| TA*TAXRISK | 3,176 | -3.3907 | 6.6399 | -74.6328 | 0 | Moderation |
| SIZE | 3,176 | 27.4907 | 1.6229 | 23.4406 | 33.1829 | Logarithm |
| INV | 3,176 | 0.0354 | 0.6103 | -23.7093 | 1 | % |
| YEAR | 3,176 | 29.3639 | 15.6694 | 4 | 133 | Year |
| ROA | 3,176 | 0.0730 | 0.0720 | -0.4709 | 0.7836 | % |
| DEBT | 3,176 | 1.4291 | 2.1141 | 0.0026 | 33.0270 | % |
| GROWTH | 3,176 | 0.2304 | 2.6894 | -0.9932 | 127.4579 | % |
| GDP | 3,176 | 0.0612 | 0.0201 | 0.0255 | 0.0812 | % |
| INF | 3,176 | 0.0267 | 0.0092 | 0.0063 | 0.0354 | % |

*Source: Author's compilation*

Table 3 presents the correlation results between variables in the model, indicating that the correlation coefficients between variables are < 0.8. This result suggests that the models do not have multicollinearity. Furthermore, the VIF coefficients of the models are < 10, reaching fairly low values. This further indicates that the models do not have multicollinearity issues.

**Table 3. Correlation matrix table between independent variables**

| Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| (1) TA | 1 | | | | | | | | | |
| (2) TA*TAXRISK | 0.3102 | 1 | | | | | | | | |
| (3) SIZE | -0.0220 | 0.0666 | 1 | | | | | | | |
| (4) INV | 0.0022 | 0.0157 | 0.0495 | 1 | | | | | | |
| (5) YEAR | -0.0663 | 0.0088 | 0.0688 | 0.0195 | 1 | | | | | |
| (6) ROA | 0.1599 | 0.0966 | -0.0354 | -0.0196 | 0.0327 | 1 | | | | |
| (7) DEBT | -0.1637 | -0.0938 | 0.2104 | 0.0241 | 0.0564 | -0.2894 | 1 | | | |
| (8) GROWTH | 0.0093 | 0.0225 | 0.0299 | 0.0023 | -0.0326 | 0.0383 | 0.1289 | 1 | | |
| (9) GDP | -0.0486 | -0.0059 | -0.0315 | 0.0531 | -0.0498 | 0.0440 | 0.0093 | 0.0259 | 1 | |
| (10) INF | 0.0056 | 0.0036 | 0.0487 | -0.0094 | 0.0511 | -0.0355 | 0.0068 | -0.0084 | 0.1571 | 1 |
| VIF | 1.47 | 1.20 | 1.07 | 1.01 | 1.05 | 1.14 | 1.19 | 1.03 | 1.04 | 1.04 |
| 1/VIF | 0.6787 | 0.8329 | 0.9381 | 0.9924 | 0.9519 | 0.8795 | 0.8378 | 0.9732 | 0.9591 | 0.9655 |
| Mean VIF | 1.16 | | | | | | | | | |

*Source: analysis results from Stata 16 software*

The results of the Durbin-Wu-Hausman test indicate that the models have endogeneity issues. Therefore, the authors employ the S-GMM estimation method to address endogeneity, autocorrelation, and heteroskedasticity (Blundell and Bond, 1998) in these models, following previous research by Oanh and Gan (2022). The two-step S-GMM regression results for the models are presented in Table 4.

**Table 4. Two-step S-GMM regression results**

| Variable | General sample | High-risk tax avoidance zones | Medium-risk tax avoidance zones | Low-risk tax avoidance zones |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Tobin's Q L1 | 0.4810** | 0.3892* | 0.3402 | 0.3052* |
| | *(0.1569)* | *(0.2287)* | *(0.3162)* | *(0.1773)* |
| TA2 | 1.0333** | 2.1430** | 1.4250* | 0.8071* |
| | *(0.4509)* | *(1.0133)* | *(0.8392)* | *(0.4334)* |
| ***TA*TAXRISK*** | ***-0.0220**** | | | |
| | *(0.0086)* | | | |
| ***TA_Dummy$_1$* TAXRISK*** | | ***-0.0052**** | | |
| | | *(0.0027)* | | |
| ***TA_Dummy$_2$* TAXRISK*** | | | ***-0.0036**** | |
| | | | *(0.0019)* | |
| | | | | ***0.0042***** |
| ***TA_Dummy$_3$* TAXRISK*** | | | | *(0.0014)* |
| | *(0.0086)* | *(0.0027)* | *(0.0019)* | *(0.0014)* |
| SIZE | 0.0118 | 0.0113 | 0.0214 | 0.0059 |
| | *(0.0179)* | *(0.0198)* | *(0.0257)* | *(0.0201)* |
| INV | 0.0167 | 0.0711 | 0.3075 | 0.2558 |
| | *(0.0260)* | *(0.1493)* | *(0.1924)* | *(0.2096)* |
| YEAR | -0.0131** | -0.0034 | -0.0174* | -0.0102** |
| | *(0.0056)* | *(0.0076)* | *(0.0099)* | *(0.0052)* |
| ROA | 2.2705* | 2.5812** | 2.5039** | 3.0166*** |
| | *(1.2410)* | *(1.2545)* | *(1.1779)* | *(0.8193)* |
| DEBT | 0.0091 | 0.0078 | -0.0054 | 0.0075 |
| | *(0.0073)* | *(0.0123)* | *(0.0121)* | *(0.0103)* |
| GROWTH | 0.0943* | 0.0875 | 0.0806 | 0.0826 |
| | *(0.0496)* | *(0.0694)* | *(0.0882)* | *(0.0627)* |
| GDP | -2.4043*** | -1.4328** | -1.1344 | -2.2572*** |
| | *(0.5019)* | *(0.5995)* | *(0.9672)* | *(0.5645)* |
| INF | -8.9801*** | -8.6683*** | -12.9699*** | -10.0399*** |
| | *(1.4258)* | *(1.8692)* | *(1.8211)* | *(1.7302)* |
| constant | 1.0270 | 1.0832 | 1.2641 | 1.2594 |
| Number of obs | 2,779 | 2,779 | 2,779 | 2,779 |
| Number of groups | 397 | 397 | 397 | 397 |
| Number of instruments | 61 | 42 | 37 | 57 |
| AR(1) (P-value) | 0.029 | 0.055 | 0.059 | 0.016 |
| AR(2) (P-value) | 0.205 | 0.131 | 0.479 | 0.321 |
| Hansen test (P-value) | 0.214 | 0.203 | 0.540 | 0.178 |
| Prob > chi2 | 0.000 | 0.000 | 0.000 | 0.000 |

*Source: analysis results from Stata 16 software*

*Note: ***, **, * are statistically significant at the 1%, 5%, 10% level.*

Table 4 presents the two-step S-GMM regression results on customers moderating the tax avoidance effect on firm value in the general sample and in different tax avoidance zones for companies listed on the Vietnamese stock market.

Regarding the tax avoidance (TA) variable, the results in columns (1), (2), (3), and (4) show that the tax avoidance variable has a positive impact on the Tobin's Q firm value variable in all models, with coefficients of 1.0333, 2.1430, 1.4250, and 0.8071, respectively (significance levels of 5%, 5%, 10%, and 10%). This result indicates that the more businesses avoid taxes, the greater their business value increases. This finding is consistent with the research of Oanh and Gan (2022), Le et al. (2022), Guedrib and Marouani (2023). It aligns with the traditional theory that businesses engage in tax avoidance to minimize tax expenses and increase after-tax cash flow, ultimately enhancing business value

Regarding the TA*TAXRISK interaction variable, the results show that this variable has a negative impact on the Tobin's Q firm value in column (1), with a coefficient of -0.0220 (5% significance level). This indicates that, in the general sample, customers reduce the positive impact of tax avoidance on business value. Similar results in columns (2) and (3) show that the variables TA_Dummy$_1$*TAXRISK and TA_Dummy$_2$*TAXRISK have negative impacts on the Tobin's Q firm value, with coefficients of -0.0052 and -0.0036, respectively (significance levels of 10% and 10%). This suggests that in high-risk and medium-risk tax avoidance zones, customers decrease business value. These findings are consistent with the research of Wong et al. (2015), Cao et al. (2020), and Guedrib and Marouani (2023). Furthermore, these results align with agency-stakeholder theory, which posits that managers represent both the firm and the interests of stakeholders. Through sales contracts between the company and its stakeholders, certain mutual benefits are achieved, ultimately influencing firm value. Accordingly, the more revenue a company generates from stakeholder transactions, the greater its tax risk, as these transactions may not follow market price principles and often incur additional costs to secure such sales contracts. Additionally, this outcome is associated with increased likelihood of audits, inspections, and tax reviews, leading to a decline in firm value.

However, the results in column (4) show that the TA_Dummy$_3$*TAXRISK variable has a positive impact on the Tobin's Q firm value variable. This finding indicates that in low-risk tax avoidance zones, customer factors increase firm value. This result is consistent with the research of Wong et al. (2015). This result shows that customers generate revenue for the business, create more after-tax cash flow and increase business value.

For the variables: firm age (YEAR); return on assets (ROA); revenue growth rate (GROWTH); annual economic growth rate (GDP); and annual inflation (INF), all have an impact on firm value and are statistically significant at the 1%, 5%, and 10% levels. The remaining control variables, such as investment (INT); firm size (SIZE); and debt structure (DEBT), also affect firm value, but are not statistically significant.

**5. Conclusions and policy recommendations**

Based on a sample of 397 firms listed on HOSE and HNX from 2015 to 2022, and using the two-step S-GMM estimation method to analyze the moderating effect of customer factors on the impact of tax avoidance on firm value, the research findings show that tax avoidance positively influences firm value in Vietnam. However, customer factors reduce the positive impact of tax avoidance on firm value in the overall sample, as well as in high-risk and medium-risk tax avoidance zones. In contrast, in low-risk tax avoidance zones, customer factors increase the impact of tax avoidance on firm value. Based on these findings, the authors propose several recommendations as follows:

For investors: Investors should consider selecting portfolios that include stocks of companies employing tax avoidance measures that enhance firm value. Companies with lower GAAP ETRs, indicating more effective tax avoidance, will see a greater increase in firm value. Alternatively, investors might choose portfolios of stocks in listed companies with a high revenue ratio from stakeholders, as this can increase firm value when these companies operate in low-risk tax avoidance zones. However, investors should be cautious when selecting stocks of companies with a high revenue ratio from stakeholders, as this can reduce firm value when these companies engage in tax avoidance, especially in high- risk tax avoidance or medium-risk tax avoidance zones.

For corporate managers: Companies should consider using tax avoidance measures, such as GAAP ETR, to reduce tax costs, increase post-tax cash flow, and enhance firm value. Additionally, companies may strategize to increase the proportion of sales transactions with stakeholders when operating in low-risk tax avoidance zones, as this can further enhance firm value. However, companies should carefully assess and manage sales transactions with stakeholders, as these may reduce firm value when engaging in tax avoidance, particularly in high- risk tax avoidance and medium-risk tax avoidance zones.

Tax avoidance generates tax-related risks for businesses. Transactions with stakeholders are one factor contributing to these tax risks. Therefore, future research should further examine additional factors that contribute to tax risks, providing insights into moderating factors that impact the effect of tax avoidance on firm value in the Vietnamese stock market.

**References:**

*Aggarwal, D., and Padhan, P. C. (2017), Impact of capital structure on firm value: Evidence from Indian hospitality industry, Theoretical Economics Letters, 7(4), 982-1000.*

*Assidi, S., Aliani, K., and Omri, M. A. (2016), Tax optimization and the firm's value: Evidence from the Tunisian context, Borsa Istanbul Review, 16(3), 177-184.*

*Blundell, R., and Bond, S. (1998), Initial conditions and moment restrictions in dynamic panel data models, Journal of econometrics, 87(1), 115-143.*

*Cao, Y., Hu, X., Lu, Y., & Su, J. (2020). Customer concentration, tax collection intensity, and corporate tax avoidance. Emerging Markets Finance and Trade, 56(11), 2563-2593.*

*Chen, X., Hu, N., Wang, X., and Tang, X. (2014), Tax avoidance and firm value: evidence from China, Nankai Business Review International, 5(1), 25-42.*

*Desai, M. A., & Dharmapala, D. (2009). Corporate tax avoidance and firm value. The review of Economics and Statistics, 91(3), 537-546.*

*Drake, K. D., Lusch, S. J., & Stekelberg, J. (2019). Does tax risk affect investor valuation of tax avoidance?. Journal of Accounting, Auditing & Finance, 34(1), 151-176.*

*Guedrib, M., and Marouani, G. (2023), The interactive impact of tax avoidance and tax risk on the firm value: new evidence in the Tunisian context, Asian Review of Accounting, 31(2), 203-226.*

*Hill, C. W., & Jones, T. M. (1992). Stakeholder-agency theory. Journal of management studies, 29(2), 131-154.*

*Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3, 305–360.*

*Le, V. H., Vu, T. A. T., and Nguyen, M. H. (2022), Tax Planning and Firm Value: The Case of Companies with Different State Ownership in Vietnam, Journal of Eastern European and Central Asian Research (JEECAR), 9(2), 333-343.*

*Neuman, S. S., Omer, T. C., and Schmidt, A. P. (2020), Assessing tax risk: Practitioner perspectives, Contemporary Accounting Research, 37(3), 1788-1827.*

*Oanh, H. K., and Gan, C. (2022), Corporate Tax Avoidance: Evidence from Vietnamese Firms, Review of Pacific Basin Financial Markets and Policies, 25(01), 2250002.*

*Wong, R. M., Kim, J. B., & Lo, A. W. (2015). Are related-party sales value-adding or value-destroying? Evidence from China. Journal of International Financial Management & Accounting, 26(1), 1-38.*

# CURRENT STATUS OF FACTORS AFFECTING MANAGEMENT ACCOUNTING FOR SHORT-TERM DECISION MAKING IN VIETNAMESE GARMENT ENTERPRISES

**MSc. Nguyen Hai Ha***

**Abstract:** ***Management accounting is an inseparable process of management activities and provides valuable information to managers, helping them make reasonable and accurate decisions in the process of performing business management functions to use resources effectively, thereby creating and maintaining value for the business. Therefore, studying the factors affecting the status of management accounting for short-term decision making in garment enterprises in Vietnam is extremely important. The results show that there are 8 factors that are independent variables including: Enterprise size; Manager participation; Qualification of accounting staff; Production technology process; Level of market competition; Level of equipment, means to support information collection, processing, analysis and provision; Cost of organizing management accounting for short-term decision making; Level of decentralization. And 01 dependent variable: Applying management accounting for short-term decision making in enterprises.***

• Keywords: *management accounting, influencing factors, short-term decision vietnamese garment enterprises.*

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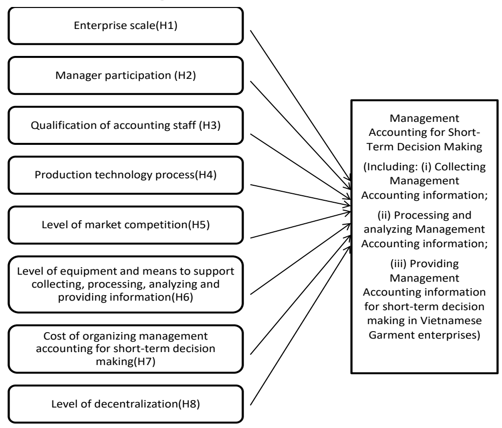
## 1. Introduction

Currently, the garment industry is considered one of the basic industries of the manufacturing industry in Vietnam, the industry solves a significant demand for employment, ensures stable social life and increases social welfare. However, in the context of today's integration, these enterprises are facing many difficulties in mobilizing capital, applying new technology as well as management skills to improve the competitiveness of the enterprise. Therefore, applying management accounting to the enterprise will help managers make correct, timely decisions and bring efficiency to the enterprise. However, implementing this issue is currently extremely difficult for most enterprises, because most enterprises do not recognize and understand the importance of management accounting. Therefore, studying the factors affecting the status of management accounting for short-term decision making in garment enterprises in Vietnam will help garment enterprises operate stably, grow sustainably and contribute to the socio-economic development of Vietnam.

## 2. Research models and methods

According to Vietnam Accounting Law (2003, 2015), management accounting is *"the collection, processing, analysis and provision of economic and financial information according to management requirements and financial and economic decisions." within the accounting unit for planning and control control the unit's operations".*

**Image 1: Research model**




*Source: Author's compilation*

From the initial survey results, the author believes that the factors in the research model are all factors that have a positive impact on the application of international accounting for short-term decision making in garment enterprises in Vietnam. Therefore, the author proposes the following research hypothesis: 08 independent variables; 01 dependent variable.

Measurement questions (scales) for independent and dependent variables were built based on questions used in a number of previous studies in the world and in the

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country such as: Tuan Mat (2010), Ahmad (2012), Chae et al. (2014), Nguyen Thi Quynh Trang (2022), Nguyen Thi Kim Ngoc (2023), then adjusted (added, reduced, corrected) to suit the actual characteristics of Vietnamese garment enterprises. With 330 questionnaires sent to 146 Vietnamese garment enterprises, 284 questionnaires were collected (rate 86.06%). After data cleaning, 252 questionnaires (rate 88.73%) were used to analyze the results.

All observed variables are measured using a Likert scale with 5 levels: 1-Completely disagree; 2-Disagree; 3-Agree at an average level; 4-Agree; 5-Totally agree.

** Research method*

After conducting the survey and receiving the response forms (received questions), the author coded and entered the data. Next, the author analyzed the data using SPSS version 22 software. First, the author tested the reliability of the scales and then conducted exploratory factor analysis (EFA), correlation analysis, and multiple regression analysis

**3. Research results and discussion**

With 330 questionnaires sent to 146 Vietnamese garment enterprises, 284 questionnaires were collected (86.06%). After data cleaning, there were 252 questionnaires (rate 88.73%) used to analyze the results.

***3.1. Testing the reliability of the scale***

*3.1.1. Enterprise Size Factor (Symbol: QM)*

**Table 1. Results of scale analysis for the QM factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| QM1 | 10.58 | 9.052 | .415 | .656 |
| QM2 | 10.53 | 8.258 | .468 | .624 |
| QM3 | 10.67 | 8.632 | .500 | .602 |
| QM4 | 10.59 | 8.898 | .501 | .604 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 1 showed that the scale has a reliability of 0.687 > 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the QM factor scale with the observed variables: QM1, QM2, QM3, QM4 is reliable.

*3.1.2. Factor Manager Participation (Symbol: TG)*

**Table 2. Results of the first scale analysis for factor TG**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| **TG1** | **19.90** | **9.589** | **.277** | **.673** |
| TG2 | 19.70 | 8.834 | .377 | .644 |
| TG3 | 19.76 | 8.437 | .410 | .633 |
| TG4 | 19.78 | 8.730 | .388 | .640 |
| TG5 | 19.69 | 7.934 | .481 | .606 |
| TG6 | 19.80 | 7.830 | .491 | .602 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 2 show that the TG scales have a reliability of 0.676> 0.6, which meets the requirements. However, the observed variable TG1 has a correlation with the total of less than 0.3, so we proceed to remove this observed variable and run a second analysis of the reliability of the scale

**Table 3. Results of the second scale analysis for the TG factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| TG2 | 15.87 | 7.243 | .333 | .660 |
| TG3 | 15.93 | 6.783 | .390 | .638 |
| TG4 | 15.95 | 6.902 | .403 | .632 |
| TG5 | 15.86 | 6.176 | .499 | .587 |
| TG6 | 15.97 | 6.091 | .507 | .583 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 3 show that the TG scales have a reliability of 0.673> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the TG factor scale with the observed variables: TG2, TG3, TG4, TG5 and TG6 is reliable.

*3.1.3. Factor Qualification of accounting staff (Symbol: TD)*

**Table 4. Scale analysis results for TD factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| TĐ1 | 16.04 | 6.090 | .437 | .640 |
| TĐ2 | 15.93 | 5.767 | .425 | .645 |
| TĐ3 | 15.98 | 5.756 | .444 | .637 |
| TĐ4 | 15.91 | 5.924 | .429 | .643 |
| TĐ5 | 16.01 | 5.496 | .476 | .622 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 4 show that the TD scales have a reliability of 0.687> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the TD factor scale with the observed variables: TD1, TD2, TD3, TD4 and TD5 is reliable.

*3.1.4. Production Technology Process Factor (Symbol: CN)*

**Table 5. Results of scale analysis for the CN factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| CN1 | 11.23 | 6.370 | .744 | .781 |
| CN2 | 11.45 | 7.097 | .652 | .822 |
| CN3 | 11.35 | 7.405 | .683 | .809 |
| CN4 | 11.26 | 7.275 | .673 | .813 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 5 show that the CN scales have a reliability of 0.848> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the CN factor scale with the observed variables: CN1, CN2, CN3 and CN4 is reliable.

*3.1.5. Factor Level of market competition (Symbol: CT)*

**Table 6. Results of scale analysis for CT factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| CT1 | 11.22 | 5.910 | .580 | .666 |
| CT2 | 11.38 | 6.492 | .545 | .687 |
| CT3 | 11.48 | 6.515 | .468 | .731 |
| CT4 | 11.22 | 6.522 | .581 | .669 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 6 show that the CN scales have a reliability of 0.747> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the CT factor scale with the observed variables: CT1, CT2, CT3 and CT4 is reliable.

*3.1.6. Factor Level of equipment, means of support, collection, processing, analysis and provision of information (Symbol: TB)*

**Table 7. Results of scale analysis for the TB factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| TB1 | 11.18 | 7.918 | .745 | .761 |
| TB2 | 11.35 | 8.550 | .639 | .810 |
| TB3 | 11.22 | 8.332 | .702 | .782 |
| TB4 | 10.98 | 9.572 | .605 | .824 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 7 show that the TB scales have a reliability of 0.839> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the TB factor scale with the observed variables: TB1, TB2, TB3 and TB4 is reliable.

*3.1.7. Factor: Cost of organizing management accounting for short-term decision-making (Symbol: CP)*

**Table 8. Scale analysis results for CP factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| CP1 | 11.37 | 7.538 | .731 | .747 |
| CP2 | 11.56 | 8.064 | .614 | .804 |
| CP3 | 11.38 | 7.844 | .701 | .762 |
| CP4 | 11.17 | 9.111 | .583 | .814 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 8 show that the CP scales have a reliability of 0.828> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the CP factor scale with the observed variables: CP1, CP2, CP3 and CP4 is reliable.

*3.1.8. Factor Level of decentralization (Symbol: PQ)*

The results of the reliability analysis of the scale in Table 9 show that the PQ scales have a reliability of 0.850> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the PQ factor scale with the observed variables: PQ1, PQ2, PQ3 and PQ4 is reliable.

**Table 9. Results of scale analysis for the PQ factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| PQ1 | **7.47** | **11.186** | **.727** | **.792** |
| PQ2 | **7.58** | **11.437** | **.698** | **.805** |
| PQ3 | **7.52** | **12.203** | **.618** | **.838** |
| PQ4 | **7.51** | **11.211** | **.712** | **.798** |

*Source: Author's analysis results*

*3.1.9. Factor Applying management accounting for short-term decision making (Dependent variable) (Symbol: AD)*

**Table 10. Results of scale analysis for AD factor**

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| AD1 | 7.95 | 2.977 | .532 | .714 |
| AD2 | 8.01 | 2.532 | .584 | .657 |
| AD3 | 7.97 | 2.599 | .617 | .617 |

*Source: Author's analysis results*

The results of the reliability analysis of the scale in Table 10 show that the dependent variable AD scales have a reliability of 0.749> 0.6, meeting the requirements. All component variables have a correlation with the total > 0.3. Thus, the scale of the dependent variable AD with the observed variables: AD1, AD2 and AD3 is reliable.

***3.2. EFA exploratory factor analysis***

*3.2.1. EFA exploratory factor analysis for the independent variable*

In this research, factor analysis will help us consider the possibility of reducing the number of 37 observed variables (34 independent variables, 3 dependent variables) down to a small number of variables used to reflect accurately. specifically the impact of factors on AD factors. The results of factor analysis are shown below:

- KMO test: According to Hoang Trong and Chu Nguyen Mong Ngoc (2007), the Sig. Bartlett's Test is less than 0.05 allowing to reject the hypothesis H0 and the value 0.5<KMO<1 means that factor analysis is appropriate.

**Table 11. KMO test**

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .708 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 3316.002 |
| | Df | 561 |
| | Sig. | 0.000 |

*Source: Author's analysis results*

The test results show that the KMO value is 0.708, greater than 0.5, and the Sig of Bartlett's Test is 0.000, less than 0.05, showing that there are 34 observations and are completely suitable for factor analysis.

- Factor rotation matrix: The method chosen here is the Varimax procedure. Exploratory factor analysis EFA will retain observed variables with loading coefficients greater than 0.5 and arrange them into main groups.

After rotating the factors, we see that the concentration of observations according to each factor is quite clear. The analysis results table shows that there are a total of 34 observations creating 9 factors. That is:TG: TG2, TG3, TG4, TG5, TG6, TĐ3, TĐ4, TĐ5; CN: CN1, CN2, CN3, CN4; PQ: PQ1, PQ2, PQ3, PQ4; TB: TB1, TB2, TB3, TB4; CP: CP1, CP2, CP3, CP4; CT: CT1, CT2, CT3, CT4; TĐ: TĐ1, TĐ2; QMC: QM1, QM2; QMM: QM3, QM4.

**Table 12. EFA results for independent variables**

| Rotated Component Matrix[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Component | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| TG6 | .719 | | | | | | | | |
| TG5 | .709 | | | | | | | | |
| TĐ3 | .635 | | | | | | | | |
| TĐ5 | .618 | | | | | | | | |
| TG3 | .563 | | | | | | | | |
| TĐ4 | .548 | | | | | | | | |
| TG4 | .530 | | | | | | | | |
| TG2 | .529 | | | | | | | | |
| CN1 | | .827 | | | | | | | |
| CN3 | | .813 | | | | | | | |
| CN2 | | .805 | | | | | | | |
| CN4 | | .757 | | | | | | | |
| PQ1 | | | .851 | | | | | | |
| PQ2 | | | .821 | | | | | | |
| PQ4 | | | .820 | | | | | | |
| PQ3 | | | .785 | | | | | | |
| TB3 | | | | .822 | | | | | |
| TB1 | | | | .808 | | | | | |
| TB4 | | | | .758 | | | | | |
| TB2 | | | | .732 | | | | | |
| CP1 | | | | | .862 | | | | |
| CP3 | | | | | .842 | | | | |
| CP2 | | | | | .789 | | | | |
| CP4 | | | | | .731 | | | | |
| CT1 | | | | | | .782 | | | |
| CT4 | | | | | | .774 | | | |
| CT2 | | | | | | .732 | | | |
| CT3 | | | | | | .710 | | | |
| QM3 | | | | | | | .789 | | |
| QM4 | | | | | | | .786 | | |
| QM2 | | | | | | | | .816 | |
| QM1 | | | | | | | | .786 | |
| TĐ2 | | | | | | | | | .688 |
| TĐ1 | | | | | | | | | .683 |

*Source: Author's analysis results*

*3.2.2. EFA analysis for dependent variable AD*

**Table 13. KMO test**

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .682 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 175.475 |
| | Df | 3 |
| | Sig. | .000 |

*Source: Author's analysis results*

The test results show that the KMO value is 0.682 > 0.5 and the Sig of Bartlett's Test is 0.000 less than 0.05, showing that the three observed variables AD1, AD2 and AD3 are correlated with each other and are completely suitable for factor analysis.

**Table 14. EFA results for dependent variables**

| Observation variable | Load coefficient |
|---|---|
| AD1 | 0.843 |
| AD2 | 0.822 |
| AD3 | 0.783 |
| ***Eigenvalues*** | ***1.999*** |
| ***Variance extraction*** | ***66.630%*** |

*Source: Author's analysis results*

For the above exploratory factor analysis results, the total variance extracted is 66.630% which is greater than 50% and the eigenvalues of the factor are greater than 1, so using the factor analysis method is appropriate. Thus, we obtain the AD factor with 3 observed variables AD1, AD2, AD3. From the above results, we have the following research hypotheses:

- H1: There is a relationship between the QMC factor and the AD factor
- H2: There is a relationship between the QMM factor and the AD factor
- H3: There is a relationship between the TG factor and the AD factor
- H4: There is a relationship between the TD factor and the AD factor
- H5: There is a relationship between the CN factor and the AD factor
- H6: There is a relationship between the CT factor and the AD factor
- H7: There is a relationship between the TB factor and the AD factor
- H8: There is a relationship between the CP factor and the AD factor
- H9: There is a relationship between the PQ factor and the AD factor

***3.3. Correlation analysis***

From the analysis results table (Table 15), it can be seen that the variables TG, CT and TĐ were eliminated because they had $P > 0.05$. The variables CN, PQ, TB, CP, QMC, QMM all had positive correlations with the dependent variable HQKD ($r > 0$, $p < 0.05$). From the above results, we have the following research hypotheses:

- H1: There is a relationship between the QMC factor and the AD factor
- H2: There is a relationship between the QMM factor and the AD factor
- H5: There is a relationship between the CN factor and the AD factor
- H7: There is a relationship between the TB factor and the AD factor
- H8: There is a relationship between the CP factor and the AD factor
- H9: There is a relationship between the PQ factor and the AD factor

**Table 15. Correlation coefficient**

| | | AD | TG | CN | PQ | TB | CP | CT | QMC | QMM | TĐ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AD | Pearson Correlation | 1 | -.055 | .439** | .125* | .479** | .205** | .069 | .208** | .275** | -.030 |
| | Sig. (2-tailed) | | .386 | .000 | .048 | .000 | .001 | .278 | .001 | .000 | .634 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| TG | Pearson Correlation | -.055 | 1 | .091 | -.034 | .074 | .122 | .017 | -.014 | .067 | .493** |
| | Sig. (2-tailed) | .386 | | .150 | .597 | .243 | .054 | .783 | .827 | .287 | .000 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| CN | Pearson Correlation | .439** | .091 | 1 | -.088 | .442** | .054 | .047 | .101 | .236** | .080 |
| | Sig. (2-tailed) | .000 | .150 | | .166 | .000 | .392 | .460 | .109 | .000 | .206 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| PQ | Pearson Correlation | .125* | -.034 | -.088 | 1 | -.252** | .029 | -.060 | .027 | -.125* | -.004 |
| | Sig. (2-tailed) | .048 | .597 | .166 | | .000 | .643 | .342 | .667 | .049 | .953 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| TB | Pearson Correlation | .479** | .074 | .442** | -.252** | 1 | .071 | .145* | .038 | .259** | .086 |
| | Sig. (2-tailed) | .000 | .243 | .000 | .000 | | .260 | .022 | .545 | .000 | .176 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| CP | Pearson Correlation | .205** | .122 | .054 | .029 | .071 | 1 | .039 | .104 | .152* | .007 |
| | Sig. (2-tailed) | .001 | .054 | .392 | .643 | .260 | | .537 | .101 | .016 | .916 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| CT | Pearson Correlation | .069 | .017 | .047 | -.060 | .145* | .039 | 1 | -.006 | .101 | -.011 |
| | Sig. (2-tailed) | .278 | .783 | .460 | .342 | .022 | .537 | | .931 | .109 | .866 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| QMC | Pearson Correlation | .208** | -.014 | .101 | .027 | .038 | .104 | -.006 | 1 | .344** | .007 |
| | Sig. (2-tailed) | .001 | .827 | .109 | .667 | .545 | .101 | .931 | | .000 | .917 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| QMM | Pearson Correlation | .275** | .067 | .236** | -.125* | .259** | .152* | .101 | .344** | 1 | -.025 |
| | Sig. (2-tailed) | .000 | .287 | .000 | .049 | .000 | .016 | .109 | .000 | | .698 |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |
| TĐ | Pearson Correlation | -.030 | .493** | .080 | -.004 | .086 | .007 | -.011 | .007 | -.025 | 1 |
| | Sig. (2-tailed) | .634 | .000 | .206 | .953 | .176 | .916 | .866 | .917 | .698 | |
| | N | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 | 251 |

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

*Source: Author's analysis result*

### *3.4. Multiple regression analysis*

After performing correlation analysis, the next regression analysis is to determine the linear relationship between the variables CN, PQ, TB, CP, QMC, QMM with the dependent variable AD.

**Table 16. First regression analysis**

| Model | Unstandardized Coefficients | | Standardized Coefficients | P | VIF |
|---|---|---|---|---|---|
| | B | Std. Error | | | |
| (Constant) | 0.605 | 0.282 | | 0.033 | |
| QMC | 0.079 | 0.035 | 0.118 | 0.026 | 1.148 |
| **QMM** | **0.058** | **0.038** | **0.084** | **0.129** | **1.259** |
| CN | 0.221 | 0.050 | 0.247 | 0.000 | 1.273 |
| TB | 0.323 | 0.047 | 0.397 | 0.000 | 1.358 |
| CP | 0.110 | 0.042 | 0.131 | 0.009 | 1.031 |
| PQ | 0.175 | 0.036 | 0.250 | 0.000 | 1.081 |
| R unstandardized squared: 0.405 | | | | | |
| R standardized squared: 0.390 | | | | | |
| P(Anova): 0.000 | | | | | |
| Durbin – Watson: 2.025 | | | | | |

*Source: Author's analysis result*

From the above results, we see that the independent variable QMM has a weak effect on the dependent variable AD (because P>0.05). We remove this variable and run the second regression.

The regression equation is as follows:

AD = a1 QMC+ a2CN+ a3TB + a4CP + a5PQ + b

Unstandardized regression model:

AD = 0.097QMC+ 0.230CN+ 0.335TB + 0.117CP + 0.170PQ + 0.654

Standardized regression model:

AD = 0.145QMC+ 0.256CN+ 0.411TB + 0.140CP + 0.243PQ

The ANOVA analysis results give sig = 0.000<0.05. Thus, the multivariate regression model is suitable for the surveyed data.

Thus, the hypotheses H1, H5, H7, H8, H9 are accepted at the 5% significance level (95% confidence level).

**Table 17. Second regression analysis**

| Model | Unstandardized Coefficients | | Standardized Coefficients | P | VIF |
|---|---|---|---|---|---|
| | B | Std. Error | | | |
| (Constant) | 0.654 | 0.281 | | 0.021 | |
| QMC | 0.097 | 0.033 | 0.145 | 0.004 | 1.022 |
| CN | 0.230 | 0.050 | 0.256 | 0.000 | 1.255 |
| TB | 0.335 | 0.046 | 0.411 | 0.000 | 1.323 |
| CP | 0.117 | 0.042 | 0.140 | 0.006 | 1.018 |
| PQ | 0.170 | 0.036 | 0.243 | 0.000 | 1.072 |
| R unstandardized squared: 0.399 | | | | | |
| R standardized squared: 0.387 | | | | | |
| P(Anova): 0.000 | | | | | |
| Durbin – Watson: 1.989 | | | | | |

*Source: Author's analysis result*

## 5. Conclusion

The results of the exploratory factor analysis showed that 9 factors have an impact on the AD factor. The extracted factor group explains 63.193% of the variation in the data.

The test results showed that the KMO value reached 0.682 > 0.5 and the Sig of Bartlett's Test was 0.000 less than 0.05, showing that the 3 observed variables AD1, AD2 and AD3 are correlated with each other and are completely suitable for factor analysis.

The hypotheses H1, H5, H7, H8, H9 are accepted at the 5% significance level (95% confidence level).

Therefore, to implement the application of management accounting to enhance the ability to provide short-term decision-making information, the author proposes that garment enterprises in Vietnam need to focus on increasing awareness for managers about the role of management accounting. and the position as well as the importance of management accounting in enterprises.

**References:**

*Hoang Trong & Chu Nguyen Mong Ngoc (2008), Study materials Analyzing research data with SPSS 2008, volume 1, Ho Chi Minh City University of Economics*

*Accounting Law No. 88/2015/QH13, dated November 20, 2015*

*Ahmad, K. (2013). The adoption of management accounting practices in malaysian small and medium-sized enterprises.Asian Social Science,10(2), 236.*

*Bouquin, H. (1997). Management accounting in its social context: Rimailho revisited.Accounting, Business & Financial History,7(3), 315 - 343.*

*Foster, G., & Gupta, M. (1994). Marketing, cost management and management accounting. Journal of Management Accounting Research,6, 43.*

*Haldma, T., & Lts, K. (2002). Contingencies influencing the management accounting practices of Estonian manufacturing companies.Management accounting research,13(4), 379 - 400.*

*Kaplan, R. S., & Atkinson, A. A. (2015). Advanced management accounting. PHI Learning.*

*Nick (1993), Eckstein (1958), Sanford (1986), Stuart (2010)*

*Mary Parker Follett*

*Sulaiman (2003)*

# ATTRACT "GREEN" FDI INTO VIETNAM FOR THE GOAL OF SUSTAINABLE DEVELOPMENT

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**Abstract:** ***In the new period, attracting Foreign Direct Investment (FDI) requires adjustments in orientation and policy to implement the Green Growth Strategy. The goal is to enhance resource efficiency, protect biodiversity and ecosystems, and thereby achieve the highest socio-economic benefits in the development process. Although Vietnam has achieved impressive results in attracting FDI, it has increasingly recognized the need for a strategic policy shift. Specifically, the focus is now on attracting new-generation FDI and "green" FDI to sustain competitiveness and align with the goal of sustainable development.***

• Keywords: *green FDI, sustainable development, Vietnam.*

*JEL codes: E22, F2, O16*

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**1. Introduction**

Many countries need green FDI capital for sustainable development and green transformation. However, green FDI capital flows are targeting developed countries, which account for about 60% of green FDI capital globally; More than 30% goes to developing countries. In particular, it is noted that some countries have made great leaps in attracting green FDI capital such as Malaysia, for example, which has now attracted 43 billion USD of green FDI capital thanks to the policy framework on climate change and green infrastructure construction, exporting green technology...

As a destination to attract FDI in the ASEAN region, along with the green transformation trend, a number of large investors from Europe have chosen Vietnam to pour green capital. This article will present the theoretical basis of green FDI and the current context and orientation of attracting FDI in Vietnam, thereby proposing solutions to promote attracting green FDI into Vietnam.

**2. Theoretical basis of green FDI**

***2.1. Foreign direct investment***

FDI is a form of long-term investment where individuals or organizations from one country invest in another country by establishing factories or business operations. The World Trade Organization provides a detailed definition of FDI. FDI takes place when an investor from one country acquires assets in another country and obtains the right to manage those assets. This element of management is what sets FDI apart from other financial instruments.

***2.2. Green FDI***

Defining and measuring green FDI is not a simple process, there is still a lack of internationally agreed definitions and relevant data on green FDI. This concept is primarily discussed in some studies by UNCTAD and an official 2011 study by the OECD, which is considered a foundational reference for subsequent research on green FDI-related issues.

Green FDI as encompassing two types of investment: (i) Foreign direct investment that adheres to national environmental standards, and (ii) Investment in the direct production of environmental products and services within the host country (UNCTAD, 2008).

OECD (2011) has had one of the first studies on the definition of green FDI. Gathering from previous documents, OECD believes that green FDI consists of two parts: (i) FDI in environmental goods and services and (ii) Foreign investment in the process of minimizing environmental damage such as using cleaner or more energy efficient technology.

Vietnam does not define green FDI, but in the 2012 "National Strategy on Green Growth", it mentions that the "Green Growth Strategy" is "a strategy to promote the process of restructuring and improving economic institutions towards more efficient use of natural resources, enhancing the competitiveness of the economy, through increased investment in technological innovation, natural capital, and economic instruments. Thereby contributing to responding to climate change, reducing poverty and ensuring sustainable economic development". In this strategy, Vietnam also defines green technology and green products. In which, green technology is "technology to develop, apply products, equipment and systems used to conserve the environment and resources, minimize negative impacts from human activities"; and green products are "non-toxic products, use energy and water efficiently and

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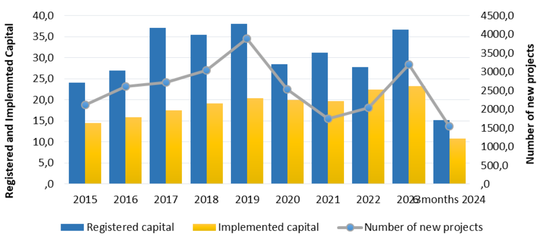
are harmless to the environment". And so, in summary, green FDI can be understood as FDI in environmental products and services or in production processes that minimize environmental impact aims to foster economic development while ensuring responsible resource use. This approach seeks to prevent environmental damage, address climate change, and maintain ecological balance in the host country.

**3. Current status of attracting green FDI in Vietnam in recent times**

***3.1. Current status of attracting foreign direct investment capital in the period 2015 to June 2024***

Period 2015 - June 2024: Project scale in terms of total registered capital, total implemented capital and number of projects increased steadily over the years. Regarding registered capital, as of June 2024, in Vietnam there were 1,538 newly registered investment projects with a capital of 9.54 million USD. As of June 20, 2024, Vietnam had 40,544 valid FDI projects with a total registered capital of 484.77 billion USD. The accumulated implemented capital for these foreign investment projects is estimated at approximately 308 billion USD, representing 63.5% of the total registered investment capital.

**Figure 1. Number of projects, total registered capital and total implemented capital of FDI capital in Vietnam in the period 2015-6/2024 (Number of projects, Billion USD)**




*Source: Foreign Investment Agency - Ministry of Planning and Investment*

According to the Ministry of Planning and Investment, FDI capital in Vietnam began to rise significantly in 2016 with the implementation of several Free Trade Agreements (FTAs). In that year, the total registered capital for newly licensed projects, additional investments, and capital contributions or share purchases reached over 24.3 billion USD, marking a 7.1% increase from 2015. Notably, the disbursed FDI capital in 2016 was estimated at 15.8 billion USD, a 9% increase from the previous year and the highest level of FDI disbursement to date.

In 2018, according to the Foreign Investment Agency of the Ministry of Planning and Investment, the total FDI, including newly registered, increased, contributed, and share purchases, was 35.46 billion USD, which was 98.8% of the amount in 2017. Although overall FDI capital attracted in 2018 decreased compared to 2017, there was a nearly 60% increase in capital contributions and share purchases. By December 20, 2018, Vietnam had 3,046 new projects with Investment Registration Certificates, totaling nearly 18 billion USD in newly registered capital, which was 84.5% of the amount in the same period of 2017. Additionally, 1,169 projects had their investment capital adjusted, with a total increase of 7.59 billion USD, or 90.3% compared to the same period in 2017.

Since 2020, the impact of the COVID-19 pandemic has led to a decline in Foreign Direct Investment in Vietnam, affecting both registered capital and newly licensed projects. In 2020, the total FDI, including newly registered, adjusted, contributed, and purchased capital, was 28.53 billion USD, representing 75% of the amount from 2019. Meanwhile, the implemented capital for FDI projects was 19.98 billion USD, equivalent to 98% of the previous year's figure.

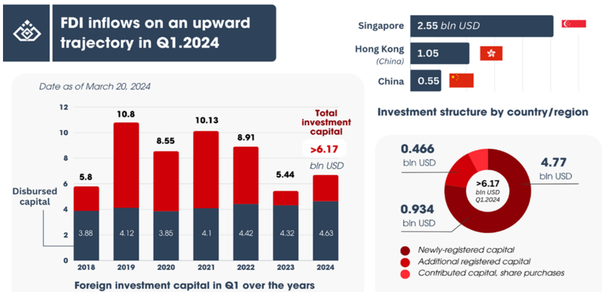
The situation improved in 2021, with registered FDI capital reaching 31.15 billion USD, up 9.2% from 2020. Both newly registered and adjusted investment capital increased, with adjusted capital rising by 40.5%. The realized FDI capital in 2021 was estimated at 19.74 billion USD, a slight decrease of 1.2% from 2020. These figures are considered remarkable given the global decline in investment flows and the disruptions caused by the pandemic.

As of December 20, 2022, the total newly registered, adjusted, and contributed capital, including share purchases and capital contributions, amounted to nearly 27.72 billion USD, which is 89% of the amount recorded in 2021. The realized capital of foreign investment projects reached approximately 22.4 billion USD, marking a 13.5% increase compared to the same period in 2021 (Foreign Investment Agency, 2022).

According to the Foreign Investment Agency's report, in 2023, the total newly registered capital, adjusted capital, and capital contributions for share purchases and investments in Vietnam reached nearly 36.61 billion USD, representing a 32.1% increase compared to the previous year. The realized capital for foreign investment projects is estimated at approximately 23.18 billion USD, reflecting a 3.5% increase from 2022.

Additionally, green FDI from other countries is making significant inroads into Vietnam. Notable projects include the Bac Lieu Liquefied Natural Gas (LNG) Power Plant, part of the Bac Lieu LNG Thermal Power Center, with a registered investment capital of 4 billion USD, and the Long An I and II LNG Power Plant projects, which have a combined registered capital of over 3.1 billion USD... Green FDI from European countries - the 6th largest foreign investor in Vietnam is forecast to continue to grow in the coming time. The Business Confidence Index survey of the European Chamber of Commerce in Vietnam confirmed this upward trend. 31% of members ranked Vietnam among the top 3 global investment destinations and more than half planned to boost Vietnam's investment in 2023, especially in the high-tech manufacturing sector. This investment boom highlights the effectiveness of the implementation of the EU-Vietnam Free Trade Agreement in attracting sustainable, high-quality FDI and making Vietnam a strategic destination. In addition, the adoption of green technology requires huge investment, while ensuring transparent, sustainable sourcing from local suppliers can be a challenge.

**Figure 2. FDI inflows into Vietnam in the first quarter of 2024**




*Source: Ministry of Planning and Investment*

According to data from the Foreign Investment Agency, in the first 3 months of 2024, the total newly registered capital, adjusted capital, and capital contributions for share purchases and investments by foreign investors have surpassed 6.17 billion USD, an increase of 13.4% over the same period in 2023. The number of new investment projects also rose, though the scale of these projects was smaller due to a lack of large investments. As a result, while the total registered investment capital over the three months increased by 13.4% compared to the same period last year, this growth rate was 25.2 percentage points lower than the increase observed in the first two months of 2024. There were 62 countries and territories investing in Vietnam in the first 3 months of 2024. Of which, Singapore led the investment rankings with a total capital of over 2.55 billion USD, representing 41.3% of the total investment capital and marking a 51.3% increase from the same period in 2023. Hong Kong followed with more than 1.05 billion USD, accounting for 17.1% of the total investment capital and nearly 2.3 times higher than the previous period. Investments from Singapore and Hong Kong are predominantly new investments, making up 89.5% of their total contributions and 79.1% of the total investment capital of Singapore and Hong Kong in 3 months, respectively.

**Table 1. FDI attraction in Vietnam in the first 6 months of 2024 and comparison with 2023 (Billion USD)**

| | New capital | Adjusted capital | Contribute capital to buy shares | Total |
|---|---|---|---|---|
| 6 months 2024 | 9.54 | 3.95 | 1.7 | 15.19 |
| 2023 | 6.49 | 2.93 | 4.01 | 13.43 |

*Source: Ministry of Planning and Investment*

In the first six months of 2024, total FDI capital in Vietnam, including newly registered capital, adjusted registered capital, and capital contributions or share purchases by foreign investors, reached nearly $15.19 billion, marking a 13.1% increase compared to the same period in 2023. This total comprises 1,538 newly licensed projects with registered capital amounting to $9.54 billion, reflecting an 18.9% increase in the number of projects and an 46.9% increase in registered capital. The increase in newly registered capital means that new projects will increase the production and business capacity of the economy. Adjusted capital has 592 investment projects, the total registered capital increased to more than 3.95 billion USD. Capital contribution and share purchase had 1,420 transactions by foreign investors the total value of capital contribution reached nearly 1.7 billion USD.

***3.2. Attracting "green" FDI associated with sustainable development goals***

After 30 years of implementing the reform policy, Vietnam has increasingly integrated into the global economy. The process of industrialization and modernization has opened up numerous new investment opportunities, leading to the development of a diverse range of investment projects with various forms, scales, and sectors. This has significantly contributed to the overall achievements in the country's economic and social development.

In the development process, the Party and the State have thoroughly implemented the consistent policy, which is: "Fast, effective and sustainable development, progress, social equity and environmental protection"; "Socio-economic development is closely linked to environmental protection and improvement, ensuring harmony between the artificial environment and the natural environment, preserving biodiversity"; "Environmental protection is a continuous requirement throughout the development process and is the responsibility of the entire political system, community, businesses, and citizens.

To implement these policies and viewpoints, the government has directed, managed, and issued numerous incentives to attract FDI to support socio-economic development. Drawing on the experiences of developed countries, Vietnam is actively restructuring its economy towards green production, researching, and applying advanced technologies to use natural resources efficiently and reduce greenhouse gas emissions.

FDI continues to be recognized as an important investment channel to help Vietnam build a green economy and quickly realize development goals. To achieve these objectives, the Vietnamese government has implemented and issued several important policies, including completing the Economic Restructuring Plan, the National Strategy on Climate Change Response, and the National Green Growth Strategy.

The National Green Growth Strategy includes three main objectives:

(1) Restructure and improve the economic institutions towards greenizing existing industries, encouraging the development of economic zones that use energy and resources efficiently with high-value-added.

(2) Research and increasingly apply advanced technologies to use natural resources more efficiently, reduce greenhouse gas emissions, and effectively respond to climate change.

(3) Improve the livelihoods of people and build an environmentally friendly lifestyle by creating more jobs in green industries, agriculture, and services, investing in natural capital, and developing green infrastructure.

In short, although FDI attraction activities have achieved impressive results, Vietnam is gradually realizing that it is necessary to revise the policy strategy, specifically by focusing on attracting "green" FDI, to maintain competitiveness and attract sustainable FDI in line with sustainable development goals.

**4. Proposed solutions to attract "green" FDI in Vietnam towards sustainable development goals**

***4.1. Orientation viewpoints***

For FDI to be directed towards a green economy, the Government needs to resolutely not allow provinces and cities to receive new FDI projects in industries that consume a lot of energy, cause greenhouse effects, and are not environmentally friendly such as cement, iron and steel, petrochemical refining; limit FDI attraction in coal-fired power, textile dyeing with strict requirements on technology, require investment in wastewater and solid waste treatment systems, establish specialized zones for textile dyeing and garment to both create a highly economically efficient textile-dyeing-garment supply chain and ensure environmental and emission requirements.

The Government has issued preferential policies to encourage investment in solar power, wind power, and renewable energy with the purchase price of solar power at 9.35 cents/kWh, wind power at 8.5 cents/kWh onshore, and 9.8 cents/kWh onshore. With this price, investors have made a profit and the policy is attracting many domestic and FDI projects. In order to quickly implement clean power projects, along with the electricity price policy, it is necessary to: First, quickly establish and approve energy development plans so that localities have conditions to attract and implement projects; Second, facilitate the signing and implementation of power purchase and sale contracts, ensuring foreign currency conversion according to the legitimate needs of investors; Third, eliminate EVN's monopoly status as soon as possible, synchronously apply market mechanisms in electricity production and trading to protect the legitimate rights of investors and consumers; Fourth, in addition to preferential policies on tax and land, it is necessary to study and apply preferential financial policies and subsidies for a number of large projects in the first years using the State budget.

For FDI projects in industries and fields that continue to be encouraged, it is necessary to pay attention to advanced technology, energy saving, environmental friendliness, and closely monitor the construction process of factories and architectural works to contribute to creating a green economy.

The Government also needs to have preferential policies to encourage FDI enterprises that are using outdated and environmentally unfriendly technology to convert to technology that meets green economic standards; set a deadline for enterprises to implement.

Investment, including foreign direct investment, to create a better and more sustainable life for people. If an investment does not ultimately increase the well-being and happiness of all people in a green economic direction, then the investment should not be made and certainly should not be pursued.

***4.2. Recommendations and solutions***

In the context of depleting natural resources and increasing climate change, the trend towards green and sustainable economic development is becoming increasingly prevalent. Renewable energy and new energy sources are being invested in and developed, with the potential to become the main sources of energy in the future.

There is a need to enhance the attraction of FDI with high technology, environmental friendliness, and labor intensity. Investment should be encouraged in infrastructure development and supporting industries, renewable energy, new materials, electronics, information technology, crop and livestock breeding, human resource training, and high-quality healthcare, with flexible mechanisms for specific projects. Additionally, establishing research and development centers of foreign-invested enterprises in Vietnam should be encouraged.

However, in order to attract and use "green" FDI resources effectively, in the coming time, Vietnam needs to adjust its FDI attraction policy orientation:

*First*, it is essential to prioritize attracting FDI into high-tech and advanced sectors, including environmentally friendly technologies, clean energy, and renewable energy. Other important areas to focus on include the production of medical equipment, healthcare services, education and training, high-quality tourism, financial services, logistics, and other modern services. Additionally, attention should be given to high-tech agriculture and smart farming, as well as the development of modern infrastructure, especially in new industries based on Industry 4.0. When attracting FDI, it is important to ensure a balance between export growth and investment in the development of high-value-added products and services.

*Second*, Regarding investment partners:

***Focus on Multinational Corporations****:* Specifically, target multinational corporations that collaborate with domestic businesses to form and develop industry clusters along value chains. Initially, continue attracting FDI into sectors where Vietnam has advantages, such as textiles and footwear. Also, focus on high-value-added stages and processes associated with smart and automated production.

***Diversify FDI Sources***: Effectively leverage relationships with strategic partners, focusing on leading developed countries and multinational corporations that hold advanced technologies and modern management capabilities.

***Monitor and Prevent***: Proactively monitor FDI trends from countries with outdated technology and environmental pollution risks. Implement timely preventive measures to ensure a sustainable investment environment.

***Attract Small and Medium Enterprises***: For small and medium-sized enterprises and small-scale projects, ensure they can upgrade technology, integrate into global production networks and value chains, and develop supporting industries.

*Third*, FDI attraction needs to be aligned with the advantages, conditions, development levels, and planning of each locality within regional linkages, while ensuring overall economic, social, and environmental effectiveness. For sensitive areas related to national defense, security, borders, seas, islands, and exclusive economic zones, FDI attraction must prioritize national defense, security, and sovereignty.

Additionally, Vietnam needs to improve mechanisms and policies to create new incentives for attracting and utilizing FDI in industrial parks, export processing zones, economic zones, high-tech zones, and high-tech agriculture zones. Mechanisms and policies should be researched and established to attract strategic investors and multinational corporations into special administrative-economic units as designated by the National Assembly when conditions are met.

*Fourth*, there should be proactive mechanisms and policies to support the development and upgrading of Vietnamese enterprises, promote supporting industries, and create linkages between FDI enterprises and domestic businesses.

The draft strategy for attracting new-generation FDI (2018-2030) recently solicited wide opinions and also proposed 8 breakthrough recommendations across specific phases as follows:

***Short- to medium-term priorities (2018-2030):***

- Strongly promote skill provision to ensure the implementation of new-generation FDI.

- Create a "4.0 Business Environment" that meets business needs in the digital age.

- Thoroughly reform the current incentive policy framework, shifting to performance-based incentives.

- Open key sectors that are foundational for competitiveness and FDI growth.

- Implement strategic policies to promote outward FDI.

***Specifically:***

*i) There needs to be a synchronized policy for connecting FDI enterprises:*

- Develop and implement a synchronized policy for connecting FDI enterprises to address market weaknesses and limitations and align with the incentive structure.

- The 100% localization rate should not be used as the target for connecting FDI enterprises in Vietnam or as a localization policy. Instead, it should be market-based and aim to support FDI investments to maximize the economic efficiency of domestic production.

- Clarify the roles of the Ministry of Planning and Investment, the Ministry of Industry and Trade, and other stakeholders in implementing a comprehensive FDI enterprise linkage program.

*ii) Implementing the FDI enterprise linkage policy:*

- Key components of the FDI enterprise linkage policy typically include the establishment of supplier databases, service connectivity, targeted supplier development programs, investment promotion to attract foreign suppliers, and providing support and/or credit incentives to help upgrade domestic enterprises.

- In countries with strong institutional frameworks, the role of investment promotion agencies mainly involves introducing domestic suppliers, considered as service provision to investors and post-investment care, as well as targeted investment promotion to attract foreign suppliers when necessary.

**5. Conclusion:** Vietnam is on the path of strong reform and increasingly deep integration into the world economy. With a favorable geographical location, competitive labor costs, and open trade and investment policies, Vietnam has been very successful in attracting FDI capital. However, in order to make breakthroughs in development, while addressing internal challenges and effectively attracting green FDI and new-generation FDI in the coming period, Vietnam needs to soon adjust its strategic orientation on FDI attraction, along with an action plan associated with reforming the investment environment, policies and specific institutions, only then can it fully exploit the potential that green FDI and new-generation FDI bring.

**References:**

*Dam Thi Thanh Thuy (2021), "Solutions to attract green FDI in Vietnam", Economic and Forecast Magazine No. 31, 2021.*

*Dang Hoai Linh (2020), "Attracting foreign direct investment in Vietnam in the post-Covid-19 pandemic period", Banking Magazine No. 14/2020.*

*Foreign Investment Agency - Ministry of Planning and Investment (2015-2024), "Foreign investment attraction situation in Vietnam from 2015 to 6/2024".*

*Le Mai Trang (2023), "Current status of FDI attraction and trends in attracting green FDI in Vietnam", Economic and Forecast Magazine, No. 28, 10/2023.*

*Le Trong Nghia (2024), "Attracting green foreign direct investment from the European Union to Vietnam", Economic and Forecast Magazine No. 05, 03/2024.*

*Ministry of Planning and Investment and World Bank (2018), "Draft Strategy and Strategic Orientation for attracting new generation FDI, period 2018-2030".*

*Nhat Xuan (2022), "LEGO invests 1 billion USD to build the first carbon neutral factory", accessed from https://doanhnghiepvn.vn/cong-nghe/lego-dau-tu-1-ty-usd-xay-dung-nha-may-trung-hoa-carbon-dau-tien/20211208095413295*

*UNCTAD (2008), "Creating an institutional environment conducive to increased foreign investment and sustainable development", Accra, Ghana*

*UNCTAD (2019), World Investment Report 2019 Special Economic Zones.*

*UNCTAD (2019), Trade and Development Report 2019 Financing A Global Green New Deal.*

*Stephen Golub, Céline Kauffmann and Philip Yeres (2011), "Defining and Measuring green FDI: An exploratory review of existing work and evidence", OECD Working Papers on International Investment, 2011/02, OECD Publishing*

# FACTORS AFFECTING TOURISTS' INTENTION TO BOOK GREEN HOTELS IN VIETNAM UTILIZING THE THEORY OF PLANNED BEHAVIOR

**PhD. Tran Thi Tuyet***

**Abstract:** ***This study aims to look at important variables that affect booking intentions, including attitude, perceived behavioral control, subjective norms, perceived customer effectiveness, and environmental concern. Data from 214 guests staying at the green hotels was collected, and SmartPLS 4.0 was used for data analysis. The result showed that booking intention is significantly impacted by attitude, subjective norms, and perceived behavioral control. Perceived customer effectiveness and the intention to reserve a green hotel were mediated by attitude, and the relationship between perceived customer effectiveness and attitude is moderated by environmental concern. These findings offer helpful guidance for boosting potential tourists' desire to book green hotels and contribute to the expanding body of research on the intention to book green hotels and the highly context-dependent theory of planned behavior.***

• Keywords: *booking intention, green hotel, perceived customer effectiveness, environmental concern, theory of planned behavior.*

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## 1. Introduction

Green hotels are essential to sustainable development since they use eco-friendly procedures that satisfy tourists' needs and boost their competitiveness (Alsheref et al., 2024; Merli et al., 2019). For example, a study by Merli et al. (2019) found that hotels should implement environmental practices to meet customer demand for their environmental practices. Moreover, Alsheref et al. (2024) proved that implementing environmental practices can help hotels gain competitive advantages. Consequently, hotels strive to adopt environmentally friendly practices.

Tourists' booking intentions toward the green hotel have been a hot topic of interest for academic researchers and hotel managers. Understanding tourists' booking intentions for green hotels is crucial for hotel managers to develop effective strategies to attract more tourists (Fauzi et al., 2022; Huy et al., 2023). Specifically, Huy et al. (2023) suggested that managers of green hotels can utilize effective digital platforms to conduct environmental campaigns to target green-oriented customers.

The theory of planned behavior (TPB) has been used to explain customers' intentions, including booking intentions for green hotels (Pan et al., 2022; Wang et al., 2019; Yeh et al., 2021). However, the results are contradictory. Specifically, Wang et al. (2019) discovered that subjective norms had a negative and substantial impact on green selection intention, while green booking attitude and perceived behavioral control had a positive and significant impact. In contrast, Pan et al. (2022) found that tourists' intentions to visit a green hotel are positively and significantly influenced by their attitude, subjective norms, and perceived behavioral control, with attitude being the most important factor. In addition, a study by Yeh et al. (2021) found that attitudes and perceived behavioral control have a significant impact on tourists' decisions to stay at green hotels. According to Nimri et al. (2020), perceived behavioral control seems to be the best indicator of green patronage intention, but subjective norms have little direct effect on behavioral intention to stay at a green hotel. Because of this, the TPB is context-dependent, and in order to better describe intention, additional factors need to be included.

Perceived customer effectiveness (PCE) significantly influences the intention to book green hotels. PCE refers to the belief that individual actions can contribute to environmental sustainability (Jang et al., 2015), and it has been shown to impact a consumer

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attitude and intention toward green hotel bookings positively (Wang et al., 2018). Although perceived consumer effectiveness is a key predictor of the desire to book green hotels, little is known about how it interacts with other factors like environmental concern. This study seeks to close these gaps by examining the purpose of reserving green hotels through the enlarged TPB by including PCE and environmental concern in hotels in Vietnam.

## 2. Literature review

### *Theory of planned behavior*

The theory of planned behavior (TPB) has been developed from the theory of reasoned action (TRA) by Ajzen and Fishbein (1980). This theory has been widely used to predict human behavior in various contexts (Fauzi et al., 2022; Han et al., 2010; Yeh et al., 2021). This theory consists of attitude, subjective norms, and perceived behavioral control, which affect behavior differently in different contexts. The TPB is used to predict intention to book green hotels, however, as mentioned above, depending on context, the findings can be different. As a result, the TPB can be used in Taiwan (Yeh et al., 2021), China (Nimri et al., 2020; Wang et al., 2019), Malaysia (Fauzi et al., 2022), Korea (Kim, 2023), and India (Verma & Chandra, 2018). However, this might not be true in Vietnam, where people have started to practice green behavior. Therefore, this theory should be expanded in the context of Vietnam.

The TPB should be expanded to explain human behavior better. As a result, adding or adjusting variables is necessary. For example, there are differences among the effects of attitude, subjective norms, and perceived behavioral control on the intention to book green hotels. Specifically, Wang et al. (2019) found that green purchase attitude and perceived behavioral control positively and significantly influence green hotel selection intention. At the same time, the subjective norm was shown to influence green selection intention negatively and significantly. In contrast, Pan et al. (2022) discovered that tourists' attitude, subjective norms, and perceived behavioral control positively and significantly influence their green hotel visit intention, with attitude being the most significant factor. In addition, a study by Yeh et al. (2021) concluded that attitude and perceived behavioral control substantially affect green hotel decisions to stay. The subjective norm has a minimal direct impact on behavioral intention to stay at a green hotel, while Nimri et al. (2020) found that perceived behavioral control appears to be the strongest predictor of green patronage intention. In addition, perceived consumer effectiveness and environmental concern are among the significant predictors in explaining the intention to book green hotels (Wang et al., 2018), but their interaction is not fully explored. Thus, this study adds perceived consumer effectiveness and environmental concern to the TPB to explain the intention to book green hotels in Vietnam.

### ***Hypothesis development***

*Attitude affects the intention to book a green hotel*

A person's attitude represents their evaluation of a specific behavior, shaped by beliefs about its potential consequences and assessed by weighing each outcome (Ajzen & Fishbein, 1980). This evaluation can range from positive to negative (Ajzen, 2011). A positive attitude toward a behavior enhances the intention to perform it, whereas a negative attitude reduces the possibility to perform an action (Ajzen, 2011). In this research, attitude refers to how individuals perceive and evaluate their experiences booking green hotels. Previous studies proved that attitude positively affected the intention to book green hotels (Nimri et al., 2020; Wang et al., 2018; Yeh et al., 2021). Hence, the author proposed the following hypothesis:

H1: Attitude positively impacts the intention to book green hotels.

*Subjective norms affect the intention to book a green hotel*

A person's behavior is often shaped by subjective norms, which represent the social pressures exerted by others (Ajzen, 2011). This construct captures perceptions of how important references - as family, friends, or colleagues - view the behavior in question (Ajzen, 2011). In this research, subjective norms refer to the perceived opinions of influential others regarding the booking of green hotels. The more an individual believes these referents expect or support the activity, the higher the likelihood of their engagement. Prior research revealed that subjective norms affected the intention to book green hotels (Nimri et al., 2020; Wang et al., 2018; Yeh et al., 2021). Hence, the author proposed the following hypothesis:

H2: Subjective norms positively affect the intention to book a green hotel.

*Perceived behavior control affects the intention to book a green hotel*

Perceived behavioral control, as defined by Ajzen (2011), is an individual's perception of their capacity to perform a task, considering resources such as time, skills, and cooperation from others. This research refers to perceived behavioral control as the determinants impacting a person's decision to book green hotels. Existing literature proved that perceived behavioral control positively impacts the intention to book green hotels. For instance, Nimri et al. (2020) found that perceived behavioral control is the strongest predictor of green patronage intention. Hence, the author proposed the following hypothesis:

H3: Perceived behavioral control positively affects the intention to book a green hotel.

*Perceived consumer effectiveness affects the attitude*

Perceived consumer effectiveness (PCE) refers to the belief that individual actions can contribute to environmental sustainability (Jang et al., 2015), and it has been shown to impact a consumer's attitude and intention toward green hotel bookings positively (Wang et al., 2018). Wang et al. (2018) suggested that perceived consumer effectiveness significantly and positively influences attitude and intention to book green hotels. Hence, the author proposed the following hypothesis:

H4: Perceived consumer effectiveness positively affects attitude toward booking green hotels.

H5: Perceived consumer effectiveness positively affects intention to book green hotels.

**Mediating effect**

Since perceived consumer effectiveness affects attitude and attitude affects intention to book green hotels, the author proposed the following hypothesis:

H6: Attitude mediates the relationship between perceived consumer effectiveness and intention to book green hotels

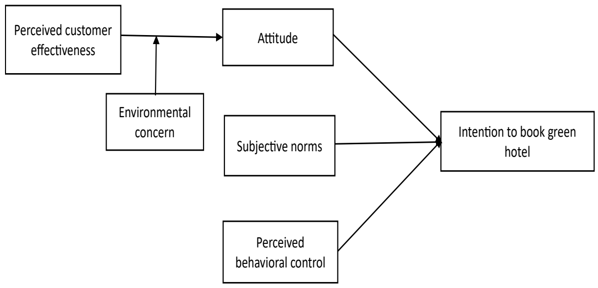
***Moderating effect of environmental concern***

Environmental concern refers to the extent to which individuals are aware of environmental issues and actively support initiatives to address them, including a personal willingness to contribute to their solution (Han et al., 2009). Studies suggest that environmental concern plays a vital role in explaining eco-friendly behaviors. Wang et al. (2018), for instance, the TPB model was extended by including environmental concern as a factor in exploring consumers' intentions to adopt hybrid electric vehicles, finding a positive relationship between environmental concern and such intentions. However, the moderating role of environmental concern in the relationship between perceived customer effectiveness and attitude is not fully explored. Hence, the author proposed the following hypothesis:

H7: Environmental concern moderates the relationship between perceived consumer effectiveness and attitude.

From all hypotheses, the research model is proposed as follows:

**Figure 1. The research model proposed**




**3. Methodology**

***Sample and Data Collection***

To explore the intention to book green hotels, the author conducted a survey targeting Vietnamese tourists who had stayed in green hotels within the past year. These tourists were chosen as the study population to ensure they were familiar with or had knowledge of green hotels. The investigation proceeded as follows: First, the author contacted several hotel managers in Hanoi known for adopting green business practices between June 20 and July 20, 2024, and requested their support in distributing a survey questionnaire to their current tourists. Second, the survey questionnaire included an informed consent form, which clearly outlined the research objectives, ensured confidentiality, and highlighted participants' rights to withdraw at any time. Ultimately, 214 tourists completed the survey.

***Instrument Development***

All measurement items used in this study were adapted from prior research. Specifically, three items for perceived consumer effectiveness were drawn from Han and Kim (2010), while four items for environmental concern were sourced from Kim and Choi (2005). The items measuring attitude (three items), perceived behavioral control (three items), subjective norm (four items), and intention (three items) were adapted from Han et al. (2010) and Ajzen (1991). A five-point Likert scale, ranging from "strongly agree" to "strongly disagree," was used, except for attitude, which was measured using a five-point semantic differential scale. Since the scales were originally in English, the author employed forward and backward translation and consulted three tourism experts and two language lecturers for feedback. Once the Vietnamese version of the questionnaire was approved, the author created a survey questionnaire.

***Data Analysis***: This study used PLS-SEM via Smart PLS 4.0 to analyze the data.

### 4. Results

**Table 1. Constructs' validity and reliability**

| Items | Outer loadings | Cronbach Alpha | CR | AVE |
|---|---|---|---|---|
| EC1 | 0.789 | 0.754 | 0.724 | 0.462 |
| EC2 | 0.687 | | | |
| EC3 | 0.619 | | | |
| EC4 | 0.751 | | | |
| PCE1 | 0.737 | 0.781 | 0.779 | 0.541 |
| PCE2 | 0.693 | | | |
| PCE3 | 0.929 | | | |
| AT1 | 0.892 | 0.857 | 0.856 | 0.667 |
| AT2 | 0.683 | | | |
| AT3 | 0.860 | | | |
| PCB1 | 0.701 | 0.781 | 0.779 | 0.629 |
| PBC2 | 0.721 | | | |
| PBC3 | 0.782 | | | |
| SN1 | 0.679 | 0.791 | 0.791 | 0.587 |
| SN2 | 0.735 | | | |
| SN3 | 0.650 | | | |
| SN4 | 0.722 | | | |
| BI1 | 0.695 | 0.768 | 0.768 | 0.525 |
| BI2 | 0.758 | | | |
| BI3 | 0.719 | | | |

**Table 2. Discriminant validity (HTMT matrix)**

| | AT | BI | EC | PBC | PCE | SN |
|---|---|---|---|---|---|---|
| AT | | | | | | |
| BI | 0.476 | | | | | |
| EC | 0.350 | 0.620 | | | | |
| PBC | 0.478 | 0.695 | 0.534 | | | |
| PCE | 0.600 | 0.723 | 0.601 | 0.573 | | |
| SN | 0.349 | 0.691 | 0.784 | 0.745 | 0.541 | |

To assess the measurement model, the authors followed Hair et al. (2023) by examining outer loadings, Cronbach's Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and Heterotrait-Monotrait (HTMT) ratios. The reliability, convergent, and discriminant validity results are detailed in Tables 1, 2.

Table 2 indicates that all outer loadings exceeded 0.5. Hair et al. (2023) recommend a preferred threshold of 0.7, they suggest retaining items with loadings between 0.5 and 0.7 if AVE and CR values meet the required benchmarks. In this study, AVE and CR values for all scales surpassed these thresholds, justifying the retention of such items.

Reliability was evaluated using Cronbach's Alpha and CR. As shown in Table 1, Cronbach's Alpha values ranged from 0.754 to 0.857, and CR values ranged from 0.724 to 0.856, both exceeding the recommended threshold of 0.7, confirming the scales' reliability.

Convergent and discriminant validity were assessed using AVE and HTMT coefficients. All AVE values exceeded the recommended 0.5 thresholds and HTMT ratios for all constructs were below the upper limit of 0.9 (Table 2), establishing the scales' convergent and discriminant validity.

*Path analysis*

Table 3 provides the results of hypothesis testing. Attitude positively influenced the intention to book green hotels (Adjusted $\beta = 0.232$, p < 0.01), supporting hypothesis H1. Similarly, subjective norms and perceived behavioral control (Adjusted $\beta = 0.357$, $p < 0.01$, Adjusted $\beta = 0.238$, $p = 0.001$), positively influenced the intention to book green hotels, supporting hypotheses H2 and H3. PCE significantly impacted attitude (Adjusted $\beta = 0.487$, $p < 0.01$), supporting hypothesis H4.

The mediating effect of attitude in the relationship between PCE and the intention to book green hotels was significant (Adjusted $\beta = 0.113$, $p = 0.011$). Moreover, the total effect of PCE on the intention to book green hotels was significant, supporting hypotheses H5 and H6. In addition, environmental concern positively moderated the relationships between PCE and attitude (Adjusted $\beta = 0.148$, $p = 0.004$), supporting H7.

**Table 3. Hypothesis testing results**

| Relationships | Adjusted β | p-value | t | Decisions |
|---|---|---|---|---|
| AT->BI | 0.232 | 0.000 | 4.328 | Accepted H1 |
| SN->BI | 0.357 | 0.000 | 4.930 | Accepted H2 |
| PBC ->BI | 0.238 | 0.001 | 3.468 | Accepted H3 |
| PCE->AT | 0.487 | 0.000 | 7.606 | Accepted H4 |
| PCE-> AT -> BI | 0.113 | 0.001 | 3.384 | Accepted H5, H6 |
| EC x EPC-> AT | 0.148 | 0.004 | 2.863 | Accepted H7 |

### 5. Discussion

This study investigates factors affecting the intention to book green hotels in Vietnam. The findings showed that attitude, subjective norms, and perceived behavioral control positively influenced the intention to book green hotels. These findings align with studies of Wang et al. (2019), Nimri et al. (2020), and Pan et al. (2022)promoting green consumption is now a key marketing strategy in the hospitality and tourism industry. As it is vital green hotels predict their customers' visit intention, this study attempts to discover the factors affecting Taiwan's Z-generation tourists' green hotel visit intention using an extended theory of planned behavior [including personal moral norms (PMN. Notably, this study found that subjective norms are among the strongest components affecting the intention to book green hotels, which contradicts Yeh et al. (2021), in which they found that subjective norms had a minimal effect on the intention to choose green hotels. There are two main reasons for this. First, Vietnam's collectivist culture places great importance on group harmony, social cohesion, and conformity to social norms. Travel decisions, such as booking green hotels, are often shaped by the influence of family, friends, and social networks. Vietnamese tourists will likely follow suit to align with these expectations if people in their circle support eco-friendly choices. Second, as Vietnam progresses, environmental concerns like pollution and climate change have become increasingly significant. Public awareness is heightened through government initiatives and media campaigns promoting sustainability, encouraging individuals to align with these societal values.

This study revealed that PCE influences attitude, subsequently impacting the intention to book green hotels. Furthermore, environmental concern moderates the relationship between PCE and attitude. Specifically, when environmental concern is high, individuals with strong PCE are more likely to act on their values, perceiving their choices as impactful. Conversely, without high environmental concern, even individuals with strong PCE may feel their efforts are insignificant and may not act. These findings are consistent with previous research, which demonstrated that PCE and environmental concern positively influence the intention to book green hotels (Fauzi et al., 2022; Wang et al., 2018)A total of 160 valid questionnaire responses were collected via an online survey. The partial least square–structural equation modelling (PLS-SEM. Notably, this study is among the first to explore the interaction between PCE and environmental concern, its effect on attitude, and ultimately booking intention. In Vietnam's collectivist culture, where social values and group norms significantly shape attitudes, tourists with high environmental concern are more attuned to societal environmental trends. Combined with strong PCE, this fosters greater motivation to book green hotels, as they see their actions benefiting themselves and the community.

***Theoretical implications***

This study provides several theoretical contributions as follows. First, this research reconfirmed that the TPB is context-dependent by expanding research in Vietnam to explain the intention to book green hotels. While the TPB is primarily used to explain human behavior through attitude, subjective norms, and perceived behavioral control, this study confirms that the TPB is context-dependent. Thus, future research should pay attention to context-dependent when interpreting the results. Second, this study highlights PCE and environmental concern, adding to the TPB in explaining the intention to book green hotels. This study pioneered the addition of TPB and testing the interaction between PCE and environmental concerns. This provides a novel explanation of its role, which benefits future research in the intention to book green hotels.

***Practical implications***

The findings of this study offer valuable insights for hotel managers in Vietnam to enhance tourists' intention to book green hotels. It highlights that attitude, subjective norms, and perceived behavioral control positively influence booking intentions, with subjective norms having the strongest impact. Therefore, hotel managers should prioritize strategies that strengthen subjective norms. For instance, they can market eco-friendly choices made by previous guests, such as stating, "85% of our guests choose to reuse towels during their stay," to create a sense of collective behavior. PCE and environmental concern also play critical roles in shaping tourists' intentions. Managers can enhance these factors by showcasing measurable outcomes, such as "By reusing towels, tourists helped save 10,000 liters of water last month," or displaying infographics in communal areas.

## 6. Conclusion

This study investigates the factors influencing customers' intention to book green hotels in Vietnam. The findings reveal that attitude, subjective norms, and perceived behavioral control significantly influence customers' intention to book green hotels, with A being the most impactful factor. Additionally, PCE and environmental concern play important roles in shaping these intentions. From these findings, this study provides valuable insights into the factors driving customers' intention to book green hotels in Vietnam, offering practical strategies for hotel managers to increase customers' intention to book green hotels.

This study has two main limitations. First, it relied on a single survey method, which may have introduced common method bias. Future research could address this by employing longitudinal data collection methods to minimize such bias. Second, the study primarily focused on green hotels in Hanoi, which may limit the generalizability of the findings to other regions, such as Danang or Ho Chi Minh City.

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## References:

*Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T*

*Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. Psychology & Health, 26(9), 1113–1127. https://doi.org/10.1080/08870446.2011.613995*

*Ajzen, I., & Fishbein, M. (1980). Understanding Attitudes and Predicting Social Behavior. Englewood Cliffs. https://cir.nii.ac.jp/crid/1572543024551612928*

*Alsheref, F. K., Khairy, H. A., Alsetoohy, O., Elsawy, O., Fayyad, S., Salama, M., Al-Romeedy, B. S., & Soliman, S. A. E. M. (2024). Catalyzing Green Identity and Sustainable Advantage in Tourism and Hotel Businesses. Sustainability, 16(12), Article 12. https://doi.org/10.3390/su16125267*

*Han, H., & Kim, Y. (2010). An investigation of green hotel customers' decision formation: Developing an extended model of the theory of planned behavior. International Journal of Hospitality Management, 29(4), 659–668. https://doi.org/10.1016/j.ijhm.2010.01.001*

*Insights from guests experience in green hotels. International Journal of Hospitality Management, 81, 169–179. https://doi.org/10.1016/j.ijhm.2019.04.022*

*Nimri, R., Patiar, A., & Jin, X. (2020). The determinants of consumers' intention of purchasing green hotel accommodation: Extending the theory of planned behaviour. Journal of Hospitality and Tourism Management, 45, 535–543. https://doi.org/10.1016/j.jhtm.2020.10.013*

*Wang, J., Wang, S., Wang, Y., Li, J., & Zhao, D. (2018). Extending the theory of planned behavior to understand consumers' intentions to visit green hotels in the Chinese context. International Journal of Contemporary Hospitality Management, 30(8), 2810–2825. https://doi.org/10.1108/IJCHM-04-2017-0223*

*Wang, L., Wong, P. P. W., Narayanan Alagas, E., & Chee, W. M. (2019). Green Hotel Selection of Chinese Consumers: A Planned Behavior Perspective. Journal of China Tourism Research, 15(2), 192–212. https://doi.org/10.1080/19388160.2018.1553743*

*Yeh, S. S., Guan, X., Chiang, T. Y., Ho, J. L., & Huan, T. C. T. (2021). Reinterpreting the theory of planned behavior and its application to green hotel consumption intention. International Journal of Hospitality Management, 94, 102827. https://doi.org/10.1016/j.ijhm.2020.10282*

# RECOMMENDATIONS FOR IMPLEMENTING SOCIAL RESPONSIBILITY AT VIETNAMESE COMMERCIAL BANKS

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**Abstract:** ***Through providing credit to businesses and people, the banking industry has created positive changes for society, which has a great impact on the sustainable development of production and business activities. Therefore, when banks not only pursue economic goals, but also pay attention to social and environmental issues, the impact of the banking industry on the economy and society will be more comprehensive and humane. The article presents the current status of social responsibility (CSR) of commercial banks in Vietnam, thereby recommending some solutions for commercial banks and State management agencies in implementing the social responsibility.***

• Keywords: *CSR, commercial banks, Vietnam.*

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**1. Overview of social responsibility**

Corporate social responsibility (CSR) was studied around the 1930s (Berle and Means, 1932). Later, Bowen (1953) mentioned the concept of CSR in the work "Social responsibility of entrepreneurs" with the idea that businesses creating products for society need to meet 4 factors: (i) Improving people's living standards, (ii) creating motivation for economic development, (iii) ensuring fairness, freedom and (iv) comprehensive development of each individual's personality. By the 1970s, CSR studies became more popular, notably the research of Harold Johnon (1971), who laid the foundation for the birth of the Stakeholder Theory. Carroll's (1979) research built a CSR pyramid model in order of 4 types of responsibilities that are not mutually exclusive, including economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility. However, Wood (1991) disagreed with Carroll's CSR pyramid model and argued that the ethical responsibility of managers must be put first, and organizations must comply with the ethical and legal standards of society.

Thus, CSR is understood as the commitment of enterprises to contribute to sustainable economic development through activities that benefit the enterprise as well as the overall development of the whole society. However, in reality, some opinions hold that enterprises do not need to have any responsibility towards society but only to shareholders and employees. Enterprises have paid taxes to the government, so the government must be responsible to society.

In recent years, the issue of CSR has received more attention in organizations, especially credit institutions. Banks are also considered a special enterprise, the difference compared to other enterprises is that banks have financial operations such as capital mobilization, lending, issuing valuable papers... Regarding the environment, banks consider themselves to be more environmentally friendly than other industries and professions because banks do not discharge toxic chemicals or spread bacteria into the environment (Tran Thi Hoang Yen, 2014). However, the bank itself must be responsible for the impact of its lending and investment decisions on businesses through credit granting operations. Therefore, within the framework of this study, based on the stakeholder theory perspective, inheriting the concept of ISO (2010), the bank's CSR is understood as the responsibility of commercial banks for the activities and impacts of commercial bank decisions on the environment, employees and society through transparency and ethical behavior to contribute to sustainable development, taking into account the wishes of stakeholders, in accordance with the law, consistent with international standards of conduct and integrated into all activities as well as implementation in the bank's relationships (Bowman et al., 1975).

**2. Social responsibility in commercial banks in Vietnam**

Recently, many Government policies have been implemented by the State Bank of Vietnam (SBV)

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with the aim of promoting sustainable economic growth, especially focusing on promoting the green economy such as:

Decision No. 432/QD-TTg dated April 12, 2012 of the Prime Minister approving the Vietnam Sustainable Development Strategy for the period 2011 - 2020; Decision No. 1552/QD-NHNN dated August 6, 2015 of the Governor of SBV promulgating the action plan of the banking sector to implement the national strategy on green growth until 2020; Decision No. 1658/QD-TTg dated October 1, 2021 of the Prime Minister approved the National Strategy on Green Growth for the period 2021 - 2030, with a vision to 2050. The Governor of the State Bank of Vietnam issued Circular No. 17/2022/TT-NHNN dated December 23, 2022 guiding the management of environmental and social risks in credit granting activities. The monetary policies of the State Bank of Vietnam in recent times have aimed to encourage investment participation in environmentally sustainable fields from financial institutions, foreign-invested enterprises and domestic enterprises, in order to reduce carbon emissions and protect the natural environment. Green banking and green credit activities are currently very important for the effective implementation of Vietnam's sustainable development strategy. At the 2021 United Nations Climate Change Conference (COP26), Prime Minister Pham Minh Chinh pledged that Vietnam would achieve Net Zero - net emissions of "0" by 2050. At the Net Zero Conference held in Hanoi on June 27, 2023, with the participation of more than 137 countries, including the United States, China, India... These countries have committed or are working towards the "Net Zero" target and account for 88% of total global emissions. Each country has set its own timeline to achieve this target, with the latest being 2035 and 2070 in some exceptional cases. Vietnam has pledged to achieve Net Zero by 2050.

In fact, the interest of bank managers in implementing CSR activities and announcing/ disclosing information about CSR to the outside is higher than in other sectors. In particular, in state-owned banks such as Vietnam Joint Stock Commercial Bank for Investment and Development, Vietnam Joint Stock Commercial Bank for Industry and Trade, Vietnam Joint Stock Commercial Bank for Foreign Trade and Vietnam Bank for Agriculture and Rural Development, the average CSR score in the period 2010 - 2024 is 92.00; 86.79; 84.54 and 80.39, respectively. The interest of state-owned commercial banks in implementing CSR is higher than that of joint-stock commercial banks, which is consistent with the State's goal for the system of state-owned commercial banks to implement the orientations and policies of the State Bank, not just the goal of making profits.

However, there are two major obstacles to implementing CSR in banks. First, the obstacle is the economic aspect. Many banks think that CSR is the use of corporate resources. In addition, banks have not made much effort in determining the budget to carry out CSR. In addition, the lack of legal regulations on CSR is also an obstacle for Vietnamese commercial banks in enhancing CSR implementation.

## 3. Policy recommendations on CSR in Vietnamese commercial banks

***For commercial banks***

Bank managers need to pay attention to CSR implementation activities because it brings immediate positive impacts on operational efficiency. The more banks invest in CSR, the more they increase their asset size, increase their mobilization and lending sources, thereby increasing operational efficiency. In addition, commercial banks in Vietnam need to pay more attention to employee responsibility, which may initially be an investment and not bring immediate results; however, in the long term, it will contribute to sustainable results in the future. Finally, bank managers need to maintain this activity, especially initiatives related to products, services, and technologies to limit waste and pollution to the environment such as green banking, green credit, and developing green products and services to aim for sustainable development goals; abandon the mindset that investing in CSR activities only increases costs and reduces operational efficiency.

There needs to be a change in perception of CSR practices not only for the benefit of the community but also for the benefit of corporations and economic organizations themselves. The results of the experiments have shown that effective CSR implementation not only helps corporations and economic organizations reach more customers, but also helps increase brand value, and ultimately increase business profits. This approach will create motivation for allocating funds specifically for CSR activities, considering it as an investment in the brand.

The perspective of CSR practices needs to be upgraded not only to stop at implementing relief programs, natural disaster mitigation and health, but also to pay attention to contributing to environmental protection, in order to build long-term sustainability. In fact, it has been proven that the score of the "community activities" indicator is higher than that of "contribution to environmental protection" in Vietnam. However, the message of protecting the living environment also brings positive effects no less than volunteer activities. Therefore, actively participating in environmental protection activities will positively affect financial performance through increasing brand value.

Protecting and respecting the living environment can be considered an investment. This is not only to comply with environmental laws but also to build a positive image of commercial banks with stakeholders. To do this, the CSR implementation department needs to be professionally trained and coached.

Long-term CSR implementation requires a strategy, careful calculation to implement regularly and focus on building the position of commercial banks. Indeed, implementing CSR in the full and practical sense is not a problem that most commercial banks are able to solve immediately, due to limited resources. such as finance, technology and human resources. In reality, it seems that commercial banks often only implement CSR when unexpected events occur, such as natural disasters, then the bank's trade union organization still conducts money donations and voluntary work. Along with the change in thinking about CSR, there needs to be an adjustment in the implementation method to improve the CSR strategy in a professional direction.

Currently, commercial banks' reports have presented actions to serve the community, however, they have not been presented in a complete and detailed manner. The main reason is that banks have not paid much attention to social information, and have not mentioned social information in financial reports due to the lack of mandatory regulations. Therefore, commercial banks in their year-end reports should not only pay attention to each financial indicator but also focus on the transparency of information related to CSR practices.

***For the state***

Continue to supplement and complete the legal framework with the current legal The State needs to supplement and complete the legal framework with the current legal framework in Vietnam as a basis for promoting CSR implementation. This supplement needs to be viewed from two different aspects: using tax rates and reporting mechanisms. With the current corporate income tax policy, it is necessary to supplement and affirm that CSR activities are aimed at deducting expenses for income tax calculation; specifically, expenses supporting environmental activities for the community. Regular and periodic environmental activities are the catalyst to help raise social awareness of sustainability. However, the above incentive policy of the State also guides commercial banks to focus on implementing activities that benefit the community on an environmental basis. The development of a set of CSR indexes aimed at improving the capacity to assess CSR implementation in the commercial banking system in particular and enterprises in general is conducted by the management agency. From there, commercial banks themselves can know their ranking scores and have appropriate behaviors for CSR activities. The lack of reporting information on CSR also reduces the feasibility of assessing the standard of CSR implementation in commercial banks by management agencies and researchers.

To raise awareness of CSR, it is necessary to encourage propaganda for the commercial banking system and enterprises. Financial mechanisms and sanctions can make CSR passively accessible to commercial banks, while awareness from the subject will help implement CSR actively. Management agencies can organize seminars or direct dialogues to disseminate knowledge about CSR to organizations. In fact, large commercial banks have regularly implemented CSR and they have experience to share lessons on CSR application. From there, management agencies and large commercial banks can assess the overall situation of CSR application in the commercial banking system and come up with appropriate plans to support small commercial banks in implementing CSR. Applying CSR not only benefits commercial banks but also contributes to social security and improving living conditions; At the same time, combining business activities with sustainable activities will help create a positive business environment from the perspective of state management.

**References:**

*Barauskaite, G., & Streimikiene, D. (2021). Corporate social responsibility and financial performance of companies: The puzzle of concepts, definitions and assessment methods. Corporate Social Responsibility and Environmental Management, 28(1), pages 278-287.*

*Bowen, H. R. (1953). Social Responsibility of the Businessman. New York: Harper and Row.*

*Boutin-Dufresne, F. and Savaria, P.J.T. (2004), "Corporate social responsibility and financial risk", Journal of Investing, Vol. 13 No. 1, pages 57-66. DOI: https://doi.org/10.3905/joi.2004.391042*

*Bowman, E. H., & Haire, M. (1975). A strategic posture toward corporate social responsibility. California management review, 18(2), pages 49-58.*

*Brammer, S., Millington, A., & Rayton, B. (2007). The contribution of corporate social responsibility to organizational commitment. The International Journal of Human Resource Management, 18(10), pages 1701-1719.*

*Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector, Management of Environmental Quality: An International Journal, vol. 30, no. 1, pages 98-115. https://doi.org/10.1108/MEQ-12-2017-0149*

*Byus, K., Deis, D., & Ouyang, B. (2010). Doing well by doing good: Corporate social responsibility and profitability. SAM Advanced Management Journal, 75(1), 44.*

*Davis, K. (1973). The case for and against business assumption of social responsibilities. Academy of Management journal, 16(2), pages 312-322.*

*Galan, J. I. (2006). Corporate social responsibility and strategic management. Journal of Management Studies, 43(7), pages 1629-1641.*

*Rahman, S. (2011). Evaluation of definitions: ten dimensions of corporate social responsibility. World Review of Business Research, 1(1), pages 166-176.*

*11. Trần Thị Hoàng Yến. (2014), CSR in the Banking Sector, International Journal of Economics, Commerce and Management, vol. 2, no. 11, pages 1-22.*

# THE IMPACT OF DEBT FINANCING ON FINANCIAL PERFORMANCE OF LISTED FIRMS IN THE BUILDING MATERIALS IN VIETNAM

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**Abstract:** ***This research aims to provide empirical data on the impact of debt structure on the financial performance of 86 publicly listed firms in Vietnam's building materials sector over the period 2016 to 2023. Employing econometric approaches. The study proposes several recommendations to optimize debt structure and enhance the financial results within the building materials industry.***

• Keywords: *debt structure, capital structure, financial performance, building materials industry, Vietnam.*

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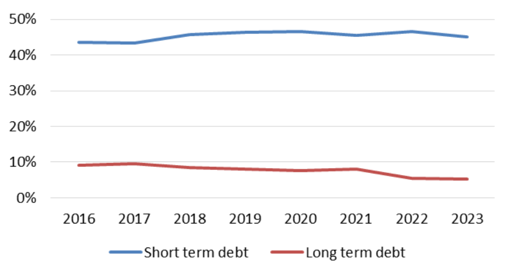
## 1. Introduction

Debt structure, categorized by maturity, is typically divided into short-term and long-term debt. The use of short-term debt and long-term debt exerts different impacts on a firm's financial performance. Short-term debt, while offering advantages such as reasonable cost of financing and easier accessibility compared to long-term debt (Lê Thị Mai, 2024), carries higher liquidity risks and the constant pressure to secure ongoing funding (Zeitun & Goaied, 2022). On the other hand, although long-term debt is typically associated with higher costs, it provides greater stability and entails lower risk than short-term debt (Nenu et al., 2018). For these reasons, analyzing the overall impact of debt on corporate financial performance without accounting for the debt structure may lead to misleading findings (Zeitun & Goaied, 2022). This underscores the necessity for further research to explore the effects of debt structure on corporate financial outcomes.

**Figure 1.1. Debt structure of Building Material Firms from 2016 to 2023**




*Source: Author's compilation and calculation based on Thomson Reuters database*

In Vietnam, firms in the building material industry are facing fierce challenges in managing debt structures due to unstable cash flows and the disruptive effects of fluctuations in the real estate market. The use of short- term debt and long-term debt by listed companies in Vietnam's building materials sector from 2016 to 2023 is illustrated in the following chart.

It can be seen from the chart that during 2016 and 2023, building materials firms in Vietnam heavily relied on short term debt, with its proportion to total capital of approximately 45%. In contrast, long-term debt remained relatively low and displayed a declining trend, decreasing from 10% in 2016 to below 5% in 2023. This pronounced dependence on short-term debt underscores a financial strategy focused on addressing the working capital demands of firms within the building materials sector. However, this situation has revealed numerous challenges as the real estate market faces difficulties. Disruptions in operating cash flows have made it increasingly difficult for building materials firms to manage working capital and meet the short-term debt obligations. Simultaneously, previous long-term debts, often used to invest in production lines or construction of new factories have become substantial burdens as revenues decline. The interest expenses from both short-term and long-term debts have further intensified financial pressures, deepening the financial distress faced by many firms in the sector.

This situation has underscored the urgent need to examine the impact of debt structure on the financial performance of building materials firms in Vietnam.

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This study aims to provide additional empirical evidence on the influence of debt financing, as well as the structure of debt fon financial outcomes of firms in the building materials sector in Vietnam. Furthermore, while previous research has mainly focused on the effects on total debt ratios on corporate financial performance, this study will delve deeper into analyzing the impacts of specific types of debt (including long-term and short-term debt) on financial performance. These two categories of debt possess distinct characteristics and exert different effects, which managers should consider when optimizing capital structure.

To address the aforementioned issues, the study will be organized into four main sections, including the Introduction to the research topic; Literature review, Research methodology and Discussion on the research findings.

## 2. Literature review

***Theoretical background***

According to the M&M theorem of Modigliani and Miller (1963) with the consideration of taxes, the use of debt financing can enhance a firm's earnings. This is because debt is generally a more cost-effective source of capital compared to equity and also provides a tax shield for the firm. This tax shield arises from the deductibility of interest expenses, which effectively reduces the firm's taxable income. Although the trade-off theory emphasizes that leveraging debt can reduce taxable income, it extends the M&M proposition by incorporating factors such as bankruptcy costs and financial distress expenses. According to this theory, as leverage increases beyond a certain level, the associated financial costs rise significantly, exposing firms to higher risks of liquidity constraints and potential bankruptcy (Nazir et al., 2021). Under such circumstances, an excessive debt ratio exerts a negative impact on financial performance. Therefore, the trade-off theory concludes that firms aim to determine an optimal debt level that balances the tax benefits of debt financing with the costs arising from its use (Zeitun & Goaied, 2022).

***Short-term debt, long-term debt and financial performance***

Several studies have emphasized the significance of decisions regarding debt structure, particularly the proportion of short-term and long-term debt in the firm's capital structure. Research by Rahman et al. (2019) indicates that compared to long-term debt, short-term debt is less costly and tends to help firms reduce the risk of financial distress. Moreover, the frequent financing pressure associated with short-term debts makes it more effective than long-term debt in improving the firm's financial performance.

Lê Thị Mai (2024) highlights that while short-term debt provides firms with greater accesibility and flexibility in utilization, it also poses significant risks, including refinancing challenges, increased short-term payment pressures and financial cost volatility. If not effectively managed, these risks can undermine financial performance. On the other hand, long-term debt offers the advantages of stable funding over extended periods and more predictable financing costs. Studies examining the impact of long-term debts on corporate financial outcomes have produced mixed results. Lamichhane & Dhungel (2024) found a significant negative relationship between the proportion of long-term debt and financial performance. Taking a different approach, other research focusing on industry-specific differences revealed a positive relationship between long-term debt and return on assets (ROA) for firms in insurance, investment an industrial sector. In contrast, this relationship was negative for firms in the service sector (Abuamsha & Shumali, 2022) .

For these reasons, we propose the following hypothesis regarding the impacts of short-term and long-term debt on financial performance:

*H1a: Short-term debt negatively affects financial performance.*

*H1b: Long-term debt negatively affects financial performance.*

***Firm size, inflation, GDP and corporate financial performance.***

Firm size plays a crucial role in shaping corporate financial performance.However, firms also encounter higher management costs and more pronounced agency problems than smaller firms, potentially exerting a negative impact on financial performance (Susanti, 2023). Among the various metrics available for measuring firm size, this study employs total assets as the primary indicators. Total assets provide a comprehensive and stable measure for a firm's resources, offering advantages over other metrics such as revenue or profit, which may exhibit greater variability. In light of these considerations, this study formulates the following research hypothesis

*H2: Fim size has either a positive or negative impact on financial performance.*

Besides, macroeconomic factors, including inflation and gross domestic product (GDP), are critical determinants of corporate financial performance. Inflation, by driving up costs for raw materials and labor, can adversely affect financial outcomes, particularly in developing economies where inflation rates are volatile and financial instability is prevalent (Cevik et al., 2024). On the other hand, GDP growth is generally linked to increased consumer spending, which boost corporate revenues and profitability (Egbunike & Okerekeoti, 2018).This positive correlation between GDP growth and financial performance has also been found in the research of Zeitun & Goaied (2022). Building on these observations, this study introduces the following hypotheses to examine the effects of inflation and GDP growth on financial performance.

*H3: Inflation has a negative impact on financial performance.*

*H4: GDP growth has a positive impact on financial performance.*

## 3. Research Methodology

### *3.1 Research Model*

From the literature review, the authors propose the following research model:

$$FP = \beta_0 + \beta_1 Shortdebt_{it} + \beta_2 Longdebt_{it} + \beta_3 Size_{it} + \beta_4 GDP_t + \beta_5 INF_t + \varepsilon_{it}$$

The variables used in the study are described in the table below:

**Table 1: Description of variables in the research model**

| No | Variables | Expected relationship | Explanation | Measurement | References |
|---|---|---|---|---|---|
| Dependent variable – Financial performance (FP) | | | | | |
| 1 | ROA | | Return on assets | ROA= Profit/Total assets | Ahmed et al(2018); Nazir et al (2021); Zeitun & Goaied (2022) |
| 2 | ROE | | Return on equity | ROE= Profit/Total equity | Ahmed et al (2018); Javeed & Tabassam (2018) |
| 3 | EPS | | Earning per share | EPS = Net profit/ Number of outstanding common shares | Shah & Rehman, (2013); S (2016) |
| Independent variables | | | | | |
| *Firm-level variables* | | | | | |
| 1 | Size | +/- | Total assets | Log(Total Assets) | Niresh & Velnampy (2014); Widawati (2023) |
| 2 | Shortdebt | - | The ratio of short-term debt to total assets | Shortdebt= Total short-term debt/ total assets | Doan (2020); Nazir et al, (2021); Sike et al. (2023) |
| 3 | Longdebt | - | The ratio of long-term debt to total assets | Longdebt= Total long-term debt/ total assets | Lamichhane & Dhungel (2024); Nazir và et al (2021); Doan (2020) |
| *Macroeconomic variables* | | | | | |
| 1 | INF | - | Inflation rate | | Cevik et al (2024); Egbunike & Okerekeoti (2018) |
| 2 | GDP | + | Gross domestic product | GDP growth rate | Egbunike & Okerekeoti (2018); Zeitun & Goaied, (2022) |

*Source: Compiled by the authors*

### *3.2. Research Data*

The study employs annual data from 86 companies in the building materials sector listed on the Hanoi Stock Exchange (HNX) and the Ho Chi Minh City Stock Exchange (HOSE) during the period from 2016 to 2023. The variables measuring financial performance, firm debt structure, and some firm-specific variables were collected from the Thomson Reuters database, while macroeconomic data such as inflation rates and GDP growth rates were obtained from the World Bank database. This approach helps ensure reliability and comprehensiveness in analyzing the relationships between variables in the research model.

### *3.3. Research method*

The authors use panel data analysis to investigate the factors affecting financial performance. To assess the impact of the debt structure, we use static estimation methods: the Fixed Effects Model (FEM), the Random Effects Model (REM), and the Feasible Generalized Least Squares (FGLS) method in the model to correct for autocorrelation.

In this study, Hausman test is employed to choose between the FEM and REM models. The assumption for the Hausman model is that the individual effects of each variable are not correlated with the other regression variables in the model. If there is a correlation, the REM model will yield biased results. Additionally, the authors used the Wald test and the Breusch-Pagan Lagrangian multiplier to check for heteroscedasticity with the FEM and REM models, respectively. Finally, to test for autocorrelation in the panel data, the study uses the Wooldridge test. If the model exhibits autocorrelation, the Feasible Generalized Least Squares (FGLS) method will be used to address this issue.

## 4. Results and Discussion

### *4.1 Descriptive statistics*

Table 2 displays the results of the Pearson's product-moment correlation coefficient. The correlation coefficients do not provide any statistical evidence of multicollinearity issues. Additionally, the variance inflation factor (VIF) has been used to assess the presence of multicollinearity in our research dataset. The model shows a VIF score of 2.47, indicating no multicollinearity issues. This finding is consistent with the research of Baccouche and Hadriche, where a VIF value below 5 is considered acceptable. It can be seen that the variables of short-term debt ratio and long-term debt ratio have an inverse correlation with the variables of the company's financial performance.

**Table 2: Correlation Matrix**

| Variables | Shortdebt | Longdebt | GDP | INF | SIZE | ROA | ROE | EPS |
|---|---|---|---|---|---|---|---|---|
| Shortdebt | 1 | | | | | | | |
| Longdebt | 0.2653 | 1 | | | | | | |
| GDP | -0.0058 | 0.0045 | 1 | | | | | |
| INF | -0.0019 | -0.0086 | 0.4952 | 1 | | | | |
| SIZE | -0.0974 | 0.1263 | -0.0095 | -0.0050 | 1 | | | |
| ROA | -0.3372 | -0.1406 | 0.0234 | -0.0277 | 0.1522 | 1 | | |
| ROE | -0.2338 | -0.1567 | -0.0525 | -0.0542 | 0.1374 | 0.5399 | 1 | |
| EPS | -0.3682 | -0.2965 | -0.0329 | -0.0409 | 0.1713 | 0.8131 | 0.5007 | 1 |

*Source: Calculated by the authors using the Stata 14 software*

### *4.2. Regression results*

*4.2.1. Regression with ROA as the dependent variable*

**Table 3: Output for Regression Analysis with ROA as the dependent variable**

| | ROA | | | |
|---|---|---|---|---|
| | OLS | REM | FEM | FGLS |
| Shortdebt | -9.080*** | -0.0746 | -3.915** | -4.580*** |
| | (-8.03) | (-0.04) | (-2.80) | (-4.07) |
| Longdebt | -3.861** | -1.284 | -4.881** | -4.948** |
| | (-2.06) | (-0.39) | (-2.01) | (-2.89) |
| GDP | 0.193 | 0.194 | 0.201* | 0.0567 |
| | -1.18 | -1.62 | -1.67 | -1.23 |
| INF | -0.803 | -0.827* | -0.812* | -0.537*** |
| | (-1.28) | (-1.81) | (-1.76) | (-3.34) |
| SIZE | 0.642*** | -0.329 | 0.567* | 0.0754 |
| | (-3.59) | (-0.43) | -(1.7) | (-0.38) |
| N | 669 | | | |
| R-SQ | 0.136 | 0.007 | | |

**: 1% significance level, **: 5% significance level, and ***: 10% significance level*

*Source: Calculated by the authors using the Stata 14 software*

The results of the regression show that in the period 2016-2023, the variables Shortdebt and Longdebt both have negative effects on the ROA of building material manufacturing enterprises and are statistically significant in all three models: OLS, FEM, and FGLS. This indicates that when building materials manufacturing enterprises use more debt, including short-term and long-term debt, it reduces the efficiency of the additional resources. This result is consistent with the findings of studies (Ahmed et al., 2018; Doan, 2020; Nazir et al., 2021). Especially during the period of a sluggish real estate market, maintaining a high debt ratio will be a burden for construction companies. In addition, raising additional debt also increases the overall capital scale, which in turn increases the total asset value, thereby reducing the return on assets (Ahmed et al., 2018).

*4.2.2. Regression with ROE as the dependent variable*

**Table 4: Output for Regression Analysis with ROE as the dependent variable**

| | ROE | | | |
|---|---|---|---|---|
| | OLS | REM | FEM | FGLS |
| Shortdebt | -62.33*** | -73.98*** | -74.73*** | -15.41** |
| | (-6.69) | (-4.45) | (-5.96) | (-2.56) |
| Longdebt | -99.55*** | -174.4*** | -156.2*** | -16.21 |
| | (-5.93) | (-6.56) | (-7.39) | (-1.08) |
| GDP | -0.271 | 0.714 | 0.294 | -0.0269 |
| | (-0.30) | -0.94 | -0.37 | (-0.14) |
| INF | -3.417 | -3.827 | -3.806 | -1.263* |
| | (-0.98) | (-1.33) | (-1.26) | (-1.91) |
| SIZE | 6.145*** | 19.02*** | 9.119*** | 3.404*** |
| | (-5.94) | (-3.77) | (-5.25) | (-3.5) |
| N | 630 | | | |
| R-SQ | 0.136 | 0.007 | | |

**: 1% significance level, **: 5% significance level, and ***: 10% significance level*

*Source: Calculated by the authors using the Stata 14 software*

The results indicate that both short and long-term debt have negative and significant impacts on firm performance in profitability. This demonstrates that when building materials manufacturing companies employ too much debt in their capital structure, whether short-term or long-term debt, it has a detrimental influence on financial performance. Several prior investigations have validated this finding (Ahmed et al., 2018; Doan, 2020; Javeed & Tabassam, 2018; Nazir et al., 2021). Because the majority of the listed building materials companies on the Vietnamese stock exchange are in a growth phase, additional borrowed capital is frequently used to invest in fixed assets, with returns realized in the long run. Furthermore, the challenges in the real estate market as a whole, a long with the specific economic conditions, have caused the profit generation of building material firms to stall. When combined with a high debt ratio and considerable interest expenditures, the debt ratio reduces the potential to create profits from equity capital.

*4.2.3. Regression with EPS as the dependent variable*

**Table 5: Output for Regression Analysis with EPS as the dependent variable**

| | EPS | | | |
|---|---|---|---|---|
| | OLS | REM | FEM | FGLS |
| Shortdebt | -3080.3*** | -73.07 | -1385.3** | -1530.6*** |
| | (-7.98) | (-0.14) | (-3.05) | (-4.63) |
| Longdebt | -4285.3*** | -212.4 | -2562.2** | -2285.3*** |
| | (-6.70) | (-0.21) | (-3.22) | (-4.17) |

| | EPS | | | |
|---|---|---|---|---|
| | OLS | REM | FEM | FGLS |
| GDP | -19.75 | -13.61 | -14.96 | 3.512 |
| | (-0.35) | (-0.37) | (-0.40) | (-0.24) |
| INF | -193.3 | -222.9 | -220.6 | -142.4** |
| | (-0.90) | (-1.59) | (-1.55) | (-2.80) |
| SIZE | 301.6*** | 690.9** | 408.9*** | 288.7*** |
| | (-4.95) | (-3.01) | (-3.47) | (-4.35) |
| N | 675 | | | |
| R-SQ | 0.209 | 0.024 | | |

**: 1% significance level, **: 5% significance level, and ***: 10% significance level*

*Source: Calculated by the authors using the Stata 14 software*

The results of the study show that in the period 2016-2023, both of Shortdebt and Longdebt variables negatively and significantly influenced financial performance measured using earnings per share. Notably, the beta coefficients are all very high. For example, in the OLS model, the impact coefficient of the long-term debt ratio on EPS is -4285.3 with 99% reliability, meaning that a 1-unit increase in the short-term debt ratio leads to a 4285.3-unit decrease in the EPS ratio. Or in the FEM model, the impact coefficient of the long-term debt ratio on EPS is -2562.2 with a 95% confidence level, indicating that a 1-unit increase in the long-term debt ratio leads to a 2562.2-unit decrease in the EPS ratio. This result is consistent with the studies of Shah & Rehman, (2013) and S (2016).

### 4.3. Discussion and policy implications

The results of the quantitative model have shown a significant and opposite impact of both short-term debt (shortdebt) and ratio of long-term debt (longdebt) on the firm's financial performance, as measured by ROE, ROA, and EPS. This result is consistent with the trade-off theory and the findings of Ahmed et al. (2018); Doan (2020); Nazir et al (2021); Shah & Rehman (2013)

Short-term debt makes up a substantial portion of the total capital structure, accounting for approximately 45%, causing building materials companies to bear significant and frequently fluctuating interest expenses. In addition, fluctuations in the real estate market disrupt the firm's operating cash flow, making it increasingly difficult to meet pay interest and negatively affecting financial stability. In contrast, although long-term debt represents a smaller proportion of the capital structure (ranging from 5% to 10%). In summary, the debt ratio, including both short-term and long-term debt, increases liquidity risk and creates significant pressure on large building materials firms to repay both interest and principal.

To improve the debt structure and enhance financial efficiency, firms in the building materials industry can restructure their debts by gradually reducing the proportion of short-term debt, and shift to long-term debt to ensure stable cash flow. Additionally, firms in this field can combine the increased use of equity capital through raising funds from shareholders, which will help reduce dependence on loans and provide more financial flexibility. Besides, seeking preferential loans from the government and international organizations at reasonable costs is also a good option to help businesses reduce the burden of interest payments. To achieve this goal, firms need to focus on sustainable development projects such as producing environmentally friendly materials or improving circular production processes. Only then can they easily access green capital sources at low costs. Additionally, strengthening relationships with banks to negotiate more favorable interest rates, using derivative instruments to hedge against exchange rate risks for foreign currency loans, are also some measures to support businesses in the building materials industry, especially those with a high import-export ratio. From a policy perspective, the government and regulatory agencies can play a supportive role through measures such as tax reductions, interest rate cuts, or extending repayment periods for firms in the building materials sector. These policies not only reduce financial pressure but also create conditions for the industry to recover and develop in the current challenging economic context.

**References:**

*Abuamsha, M., & Shumali, S. (2022). Debt structure and its impact on financial performance: An empirical study on the Palestinian stock exchange. Journal of International Studies, 15(1), 211–229. https://doi.org/10.14254/2071-8330.2022/15-1/14*

*Ahmed, F., Awais, I., & Kashif, M. (2018). Financial Leverage and Firms' Performance: Empirical Investigation of KSE-100 Index. ETIKONOMI, 17(1), 45–56. https://doi.org/10.15408/etk.v17i1.6102*

*Cevik, S., Fan, A., & Naik, S. (2024). Is Inflation Good for Business? The Firm-Level Impact of Inflation Shocks in the Baltics 1997-2021, WP/24/43, March 2024.*

*Chechet, I. L., & Badmus Olayiwola, A. (2014). Capital Structure and Profitability of Nigerian Quoted Firms: The Agency Cost Theory Perspective. In American International Journal of Social Science (Vol. 3, Issue 1). www.aijssnet.com*

*Doan, T. T. T. (2020). Financing decision and firm performance: Evidence from an emerging country. Management Science Letters, 10(4), 849–854. https://doi.org/10.5267/j.msl.2019.10.012*

*Nazir, A., Azam, M., & Khalid, M. U. (2021). Debt financing and firm performance: empirical evidence from the Pakistan Stock Exchange. Asian Journal of Accounting Research, 6(3), 324–334. https://doi.org/10.1108/AJAR-03-2019-0019*

*Shah, S., & Rehman, F. U. (2013). "Relationship between Financial Leverage and Financial Performance: Empirical Evidence of Listed Sugar Companies of Pakistan." Type: Double Blind Peer Reviewed International Research Journal Publisher: Global Journals Inc, 13.*

*Sike, R. I., Ibrahim, U. A., & Maitala, F. (2023). Capital Structure and Financial Performance: A Sectorial Analysis. WSEAS Transactions on Business and Economics, 20, 1498–1508. https://doi.org/10.37394/23207.2023.20.132*

*S, N. (2016). The Impact of Capital Structure on Financial Performance of the Firms: Evidence From Borsa Istanbul. Journal of Business & Financial Affairs, 5(2). https://doi.org/10.4172/2167-0234.1000173*

*Susanti, nora. (2023). THE EFFECT OF COMPANY SIZE AND DIVIDEND POLICY ON THE FINANCIAL PERFORMANCE. Economica, 11(2), 104–113. https://doi.org/10.22202/economica.2023.v11.i2.6545*

*Zeitun, R., & Goaied, M. (2022). The nexus between debt structure, firm performance, and the financial crisis: non-linear panel data evidence from Japan. Applied Economics, 54(40), 4681–4699. https://doi.org/10.1080/00036846.2022.2033680*

# IMPACT OF CREDIT RISK ON THE FINANCIAL PERFORMANCE OF VIETNAMESE BANKS DURING COVID-19 PERIOD

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**Abstract:** ***The study investigates the impact of credit risk on the financial performance of Vietnamese commercial banks during the Covid-19 pandemic. Using panel data from 27 commercial banks in Vietnam over the period from 2011 to 2023, the study employs OLS, FEM, REM, and FGLS models. The results show that NPLs have a significant negative relationship with ROA. Furthermore, Covid-19 strengthens the impact of NPLs on banks' ROE. While the relationship is significant, the significance level is not as strong as in previous studies, suggesting that the Vietnamese banking system may have developed effective mechanisms to mitigate the adverse effects of non-performing loans. The research offers valuable insights for bankers and regulators to better manage credit risk, particularly during crisis periods.***

• Keywords: *credit risk, non-performing loan, covid-19, financial performance, vietnamese commercial bank.*

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## 1. Introduction

The Covid-19 pandemic has had a profound impact on the global banking sector. The economic disruptions caused by the pandemic, including widespread business closures, rising unemployment, and supply chain interruptions, have led to an increase in non-performing loans (NPLs), thereby eroding banks' profitability. The heightened credit risk has also prompted banks to adopt more conservative lending practices, which may limit credit growth. As a result, many banks have been significantly affected by the pandemic.

Since the peak of the non-performing loan (NPL) ratio in the Vietnamese banking market following the global economic crisis of 2008-2009, the Vietnamese banking system has implemented a series of stringent measures to control bad debt. These measures include the strict enforcement of credit growth limits, the enactment of Resolution No. 42, which provides a legal framework for solving NPLs, and the strengthening of the restructuring process for weak banks. Additionally, improvements have been made in loan classification standards, the establishment of asset management companies to handle bad debts more efficiently, and the introduction of stricter regulations on risk provisioning, coupled with enhanced transparency in reporting. As a result, the NPLs ratio was significantly reduced and remained within the acceptable limit. Despite several years of recovery, the recent Covid-19 pandemic and the Russia-Ukraine conflict have led to a global economic downturn, pushing the Vietnamese economy into a severe difficulty. Consequently, the NPLs ratio began to rise again. By June 2024, the NPLs ratio of the credit institution system had reached 2.3%, up from 1.49% in 2021. The total ratio of bad debt, including unresolved debt at the Vietnam Asset Management Company (VAMC) and potential bad debt, compared to total outstanding debt, stood at 6.44% (Trieu Minh, 2025).

From a theoretical standpoint, numerous studies have examined the impact of credit risk on the profitability of commercial banks; however, the findings remain inconsistent. Some research highlights the negative effect of credit risk on the banks' performance (Jacob, 2022; Oketch, 2018; Le & Ngo, 2020; Andries, 2020; Vu & Turnell, 2020), while other studies suggest a positive relationship between credit risk and bank profitability (Alshatti, 2017; Embaye, 2018; Nguyen & Nguyen, 2021; Marshal & Onyekachi, 2016; Kolapo, 2022; Cheng, 2020). Several studies have also explored the link between credit risk and financial performance in crisis contexts (Le & Ngo, 2020; However, a significant gap exists in the literature regarding the direct relationship between credit risk and bank performance during the Covid-19 pandemic.

This study investigates the impact of non-performing loans (NPLs) on the financial performance of Vietnamese banks, considering the context of the Covid-19 pandemic. It makes several important contributions to both the literature and practical applications. Specifically, it seeks to answer the question of whether, despite the various measures taken by the banking system to mitigate the negative effects of Covid-19, the pandemic has intensified the impact of NPLs on banks' financial performance. The research covers the period from 2011 to 2023, a notable timeframe during which Vietnamese banks standardized their operations through the implementation of Basel II and prepared for the adoption of International Financial Reporting Standards 9 (IFRS9). This period coincides with the emergence, spread, and eventual subsiding

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of the Covid-19 pandemic. The findings of this study are highly relevant to policymakers, bank executives, board members, and financial investors, as they provide valuable insights for taking proactive measures to mitigate credit risk. Furthermore, the study's outcomes can assist policymakers in shaping a more resilient banking sector, safeguarding it from future crises, and ensuring that the banking industry continues to play its critical role in driving economic growth.

The remainder of this paper is structured as follows: Section 2 provides a comprehensive literature review. Section 3 outlines the methodological framework. Section 4 presents a succinct synthesis of the key findings and outcomes. Finally, Sections 5 and 6 offer a discussion of the results and conclude the study, respectively.

**2. Literature review**

The study is grounded in the theory of information asymmetry (Akerlof et al., 2014) and the trade-off theory (Campbell & Kelly, 1994). Information asymmetry refers to a situation where one party in an economic transaction possesses more information than the other (Stiglitz, 2002). In the banking context, this means that the borrower typically knows more about their ability to repay a loan than the lender (Spence, 1973). Information asymmetry is a primary factor contributing to banks' credit risk, as it leads to adverse selection and moral hazard (Dietrich, 2017). The trade-off theory (Campbell & Kelly, 1994) posits that investors and firms face a fundamental trade-off between risk and reward, where higher levels of risk are expected to yield higher potential returns. In the context of banking, Tan (2019) argues that when banks are exposed to higher credit risk, they typically anticipate higher profits.

Many relevant empirical research findings align with the trade-off theory. For instance, Nguyen and Nguyen (2022) examine the relationship between banks' profitability and credit risk in Vietnam and find a significant positive correlation. Similar evidence is also reported in Nigeria (Marshal & Onyekachi, 2016; Kolapo, 2022), South Africa (Cheng, 2020), and Eritrea (Embaye, 2018). Le and Ngo (2020) test this relationship using cross-country data and observe a similar positive impact. The positive relationship identified in these studies can be attributed to the exceptionally high interest rates charged by banks to offset the risks associated with high credit risk, ultimately leading to higher profits in these contexts.

In contrast, numerous studies have found a negative relationship between credit risk and banks' profitability in various countries. These include studies in Nigeria (Ebenezer & Omar, 2016), Bangladesh (Noman et al., 2015), Ghana (Gadzo, 2019).This negative relationship can be explained by the fact that credit risk leads to an increase in the cost of bank assets. As a result, high credit risk leads to higher operational costs while simultaneously reducing the return on cash flows.

Several studies have examined the impact of crises on bank performance. Le and Ngo (2020) found a negative relationship between financial crises and bank performance. Andries (2020) reported that crises have a significant and positive impact on both the cost and profit inefficiencies of commercial banks in the EU, with a more pronounced effect on Eurozone banks. Similarly, Vu and Turnell (2020) found that the crisis adversely impacted the profit efficiency of Australian banks. In contrast, Gulati and Kumar (2016) found no significant or long-lasting adverse effects of the global financial crisis on the efficiency of the Indian banking sector.

**3. Conceptual model**

This research uses annual data from all listed commercial banks in Vietnam over the period 2011 to 2023. Banks with incomplete financial data for this period were excluded from the analysis. Additionally, all bank-level variables are winsorized at the 1% and 99% levels to mitigate the potential effects of outliers. The final sample consists of a balanced panel of 27 banks, which account for 95% of the total charter capital in the Vietnamese banking system.

The research model is based on previous studies. Return on Assets (ROA) and Return on Equity (ROE) are used as measures of financial performance, while credit risk is measured by the Non-Performing Loan (NPL) ratio and the Loan Loss Provision (LLP) ratio. The model includes five control variables: the Cost to Income Ratio (CIR), Liquidity Ratio (LR), Average Lending Rate (ALR), Capital Adequacy Ratio (CAR), Bank Size (SIZE), and the History of Establishment (AGE). Additionally, two macroeconomic variables, the GDP Growth Rate (GDP) and Inflation Rate (INF), are incorporated. To account for the impact of financial crises, a dummy variable, CRISIS, is included in the model. The CRISIS variable takes the value of 1 to represent crisis conditions and 0 to represent normal conditions during the remaining years of the research period.

The equations of the baseline model are specified as follows:

$$\begin{aligned} Bank\ performance_{i,t} = {} & \alpha_{i,t} + \beta_1 NPL_{i,t} + \beta_2 \mathrm{CIR}_{i,t} + \beta_3 CAR_{i,t} + \beta_4 ALR_{i,t} \\ & + \beta_5 LR_{i,t} + \beta_6 LLP_{i,t} + + \beta_7 INF_{i,t} + \beta_8 AGE_{i,t} \\ & + \beta_9 GDP_{i,t} + \beta_{10} CRISIS_{i,t} \qquad (1) \end{aligned}$$

The study extends the baseline model by incorporating interactive variables of NPL*CRISIS and LLP*CRISIS to examine whether the Covid-19 period influences the relationship between credit risk and bank performance.

The study was conducted using OLS, FEM, and REM regressions. To select the most appropriate model, the study employs the Hausman test. The chosen model is then subjected to hypothesis testing, including multicollinearity testing (VIF test), heteroscedasticity testing (Breusch and Pagan Lagrangian test), and autocorrelation testing (Wooldridge test). The Hausman test results indicate that the appropriate model for regressing ROA is the Fixed Effects Model (FEM), while the Random Effects Model (REM) is suitable for regressing ROE. The results from the VIF, White, and Wooldridge tests reveal that both the FEM and REM models do not suffer from multicollinearity but exhibit heteroscedasticity and autocorrelation.

**Table 1. Summary of explanatory variables and dependent variables**

| | Variables | Measurement | Expected sign | Reference |
|---|---|---|---|---|
| **Dependent variables** | | | | |
| | ROA (Return on asset) | $\frac{Net\ income}{Total\ assets}$ | | Kolapo et al. (2022)<br>Al Zaidanin & Al Zaidanin (2021)<br>Alshatti (2017). |
| | ROE (Return on equity) | $\frac{Net\ income}{Equity}$ | | Alshatti (2017).<br>Ebenezer, & Omar, (2016) |
| Credit risk | NPL (Non-performing loans) | $\frac{Total\ nonperforming\ loan}{Total\ loans}$ | | Kolapo et al. (2022)<br>Al Zaidanin & Al Zaidanin (2021)<br>Alshatti (2017). |
| | LLP (Loan loss provision) | $\frac{Loan\ loss\ provision}{Total\ assets}$ | - | Kolapo et al. (2022)<br>Alshatti (2017). |
| **Control variables** | | | | |
| | CAR (Capital adequacy ratio) | ((Tier1 Capitalit + Tier2 Capitalit)/ Total Risk weighted Assetit )*100% | + | Al Zaidanin & Al Zaidanin (2021)<br>Alshatti (2017). |
| | LR (Liquidity ratio) | $\frac{Total\ loans}{Total\ deposits}$ | +/- | Al Zaidanin & Al Zaidanin (2021) |
| | CIR (Cost-Income ratio) | $\frac{Total\ operating\ cost}{Total\ revenue}$ | - | Al Zaidanin & Al Zaidanin (2021) |
| | BS (Bank size) | Ln(total assets) | + | Elshaday et al. (2018) |
| | ALR (Average lending rate) | $\frac{Net\ interest\ income}{Total\ assets}$ | + | Alshatti (2017)<br>Elshaday et al. (2018) |
| | AGE | Age of commercial banks from established to the year calculated | + | Author's proposal |
| Other factors | INF (Inflation) | Annual inflation rate declared by word bank yearly | +/- | Vo et al (2022)<br>Le & Ngo (2020) |
| | GDP (Gross domestic products) | Growth rate of gross domestic products | +/- | Vo et al (2022)<br>Le & Ngo (2020) |
| | CRISIS (Covid Pandemic) | Panel data:<br>From 2011 - 2019: 0 value<br>From 2020 - 2023: value at 1 | +/- | Gulati & Kumar (2016)<br>Le & Ngo (2020) |

*Source: Author, 2024*

The study employs the Feasible Generalized Least Squares (FGLS) estimation method, as proposed by Hansen (2007), to restructure the models and address the heteroscedasticity issue.

## 4. Result

### *4.1. Descriptive statistics*

**Table 2. Descriptive statsitcs of variables**

| Variable | Obs | Mean | Std. dev. | Min | Max |
|---|---|---|---|---|---|
| ROA | 351 | 0.019 | 0.010 | 0.004 | 0.42 |
| ROE | 351 | 0.217 | 0.118 | 0.049 | 0.441 |
| NPL | 351 | 0.021 | 0.009 | 0.008 | 0.045 |
| CAR | 351 | 0.103 | 0.031 | 0.065 | 0.174 |
| CIR | 351 | 0.231 | 0.060 | 0.123 | 0.324 |
| ALR | 351 | 0.029 | 0.013 | 0.014 | 0.065 |
| LR | 351 | 0.886 | 0.154 | 0.599 | 1.16 |
| LLP | 351 | 0.008 | 0.003 | 0.004 | 0.015 |
| AGE | 351 | 23.909 | 10.811 | 6 | 55 |
| INF | 351 | 4.852 | 4.481 | 0.631 | 18.678 |
| CRISIS | 351 | 0.308 | 0.462 | 0 | 1 |
| BS | 351 | 5.128 | 0.489 | 4.329 | 6.066 |
| GDP | 351 | 0.087 | 0.039 | 0.025 | 0.173 |

*Source: Author, 2024*

Table 2 presents the descriptive statistics for all variables over the period 2011 - 2023 (351 observations). The key dependent variables, ROA & ROE, have the mean of 1.9% and 21.7%. The NPL ratio has a mean of 2.1% and range from 0.8% to 4.5%, highlights a vast disparity in risk exposure among banks. Capital Adequacy Ratio (CAR) shows a standard deviation of 0.031 with a mean of 10.3%, showing most banks exceed the regulatory minimum of 8%. The cost-income ratio (CIR) is relatively low at 23.1%. Average lending rate (ALR) is 0.029 and LR showing a mean of 0.886, suggesting that most banks maintain high ratio of loan to deposit. The average age of banks in the dataset is 24 years**,** with a range from newly established banks (6 years) to much older institutions (55 years).

The correlation matrix and VIF among variables is displayed in Table 3. All correlations are below 0.8, indicating relatively weak relationships between the variables. The highest VIF is observed for inflation (INF) with a value of 3.68, within acceptable limits, indicating no significant degree of multicollinearity.

**Table 3. Correlation matrix**

| | NPL | CAR | CIR | ALR | LR | LLP | AGE | INF | CRISIS | BS | GDP | VIF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NPL | 1.00 | | | | | | | | | | | 1.36 |
| CAR | 0.26*** | 1.00 | | | | | | | | | | 1.81 |
| CIR | -0.10 | 0.11** | 1.00 | | | | | | | | | 1.54 |
| ALR | -0.04 | 0.25*** | 0.13** | 1.00 | | | | | | | | 1.56 |
| LR | -0.12** | 0.19*** | -0.05 | 0.36*** | 1.00 | | | | | | | 1.46 |
| LLP | 0.13*** | -0.06 | -0.06 | 0.27*** | 0.34*** | 1.00 | | | | | | 1.95 |
| AGE | -0.15*** | -0.12** | 0.07 | -0.06 | 0.19*** | 0.49*** | 1.00 | | | | | 2.11 |
| INF | 0.16*** | 0.23*** | -0.48*** | 0.10* | -0.01 | -0.08 | -0.19*** | 1.00 | | | | 3.68 |
| CRISIS | -0.10* | -0.04 | 0.03 | 0.07 | 0.31*** | 0.30*** | 0.25*** | -0.29*** | 1.00 | | | 1.42 |
| BS | -0.31*** | -0.44*** | 0.03 | 0.16*** | 0.26*** | 0.51*** | 0.62*** | -0.27*** | 0.35*** | 1.00 | | 3.05 |
| GDP | 0.14*** | 0.19*** | -0.33*** | 0.10** | 0.01 | -0.04 | -0.16*** | 0.8*** | -0.36*** | -0.22*** | 1.00 | 3.13 |

*Source: Author, 2024*

### *4.2. Baseline model and extended model*

**Table 4: Regression results with FGLS estimation**

| Variable | Baseline model | | Extended model | |
|---|---|---|---|---|
| | ROA | ROE | ROE | ROE |
| NPL | -0.0507*<br>[-1.73] | -0.5113<br>[-1.20] | -0.414<br>[-1.05] | -0.865**<br>[-2.47] |
| CAR | 0.0758***<br>[5.62] | -0.5295***<br>[-3.59] | -0.667***<br>[-4.31] | -0.634***<br>[-4.05] |
| CIR | -0.0122**<br>[-2.14] | -0.1776**<br>[-2.56] | -0.176***<br>[-2.70] | -0.169**<br>[-2.57] |
| ALR | 0.4926***<br>[15.65] | 3.6983***<br>[11.32] | 4.160***<br>[12.62] | 4.134***<br>[12.50] |
| LR | 0.0028<br>[1.29] | 0.1067***<br>[4.07] | 0.0476*<br>[1.86] | 0.0374<br>[1.46] |
| LLP | -0.0797<br>[-0.66] | -2.5659<br>[-1.48] | -0.910<br>[-0.66] | -0.389<br>[-0.26] |
| AGE | 0.0000<br>[0.47] | 0.0021***<br>[4.73] | 0.00205***<br>[4.18] | 0.00201***<br>[4.06] |
| BS | 0.0079***<br>[6.99] | 0.1128***<br>[9.42] | 0.110***<br>[8.39] | 0.113***<br>[8.28] |
| CRISIS | 0.0021***<br>[3.30] | 0.0140<br>[1.62] | 0.0429***<br>[2.75] | 0.0147<br>[0.79] |
| GDP | 0.0078<br>[1.09] | 0.0993<br>[0.66] | 0.0498<br>[0.61] | 0.0576<br>[0.70] |
| INF | 0.0001**<br>[2.34] | 0.0006<br>[0.48] | 0.000963<br>[1.02] | 0.00104<br>[1.09] |
| CRISIS*NPL | | | -1.632**<br>[-2.42] | |
| CRISIS*LLP | | | | -0.684<br>[-0.30] |
| _cons | -0.0449<br>[-7.56] | -0.5033***<br>[-7.72] | -0.444***<br>[-6.27] | -0.445***<br>[-6.02] |

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

*Source: Author, 2024*

The baseline model investigates the individual impact of credit risk and other control variables on bank performance. Table 4 presents the FGLS results for the dependent variables, ROA and ROE, respectively. The results show that NPL negatively affects ROA at the 10% significance level, while this negative relationship with ROE is not statistically significant. The financial crisis negatively impacts banks' ROA, though it does not significantly affect ROE. CAR positively influences ROA but negatively affects ROE, with both relationships significant at the 1% level. CER negatively impacts both ROA and ROE at the 5% significance level, while ALR and BS positively affect both ROA and ROE at the 1% significance level.

The extended models with interactive variables of NPL*CRISIS and LLP*CRISIS are used to examine whether the Covid-19 period influences the relationship between credit risk and bank performance. The results indicate that, for the dependent variable ROA, neither the interaction of NPL*CRISIS nor the interaction of LLP*CRISIS significantly affects bank performance. However, for the dependent variable ROE, the interaction between NPL*CRISIS negatively impacts bank performance at the 5% significance level, while the interaction between LLP*Crisis remains statistically insignificant. Other controlling variable still have positive strong impact (ALR, AGE, BS) and positive impact (CAR, CIR)**.**

**5. Discussion**

NPLs and LLPs exhibit negative coefficients across all models. However, NPL is statistically significant with ROA in the baseline model and with ROE in the extended model, while LLP does not have a significant impact on banks' performance in any model. These results align with previous study of Ebenezer & Omar (2016), Noman et al., (2015), Gadzo (2019), Musyoki & Kadubo (2012); Oketch (2018), Alshatti, (2017), Al Zaidanin & Al Zaidanin (2021). Although the result show a significant negative impact, but it is not as strong as expected. It may be attributed to the period of 2011-2023 not have witnessed the same level of severe credit risk as earlier periods. Additionally, efforts by the banking system to address bad debt and restructure the sector may have mitigated the impact of credit risk on banks' performance.

The crisis caused by the Covid-19 pandemic had a significant negative impact on banks' ROA (in the baseline model) and has strengthened the effect of NPL on banks' ROE (in the extended model). These results align with studies by Le and Ngo (2020), Andries (2020), and Vu and Turnell (2020), which suggest that the Covid-19 crisis may have been as severe as a financial crisis and that such crises could amplify the impact of credit risk.

Among other notable findings from the control variables, CAR has a negative and highly significant relationship with ROE in all models, but a positive and significant relationship with ROA. This result implies that a higher CAR, which represents a higher proportion of equity over risk-weighted assets, may reduce the return on equity. However, banks with a higher CAR are often perceived as having greater financial strength and reputation, which can help them generate higher returns on assets. This finding is contrast with the work of Al Zaidanin & Al Zaidanin (2021)

Alshatti (2017), but consistent with Kosmidou (2008), who highlighted that banks with higher capital buffers tend to have better profitability due to their increased ability to absorb shocks and maintain operations, even during financial downturns.

The positive relationship between ALR and bank performance aligns with the theoretical framework that higher lending rates enhance bank profitability by increasing interest margins. This is in line with the findings of Alshatti (2017) and Elshaday et al. (2018). CIR negatively impacts both ROA and ROE in all models, which is consistent with Al Zaidanin & Al Zaidanin (2021), who emphasize the importance of controlling operating costs to improve financial results. Finally, the positive relationship between bank size and age is similar to Elshaday et al. (2018) who supports the theory of economies of scale, suggesting that in the Vietnamese market, the size and history of a bank's establishment provide competitive advantages that enable more efficient performance.

**6. Conclusion:** This study investigates the impact of credit risk on the financial performance of commercial banks in Vietnam during the period of Covid-19. The study utilizes panel data from 27 commercial banks in Vietnam over the period 2011 to 2023 with yearly financial statements. Results show that NPLs demonstrate a significant negative relationship with ROA. The Covid-19 also strenthen the impact of NPLs to banks' ROE. While the impact is significant, but the significant level is not as strong as previous studies, suggesting that Vietnamese banking system might have developed effective mechanisms to mitigate the adverse effects of non-performing loans. The research offer valuables insight for banker and regulators to better control credit risk, especilly in the crisis period.

**References:**

*Andrieș, A. M., & Ursu, S. G. (2016). Financial crisis and bank efficiency: An empirical study of European banks. Economic research-Ekonomska istraživanja, 29(1), 485-497.*

*Akerlof, G. A. (1978). The market for "lemons": Quality uncertainty and the market mechanism. In Uncertainty in economics (pp. 235-251). Elsevier.*

*Alshatti, A. S. (2017). The effect of credit risk management on financial performance of the Jordanian commercial banks. Investment Management and Financial Innovations, 12(1-2), 338-345.*

*Berger, A.N. & DeYoung, R., 1997. Problem loans and cost efficiency in commercial banks. Journal of Banking & Finance, 21(6), pp. 849-870.*

*Embaye, S. S. (2018). The impact of credit risk management on financial performance of commercial banks - Evidence from Eritrea. . Research Journal of Finance & Accounting,, 8(19), 70-76.*

*Jacob, G. (2022). Do bank profits converge? European Financial Management, . Financial and Technology Journal, 19(2), 345-365.*

*Lindset, S., Lund, A.-C., & Persson, S.-A. (2014). Credit risk and asymmetric information: A simplified approach. Journal of Economic Dynamics and Control, 39, 98-112.*

*Le, T. D., & Ngo, T. (2020). The determinants of bank profitability: a cross-country analysis. CentralBank Review, Vol. 20 No. 2, pp. 65-73.*

*Marshal, I. &. (2016). Credit risk and performance of selected deposit money banks in Nigeria: An empirical investigation. . European Journal of Humanities and Social Sciences,, 31(1), 1683-1694.*

*Musyoki, D., & Kadubo, A. S. (2012). The impact of credit risk management on the financial performance of banks in Kenya for the period. International Journal of Business and Public Management, 2(2), 72-80.*

*Noman, A. H. (2015). The effect of credit risk on the banking profitability: A case on Bangladesh. . Global Journal of Management & Business Research, 15(3), 40-48.*

*Stiglitz, J. E. (2002). Information and the change in the paradigm in economics. . American Economic Review, , 92(3), 460-501.*

*Tan, Y. (2019). The impacts of risk and competition on bank profitability in China. Journal of International Financial Markets,. Institutions and Money, , 40, 85- 110.*

*Trieu Minh (2015). Bức tranh tín dụng và nợ xấu của các ngân hàng. Tạp chí Kinh tế Sài Gòn Online https://thesaigontimes.vn/buc-tranh-tin-dung-va-no-xau-cua-cac-ngan-hang/*

*Vu, H., & Turnell, S. (2011). Cost and profit efficiencies of Australian banks and the impact of the global financial crisis. Economic Record, 87(279), 525-536.*

# CARBON TRADING SYSTEM AROUND THE WORLD - AN INCLUSIVE REVIEW AND PRACTICAL LESSONS FOR VIETNAM

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**Abstract:** ***Bridging the climate finance gap is crucial for developing countries facing climate change. Declining financial support from developed nations and increasing fiscal pressure necessitates alternative funding solutions. The carbon market presents a viable option, yet carbon trading systems remain limited, primarily to developed countries. This study examines carbon credit trading markets in key nations, providing insights into their establishment and operation. We propose recommendations for developing Vietnam's carbon credit trading market based on these findings.***

• Keywords: *carbon credit market, emissions trading system, greenhouse gas emission, international lessons, Vietnam.*

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## 1. Introduction

Climate change presents a formidable global challenge, with developing countries disproportionately affected due to insufficient financial resources for mitigation and adaptation. The Intergovernmental Panel on Climate Change (IPCC) estimates that $6 trillion is needed to achieve only half of their climate action goals. McKinsey & Company projects that these nations will require $2 trillion annually for climate initiatives and $3 trillion for broader development by 2030. However, with financial support from developed nations shrinking and domestic sources covering only 40% of the required funds, bridging this financial gap is imperative for developing ones (McKinsey & Company, 2023).

Carbon trading offers a dual solution reducing $CO_2$ emissions while addressing the climate finance shortfall. Governments or regulatory bodies set emission caps, allocating tradable permits to businesses (Marcu, 2006). Companies exceeding their limit must buy credits from lower-emitting entities, creating an economic incentive for emission reductions. Alternatively, the seller is rewarded with monetary benefit for emission reduction, while the buyer pays an emission price. Such trading mechanisms have promoted the development of carbon markets.

Carbon markets operate through compliance and voluntary mechanisms. Compliance markets, regulated by mandatory frameworks like the Kyoto Protocol, include two central trading systems: (i) Cap-and-trade (ETS), which fixes an upper emission limit and allows permit auctions and trading. (ii) Baseline-and-credit: This system allows emitters to earn and trade credits by exceeding reduction targets (Brohe et al., 2012). Voluntary carbon markets enable non-regulated entities companies, individuals, and NGOs to purchase offsets for corporate social responsibility or public image purposes (USAID, 2022).

Typically, there are two forms of carbon trading: (i) emission quotas and trading and (ii) carbon offsetting. The emission quotas and trading mechanisms target compulsory markets with high-emission participants, such as the energy or transportation sectors. The authorities determine the overall limit, and participants exchange emission quotas, which means that emission reduction was not created or eliminated but traded between parties. The carbon offsetting mechanism targets both compulsory and voluntary markets. It allows carbon credit creation by individuals or organizations implementing emission-reduced projects such as renewable energy, energy efficiency, or forest regeneration. The credits are then sold to governments, organizations, or individuals who wish to reduce their carbon footprint and become carbon neutral (USAID, 2022). Examples of emission quotas and trading markets are the EU-ETS (Europe), the Regional GHG Initiative (the U.S.), The Chicago Climate Exchange (the U.S.), and China's experimental emission trading program. Examples of carbon-offsetting markets are Japan's Bilateral Credit Clearing Mechanism and the Clean Development Mechanism (CDM).

With nearly 700 million people and rising energy demand, Southeast Asia is pivotal in the global net-zero transition. Eight of ten ASEAN nations, except

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Indonesia and the Philippines, target carbon neutrality by 2050 (Lawson et al., 2023). Singapore leads with a carbon tax (2019) and the Climate Impact X trading platform (2020). Vietnam is making substantial progress, updating its Nationally Determined Contribution (NDC) in 2020 to target a 9% GHG reduction by 2030. Recent environmental regulations, including Law on Environmental Protection (2022), Decree 08/2022/ND-CP (on elaborating the Law on Environmental Protection), and Decree 06/2022/ND-CP (on mitigation of GHG emission and protection of Ozone layer), set the groundwork for the development of carbon market. By 2027, Vietnam plans to establish domestic carbon trading regulations, with whole market operation and international linkage by 2028. Hence, Vietnam must examine how successful countries worldwide have established and operated their carbon trading market.

This paper examines international experiences constructing and operating the trading exchange platform for carbon emissions, thereby identifying practical lessons for Vietnam in building and developing the trading platform for carbon credits. We select four prominent examples of prosperous countries, including Europe, the United States, Korea, and China, that have built and operated the exchange platform for carbon credits.

## 2. Global experience in establishing and operating carbon credit trading platforms

### *2.1. The experience of European countries*

The European Union launched the European Trading System (EU ETS) in 2005, establishing one of the world's largest carbon markets. Operating under a cap-and-trade mechanism, it covers sectors such as thermal power stations (>20MW), mineral oil refineries, and mining. The EU ETS is founded on two key Kyoto Protocol pillars: (1) legally binding emission reduction targets for 37 industrialized countries and (2) an international emissions trading system. It regulates over 10,000 installations in the manufacturing and energy sectors, aircraft operators, and maritime transporters.

Now in its fourth phase (2021-2030), the EU ETS has evolved significantly:

***Phase 1 (2005-2007)****:* Initial implementation; overallocation of allowances led to a price collapse in 2007.

***Phase 2 (2008-2012)****:* Economic downturn caused surplus allowances despite a 6.5% reduction. Iceland, Norway, and Liechtenstein joined, and the aviation sector was included.

***Phase 3 (2013-2020)****:* Major reforms introduced fixed emission caps, reduced annually by 1.74%, with aviation capped at 5% below 2004-2006 levels.

***Phase 4 (2021-2030)****:* Emission caps continue to decline at a 2.2% annual reduction rate for fixed installations, while the aviation cap remains unchanged. The European Climate Exchange (ECX) was introduced to enhance market liquidity, offering benefits such as lower transaction costs, price transparency, and risk reduction (Labatt & White, 2011).

The ETS offers two types of carbon credits:

- EU Allowances (EUAs): Traded as futures and options contracts on the ECX.

- Certified Emission Reductions (CERs): Issued from Clean Development Mechanism (CDM) projects, traded as futures and options.

ECX futures contracts are traded in lots of 1,000 units and expire quarterly (March, June, September, December). Options contracts on EUA and CER futures settle into corresponding futures at expiration. ECX products are traded on the Intercontinental Exchange (ICE) electronic platform and are accessible via "WebICE" or Independent Software Vendors. Participants include ICE Future Europe members (enabled for ECX contracts) and clients routing orders through members. Membership is categorized into general participants (trading on behalf of others) and trade participants (trading only for themselves).

### *2.2. Experience in the U.S*

In the United States, there was no carbon trading platform at the national level. However, many models exist for establishing a compulsory domestic carbon market in the U.S., such as the Western Climate Initiative (WCI) and the Regional Greenhouse Gas Initiative (RGGI).

*Chicago Climate Exchange (CCX)*

Launched in 2003, the CCX was the first voluntary carbon trading platform in the U.S. It traded Carbon Financial Instruments (CFIs) and was open only to businesses voluntarily registered under its mandatory reduction policy (Bayon et al., 2012). Operating under a cap-and-trade system, the CCX set an overall emissions cap that declined over time. However, due to the absence of federal regulation and the U.S. Congress's failure to pass climate legislation, the exchange ceased operations in 2010. Despite its closure, the CCX provided valuable insights into carbon trading, influencing initiatives such as the Regional Greenhouse Gas Initiative (RGGI) and California's cap-and-trade program.

*Regional Greenhouse Gas Initiative (RGGI)*

RGGI was the first mandatory cap-and-trade program in the U.S., involving ten northeastern and mid-Atlantic states (Brohe et al., 2009). States collectively set carbon caps based on historical emissions, forming a regional emissions limit. The program restricts $CO_2$ emissions from power plants, issuing tradable allowances, each representing the right to emit one short ton of $CO_2$. Businesses can comply by reducing emissions, purchasing credits, or contributing to the Emissions and Variables Management Fund.

*California's Cap-and-Trade Program*

California's cap-and-trade system is North America's first multi-sector mandatory carbon market and the fourth largest globally, following China, the EU, and South Korea. The program targets a 40% reduction from 1990 levels by 2030 and 80% by 2050. Revenue is directed to the Greenhouse Gas Reduction Fund for emission-reduction projects. The program covers 85% of California's total emissions and applies to businesses emitting ≥25,000 metric tons of $CO_2$ annually, including power plants, fuel distributors, and industrial facilities. Entities must register, report emissions annually, and undergo third-party verification (C2ES, n.d.). Allowance allocation varies by sector. For example, the electricity sector used long-term procurement plans, and the natural gas sector based on 2011 sales. Most of the emission allowances are sold at auctions, and some of them are freely allocated. The auction price minimum was $10 in 2012 and increased by 5% annually to account for inflation coverage. The auction price maximum is set at $65 in 2021, increasing 5% annually, and at this price, an unlimited supply of allowance will be available. Offsets are allowed for 8% of total compliance obligation in 2020, 4% for 2021-2025, and 6% for 2026-2030. From 2021, 50% of the offsets must be from projects from specific sectors, comply with CARB-approved protocol, and directly benefit California.

***2.3. Experiences in Korea***

K-ETS is the second-largest carbon market globally after the EU-ETS, covering 73% of Korea's total greenhouse gas (GHG) emissions. Launched in January 2015, K-ETS was established under the Framework Act on Low Carbon, Green Growth (2010), which authorized the government to regulate GHG trading. The Greenhouse Gas Emissions Allocation and Trading Act (2012) provided the legal foundation, marking a significant milestone in Korea's emissions reduction policy.

A key success factor of K-ETS is its phased implementation, ensuring a structured approach toward long-term climate goals. The system has undergone three phases:

***Phase 1 (2015-2017):*** Focused on market stabilization. Free allowances were allocated to controlled entities across six sectors electricity, industry (iron and steel, petrochemicals, cement, oil refining, non-ferrous metals, textiles, etc.), buildings, public, waste, and transportation based on average GHG emissions (2011-2013) (Lim, 2015).

***Phase 2 (2018-2020):*** Expanded to eight sectors and introduced auction-based allocation, shifting the financial burden to high-emission entities. Though auctions were planned for 2018, they were delayed until January 2019. Approximately 3% of allowances were auctioned.

***Phase 3 (2021-2025):*** Increased auction rates (>10%) to boost market liquidity and encourage investment in mitigation activities. Restrictions on market participation in earlier phases had led to low liquidity, high carbon prices, and frequent government intervention (Kuneman et al., 2021).

Despite challenges such as low trading volumes and price volatility, K-ETS continues to evolve as a critical component of Korea's carbon reduction strategy. The main components of ETS's activities include:

***(i) Selection of controlled units***: The ETS policy controls enterprises with average annual emissions greater than 125,000 tCO2/year and facilities with average annual emissions greater than 25,000 tCO2/year (Kuneman et al., 2021).

***(ii) Allocation of emission allowance***: The national emission allowance allocation plan sets out the total allowance allocated to controlled firms by each industry for a specific period. K-ETS applies an emissions history-based approach to allocation for the first period. However, the benchmark was applied to regulated cement, aerospace, and petroleum refining entities. Toward the end of Phase 2, the share of sector-specific benchmarking reached 50% of the total primary allocation. It was expanded to a total of seven sub-sectors: gray clinker, oil refining, domestic aviation, with the addition of waste, industrial parks, electricity generation, and district heating/cooling (MoE, 2018).

***(iii) Trading of emission allowances: K-ETS-controlled entities can profit or lose*** from selling or buying emission allowances on the trading market. The trading was conducted on the KAU exchange called "Korea Climate Exchange," where controlled entities were given trading accounts. KRX was selected because it already has a long-standing and stable operating system that supports large-scale trading activities and promotes this market (KLRI, 2017).

K-ETS is supervised and coordinated by the Ministry of Environment (MoE), responsible for preparing the

National Emission Allowance Allocation Plan. The Allocation Committee, composed of coordinating ministries (such as MOTIE, MOLIT, and MAFRA), reviews this plan (ICAP, 2020). In addition, the MoE is responsible for selecting and notifying controlled entities, reporting and verifying emissions reports of controlled entities, operating the offset program, and conducting punishment. The Korea Greenhouse Gas Statistics and Research Center (GIR) and the Korea Environmental Corporation (KECO) support the MoE at the operational level. As an organization under the MoE, GIR manages all data and information related to national greenhouse gas emissions. On the other hand, KECO provides supervision services (such as review, monitoring, and evaluation) to ensure the appropriateness of quota allocation, purchasing, MRV, and performance reporting of controlled entities (MoE, 2020).

***2.4. Experiences in China***

China quickly built and developed the market after introducing carbon market regulations in the Kyoto Protocol. China's carbon market is effective for realizing the "two carbon goals" of peaking carbon emissions by 2030 and becoming carbon neutral by 2060, aiming for green, sustainable development. There are three stages of market development.

*In the first phase,* from 2002 to 2012, certified greenhouse gas emission reduction certificates (CERs) generated by projects of the Clean Development Mechanism (CDM), a cooperative mechanism established under the Kyoto Protocol, began participating in international transactions (Hua, 2019).

*In the second phase,* from 2013 to 2020, the carbon emission rights transaction was implemented in several localities. China has piloted the establishment of seven carbon markets, tested in five cities and two provinces, with 57 million tons of carbon traded in 2013 and 2014 (Zhang et al., 2020). These local carbon markets committed to setting a target of reducing emissions by about 15-20% in all stages. In addition to trading with carbon quotas, national voluntary certified emission reductions (CCERs) can also be used to offset carbon emissions, thereby forming a domestic emission reduction certificate market (Chang et al., 2018; Zhao et al., 2016).

*In the third phase,* from 2021, China officially launched the trading market for carbon emissions nationwide, focusing on the electricity industry. China has become the most significant carbon spot market globally, reaching about 4.5 billion tons /year.

The Chinese carbon credit market operates on a cap-and-trade mechanism (Lo, 2016). When implementing the national carbon market, free allowance allocation is made based on the norms of four types of plants: coal power plants under 300 MW, coal power plants over 300 MW, new coal power plants, and gas nature. During the 2021-2022 period, there were a total of more than 2,200 power generation enterprises that were eligible to apply for carbon emission rights transactions. Determining carbon credit allocation quotas is critical to ensure affordable carbon prices. China provides flexible quotas based on normal operating levels, depending on the performance of leading enterprises in each sector. China also makes adjustments to emissions rights based on annual outputs. Like the European markets, China set up a Market Reserve to buy emission rights when there is a surplus and sell when there is a shortage.

Quota auctions were also introduced and gradually expanded in application, but there is yet to be a deadline for this implementation. China also created a mechanism to allow market participants to deposit emission reduction credits into carbon banks for future use. Accordingly, businesses that still lack a large quota can advance a portion of the 2023 quota to pay for 2021 and 2022. To do that, China strictly implements Measurement - Reporting - Monitoring with support from the World Bank and the Government (An, 2022).

Companies participating in the Chinese market and national carbon credit trading system can participate in credit trading. The carbon trading market includes the carbon quota trading market and the carbon credit trading market. Emission-controlled and voluntary emission-reduction enterprises participate in the credit trading market with carbon credits as "goods" (Zhang et al., 2020). National-certified voluntary emission reduction (CCER) is a credit for activities that help reduce or eliminate greenhouse gas emissions certified by the government. The Chinese Ministry of Ecology and Environment has announced four projects eligible to trade this credit, including solar thermal power plant projects and mangrove restoration. Each emission firm can use CCERs to offset 5% of the paid quota yearly. The scale of the Chinese carbon trading market is expected to increase to 26.4 billion yuan (3.6 billion USD) by 2025.

***2.5. Overall assessment of global experiences***

The review of establishing and operating the carbon trading system of typical countries above emphasizes four main points of building a carbon trading market for Vietnam as follows:

*(i) Organizational mechanism of the carbon trading system:* Carbon markets operate under two mechanisms: compliance and voluntary. The EU ETS exemplifies a compliance system, whereas the Chicago Climate

Exchange (CCX) represents a voluntary system. The shift from voluntary to mandatory mechanisms was driven by the Paris Agreement, which replaced the Kyoto Protocol's division of countries into capped and uncapped groups. Under Kyoto, only Annex B countries had legal climate mitigation obligations, making uncapped nations the primary suppliers of compliance and voluntary markets (Kreibich & Hermwille, 2021). The Paris Agreement requires all nations to establish Nationally Determined Contributions (NDCs), reducing the number of uncapped countries.

*(ii) Approach to outline and implement the carbon trading system:* The experiences of the mentioned countries indicate that the efficient carbon trading system should be a multiple-stage model. The number of phases could differ by country, depending on the economic and political characteristics. However, there should be three necessary phases for building and operating a new carbon trading system: (i) setting a context and scattering, (ii) expanding to several main areas, and (iii) spreading over the nation.

*(iii) Quantification of Carbon Market Volume and Pricing:* Offset credits are certified and traded freely in the voluntary trading system. Registries and standard organizations certify functions in the voluntary trading system. They verify whether or not a particular offset project satisfies the criteria of a low-carbon project and issue the carbon offset credits, which provide a buyer with a claim on underlying carbon outcomes (Spilker & Nugent, 2022). On the other hand, in the compliance trading system, the government determines price and quantity through the auction mechanism and allocation benchmarking. In Korea and China, for example, besides the fixed volume allocated to particular industries and companies, the government allows carbon exchange and offsets among the companies.

*(iv) Supporting factors for Carbon trading:* The most critical factor is the information system, especially data for carbon emission and environmental compliance. Another factor is the legal framework for the climate commitment and carbon exchange market. The success of European countries, Korea, and China expresses the importance of government awareness and direction. Climate action is compulsory for all countries since the profound damage of climate change has threatened the sustainable development of the next generation.

## 3. Practical lessons for Vietnam

### *3.1. Legal framework and steps to the carbon trading market of the Vietnamese government*

According to data from the Ministry of Natural Resources and Environment, 2011-2020, extreme climate has caused severe economic damage, with total losses estimated at 229,958 billion VND (equivalent to 10 billion USD in price 2022). On average, due to extreme weather events, direct damage to public and private property causes Vietnam to lose about 2.4 billion USD (equivalent to 0.8% of GDP) each year. Furthermore, if calculated according to the cost of general environmental degradation, damage due to climate change is estimated at 10 billion USD in 2020, equivalent to 3.2% of GDP. Climate change will be one of the factors reducing Vietnam's growth. Without effective adaptation solutions, a temperature increase of 1.0°C and 1.5°C could cause losses of about 1.8% of GDP and 4.5% of GDP, respectively. If sea levels rise and temperatures increase, according to the worst scenario, it is estimated that by 2050, Vietnam will have about 3.1 million people to migrate internally.

On the other hand, businesses exporting to the EU market are facing the Carbon Border Adjustment Mechanism (CBAM), which will be partially piloted from October 2023 and officially implemented in 2026. The EU's Carbon Border Adjustment Mechanism (CBAM) will impose a carbon tax on all goods imported into the markets of European Union (EU) countries based on the intensity of greenhouse gas emissions in the production process in the host country. Vietnam is the 11th most significant partner in importing goods to the EU. Although most goods exported from Vietnam do not fall into these groups, the scope is likely to expand and include more products in the future. CBAM will create significant additional costs for Vietnam's exported goods if the Mechanism is expanded to other sectors in the future. Therefore, to help domestic businesses adapt to CBAM, the government has been aiming to prioritize carbon credit trading.

Recognizing the severe impacts of climate change, the Vietnamese government has taken decisive climate action. At COP26, Vietnam committed to bringing net zero emissions by 2050. The government issued the Law on Environmental Protection 2020, which clearly states that carbon credits are certificates that can be traded and represent the right to emit one ton of CO2 or equivalent. On January 7, 2022, the government issued Decree No. 06/2022/ND-CP to regulate greenhouse gas emission mitigation and ozone protection.

On that basis, the Ministry of Natural Resources and Environment developed a project, "Developing the carbon market in Vietnam." Accordingly, by 2025, Vietnam will begin piloting; by the end of 2027, Vietnam will complete the legal framework on carbon credit management, greenhouse gas emission quotas, and carbon credits exchange, improving capacity and raising awareness about carbon market development. In addition, the Project also sets the goal that by 2028, Vietnam will operate an official carbon credit exchange. It will be a market to connect buyers and sellers and increase transparency in carbon pricing. Prices accurately reflect market supply and demand, ensuring market participants' benefits. In addition, the centralized carbon credit exchange will also help authorities control carbon credit trading transactions and plan for implementing greenhouse gas reduction projects.

### *3.2. Lessons for Vietnam in building and operating the carbon market*

Research on experience in building and operating carbon credit trading floors of pioneering countries, several practical lessons that can be applied in Vietnam as follows:

***Legal Framework****:* A robust legal framework ensures business confidence in participating in trading platforms and investing in carbon reduction projects. Without clear regulations and coordination from state agencies, localities will struggle to implement carbon credit markets effectively. The framework should define carbon trading products, methods, participants' rights and obligations, roles of intermediaries, penalties for violations, and dispute resolution mechanisms. Establishing a dedicated supervisory body is crucial for market oversight. Recognizing "carbon" as a legitimate commodity and clearly defining carbon credit ownership is critical to preventing disputes and ensuring market credibility.

***Operational Mechanisms****:* Carbon trading should be introduced in central industrial provinces and high-emission sectors, as non-pilot areas may lack capacity and data. A structured plan is needed to support these regions in catching up before expanding the Emissions Trading System (ETS). Vietnam has already outlined a pilot market and identified key industries for initial implementation.

***Information systems and market data****:* To develop a strong carbon trading system, Vietnam must standardize carbon trading regulations, enhance information transparency, and ensure market liquidity. Unified standards facilitate efficient trading, while accessible and transparent data enable informed decision-making. Ensuring the availability of high-quality carbon credits from verified projects requires low-cost, transparent verification and certification processes. Additionally, market liquidity can be improved by involving trading intermediaries who provide expertise, advisory services, and transaction support.

## 4. Conclusion

Building a carbon market is crucial for Vietnam to meet its GHG reduction commitments. Drawing from international experience and Vietnam's current context, several key factors should be considered. First, high-emission industries should be prioritized for a pilot Emissions Trading System (ETS), laying the groundwork for a full-scale market. Second, authorities must establish transparent methodologies for calculating emission reductions to ensure equitable allocation of emission rights. A well-structured carbon credit market will enable cost-effective GHG reductions, incentivize low-emission technologies, enhance business competitiveness, and advance Vietnam's transition to a low-carbon economy while strengthening climate resilience.

## References:


*An, Z. E. N. G., Tan, X.-C., Wang, Y., & Gao, J.-X. (2022). International experiences on measurement, reporting, and verification of climate finance and implications for China. Advances in Climate Change Research, 18(2), 215.*

*Bayon, R., Hawn, A., & Hamilton, K. (2012). Voluntary carbon markets: An international business guide to what they are and how they work (2nd ed.). Routledge.*

*Brohé, A., Stern, N., Eyre, N., & Howarth, N. (2012). Carbon markets: An international business guide. Routledge.*

*Center for Climate and Energy Solutions (C2ES). (n.d.). California Cap and Trade. https://www.c2es.org/content/california-cap-and-trade/*

*Chang, K., Chen, R., & Chevallier, J. (2018). Market fragmentation, liquidity measures, and improvement perspectives from China's emissions trading scheme pilots. Energy Economics, 75, 249-260. https://doi.org/10.1016/j.eneco.2018.02.015*

*European Commission (E.C.). (n.d.). Emissions cap and allowances. https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/emissions-cap-and-allowances_en*

*Hua, Y., & Dong, F. (2019). China's carbon market development and carbon market connection: A literature review. Energies, 12(9), 1663. https://doi.org/10.3390/en12091663*

*International Carbon Action Partnership (ICAP). (2020). Korea announces third-party participation and changes to allocation. https://icapcarbonaction.com/en/news-archive/704-korea-announces-third-party-participation-and-changesto-allocation*

*Intercontinental Exchange (ICE). (2016). ICE ECX Contracts: EUAs and CERs. https://www.ice.com/publicdocs/ICE_ECX_getting_started.pdf*

*Korea Legislative Research Institute. (2017). Enforcement decree of the act on the allocation and trading of greenhouse gas emission permits. https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=46598&type=sogan&key=60*

*Kreibich, N., & Hermwille, L. (2021). Caught in between: Credibility and feasibility of the voluntary carbon market post-2020. Climate Policy, 21(7), 939-957. https://doi.org/10.1080/14693062.2021.2005571*

*Kuneman, E., Acworth, W., Bernstein, T., & Boute, A. (2021). The Korea emissions trading system and electricity market: Influence of market structures and market regulation on the carbon market. Case study report (No. UBA-FB--000418/Z.W., 3, ENG). Umweltbundesamt (UBA).*

*Labatt, S., & White, R. R. (2011). Carbon finance: The financial implications of climate change. John Wiley & Sons.*

*Lawson, M., Phua, D., Rogers, C., Meng, S., Robinson, P., Chiu, P., & Thomas-Walters, L. (2023). Developing carbon trading markets in Southeast Asia. https://www.kwm.com/cn/en/insights/latest-thinking/development-of-carbon-trading-markets-in-southeast-asia.html*

*Lim, D. (2015). Experience with emission benchmarks: ETS allocation in Korea. ECO & Partners, Seoul.*

*Lo, A. Y. (2016). Challenges to the development of carbon markets in China. Climate Policy, 16(1), 109-124. https://doi.org/10.1080/14693062.2014.992135*

*Marcu, A. (2006). The business case. Environmental Finance, May (Supplement: Global Carbon), S8-S9.*

*McKinsey & Company. (2023). Solving the climate finance equation for developing countries.*

*Ministry of Environment (MoE). (2018). Phase 2 National Emissions Allocation Plan. MoE, Seoul.*

*Ministry of Environment (MoE). (2020). Greenhouse gas emissions trading system 3rd plan period (2021-2025) - National emission permit allocation plan, draft version. MoE, Seoul.*

*Spilker, G., & Nugent, N. (2022). Voluntary carbon market derivatives: Growth, innovation & usage. Borsa Istanbul Review, 22(2), S109-S118. https://doi.org/10.1016/j.bir.2022.03.005*

*United States Agency for International Development (USAID). (2022). Carbon markets in Vietnam - Briefing paper.*

*Zhang, W., Li, J., Li, G., & Guo, S. (2020). Emission reduction effect and carbon market efficiency of carbon emissions trading policy in China. Energy, 196, 117117. https://doi.org/10.1016/j.energy.2020.117117*

*Zhao, X. G., Jiang, G. W., Li, A., & Yun, L. (2016). Technology, cost, and performance of waste-to-energy incineration industry in China. Renewable and Sustainable Energy Reviews, 55, 115-130. https://doi.org/10.1016/j.rser.2015.10.128*

# CURRENT SITUATION OF FINTECH DEVELOPMENT IN COUNTRIES AROUND THE WORLD AND IN VIETNAM

PhD. Dao Thuy Hang*

**Abstract:** ***In recent years, financial technology (Fintech) has emerged as a prominent trend globally, significantly changing the way traditional financial services are provided. Fintech encompasses the combination of finance and technology, offering various conveniences such as electronic payments, personal financial management, online investing, and lending through digital platforms. The robust development of Fintech is not only occurring in developed countries but is also spreading to many emerging markets, including Vietnam. Globally, Fintech has been rapidly advancing with significant strides in major markets such as the United States, China, and the United Kingdom. These countries have established a strong Fintech ecosystem, supported by government backing, developed technological infrastructure, and abundant investment capital. In contrast, in Vietnam, despite being an emerging market, Fintech has witnessed remarkable growth, particularly in the fields of digital payments and digital finance, thanks to the increase in internet users and mobile device penetration. This article aims to analyze the current status of Fintech development worldwide and in Vietnam, clarifying the opportunities and challenges faced by Fintech enterprises. Additionally, the article will provide several recommendations to promote sustainable Fintech development in the context of globalization and digital transformation.***

• Keywords: *fintech, global, Vietnam, digital finance, digital transformation.*

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## 1. Introduction

In the context of globalization and the rapid advancement of technology, Fintech (financial technology) has become an indispensable trend, transforming the way traditional financial services are provided and accessed. Innovations in this field not only help optimize financial processes but also provide convenience, transparency, and cost savings for users. Services such as electronic payments, personal financial management, online investing, and digital lending are gradually becoming popular choices, replacing traditional methods. Fintech is not only developing in advanced economies like the United States, the United Kingdom, and China, but it is also spreading to many emerging markets where the demand for digital financial services is increasingly high. These countries, thanks to government support and favorable policies, have built a robust Fintech ecosystem with active participation from both startups and major financial corporations. They have succeeded in applying technology to address issues related to payments, credit, and investment. In Vietnam, a rapidly developing economy, Fintech has also made significant progress, particularly in the fields of electronic payments and digital finance. With the widespread availability of the internet and smartphones, Vietnamese citizens are increasingly able to access Fintech services, ranging from money transfers and bill payments to investing and borrowing. However, alongside the vast opportunities, Fintech in Vietnam still faces numerous challenges, including an incomplete legal framework, security risks, and user trust issues. Therefore, researching the current status of Fintech development is not only important for identifying successes but also for highlighting the challenges that need to be addressed. This article will provide an overview of Fintech development worldwide and in Vietnam, along with recommendations to promote sustainable Fintech growth in the context of globalization and digital transformation.

## 2. Current situation of fintech development worldwide

The development of Fintech worldwide is strongly driven by several factors, including the explosion of the internet, the demand for convenient and low-cost financial services, as well as advancements in technologies such as artificial intelligence (AI), blockchain, and big data. Below are some key highlights regarding the current status of Fintech development in several leading countries around the world.

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***2.1. The development of fintech in the United States***

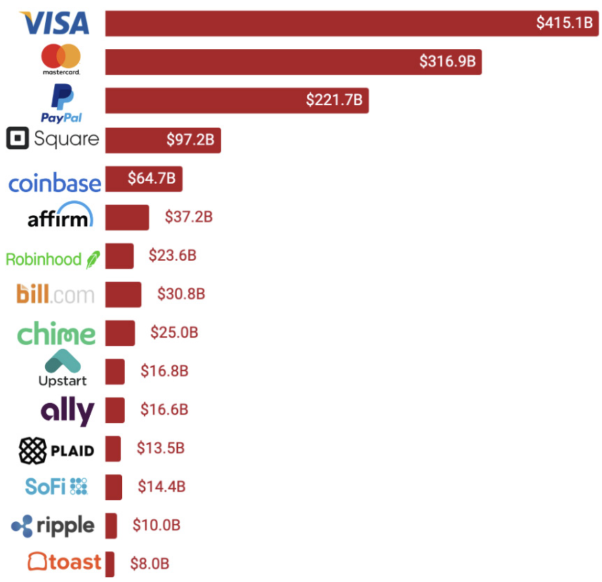
The United States is one of the leading countries in the world in financial technology (Fintech), with strong and diverse development across payment, lending, investment, and personal financial management sectors. Fintech in the U.S. has completely transformed the way consumers and businesses access financial services, providing numerous conveniences and effective solutions. The growth of Fintech in the U.S. has made significant strides, positioning the country as a global center for financial technology.

One of the key factors contributing to this development is the emergence of large Fintech companies, such as PayPal, Square, and Stripe. Founded in 1998, PayPal has become one of the largest electronic payment platforms globally, completely changing the way online transactions and international money transfers are conducted, enabling consumers and businesses to carry out financial transactions quickly and securely. Square, established in 2009 by Jack Dorsey, has revolutionized the way small and medium-sized enterprises accept credit card payments through convenient mobile devices and POS systems, simplifying the payment process and increasing business efficiency. Meanwhile, Stripe, a young and dynamic Fintech company, stands out with its online payment services for digital businesses. Stripe provides integrated payment API solutions that easily embed into online platforms, allowing startups and large enterprises to scale their operations globally without encountering complex payment system barriers.

The development of these companies is just a small part of the broader picture of the Fintech industry in the U.S. In addition to electronic payments, other areas such as peer-to-peer (P2P) lending, personal financial management, and online investing are also growing rapidly. Platforms like LendingClub and SoFi have transformed the approach to personal and business finance, enabling individuals to easily borrow money and invest without going through traditional financial institutions. Companies like Robinhood have also fueled the boom in stock trading and online investing, providing easy investment opportunities for millions of users with just a click on their phones.

Moreover, the Fintech ecosystem in the U.S. is reinforced by a relatively flexible regulatory environment that allows startups to experiment with new business models. The U.S. government and financial regulatory agencies have implemented various policies to support innovation and creativity in this sector, providing Fintech businesses with the space to grow. Additionally, with abundant venture capital funding, Fintech companies in the U.S. have the opportunity to access substantial financial resources to expand operations and innovate technology.

**Figure 1. Market valuation of fintech unicorns in the USA market valuation in $ billion**




*Source: CFTE*

It is evident that the United States is at the forefront of building and developing the Fintech industry, with the emergence of many innovative startups and advanced payment platforms. The combination of modern technology, a flexible regulatory environment, and strong support from investors has created a robust Fintech ecosystem that not only changes the way financial services are accessed domestically but also has a significant impact globally.

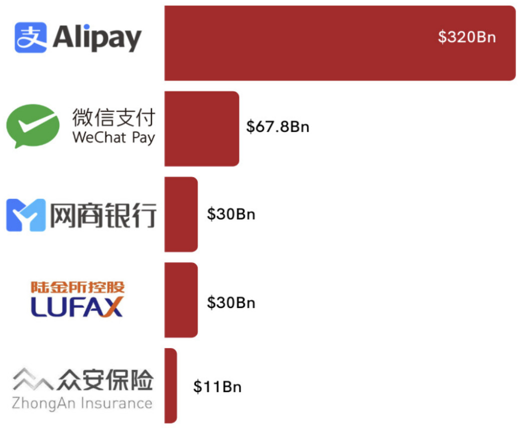
***2.2. The Development of fintech in China***

China is one of the pioneering countries in the Fintech sector, with the rapid and robust development of financial technologies. The Fintech boom in China has transformed the entire financial ecosystem, encompassing electronic payments, lending, personal finance management, insurance, and investment. The country has become the largest Fintech market in the world, surpassing even the United States in terms of the number of users, transaction volume, and market scale.

One of the notable features of Fintech in China is the remarkable growth of electronic payment services.

According to data from the People's Bank of China (PBOC), the value of mobile payment transactions in China reached 393.9 trillion yuan (approximately 60.5 trillion USD) in 2020, an increase of 24.5% compared to the previous year. The mobile payment system is dominated by two giants: Alipay from Alibaba Group and WeChat Pay from Tencent. Alipay holds over 55% of the mobile payment market share in China, while WeChat Pay accounts for about 39%. Both of these platforms have become an integral part of daily life for the Chinese people, facilitating online shopping, bill payments, and transactions at stores and restaurants.

**Figure 2. Market valuation of fintech unicorns in China market valuation in $ billion**




*Source: CFTE*

The robust development of electronic payments in China is driven by a vast digital ecosystem and the widespread adoption of smartphones. As of 2021, China had approximately 1.1 billion mobile phone users, of which more than 850 million utilized mobile payments. This development is not limited to major urban areas like Beijing and Shanghai but has also expanded into rural regions, enhancing financial access for millions of people.

The peer-to-peer (P2P) lending sector is also a highlight of Fintech in China. Platforms such as Lufax and Ant Financial have enabled millions of individuals and small businesses to access loans without going through traditional banking systems. By the end of 2020, the total value of online loans in China was estimated to exceed 1.5 trillion yuan (approximately 230 billion USD). However, this sector also faces numerous risks and challenges related to management and supervision. The explosion of P2P lending platforms has led to several financial scandals, prompting the Chinese government to intervene more forcefully in regulating and overseeing this activity. By 2021, many P2P platforms had been shut down or forced to change their business models to comply with new regulations.

China also plays a significant role in the development of blockchain technology and cryptocurrencies. The Chinese government has recognized the potential of blockchain and has implemented a national strategy for its development. By 2020, China held approximately 25% of the global total of blockchain-related patents. Major banks and companies in China are actively experimenting with blockchain across various sectors, including payments, supply chain management, and financial services.

One of the prominent moves by the Chinese government is the development of the central bank digital currency (CBDC), known as e-CNY. This is China's first national cryptocurrency project, piloted in several major cities such as Shenzhen, Suzhou, and Beijing. E-CNY is expected to gradually replace cash and create an entirely new digital payment system, with management and control from the central bank. By 2021, over 140 million people had registered to use e-CNY, with a total transaction value exceeding 87.5 billion yuan.

The asset management and online insurance sectors are also rapidly developing in China, thanks to the emergence of Fintech platforms. Yu'e Bao, a wealth management product from Alipay, has become the largest money market fund in the world, boasting over 600 million users. This fund allows users to easily transfer money from their payment accounts to investment accounts with just a few clicks, generating annual returns that significantly exceed traditional savings interest rates.

In the insurance sector, Fintech companies like ZhongAn have opened a new market with online insurance products. ZhongAn is China's first digital insurance company, offering fully online insurance products ranging from health insurance to travel insurance. In 2020, ZhongAn served over 500 million customers, with more than 10 billion insurance contracts signed through its online platform.

The rapid development of Fintech in China is closely linked to the crucial role of the government and supportive policies. The Chinese government has taken proactive steps to promote innovation in the digital finance sector. Financial regulatory agencies, such as the People's Bank of China and the China Banking and Insurance Regulatory Commission, have implemented various policies and regulations aimed at fostering sustainable Fintech development while minimizing risks related to fraud and security. Additionally, China has made significant investments in digital infrastructure, including 5G networks and big data systems, facilitating the growth of Fintech companies. By 2021, China had over 40 major cities covered by 5G, supporting the rollout of new-generation Fintech services.

***2.3. The development of fintech in the UK***

The United Kingdom is one of the world's leading financial centers and a pioneer in the development of financial technology (Fintech). With a combination of a favorable regulatory environment, advanced financial infrastructure, and a highly skilled workforce, the UK has become one of the most dynamic Fintech markets globally. London, the capital of the UK, is regarded as the "Fintech hub" of Europe, attracting Fintech companies and investors from around the world. The development of Fintech in the UK is not limited to the payments sector; it also extends to areas such as lending, investment, insurance, and asset management.

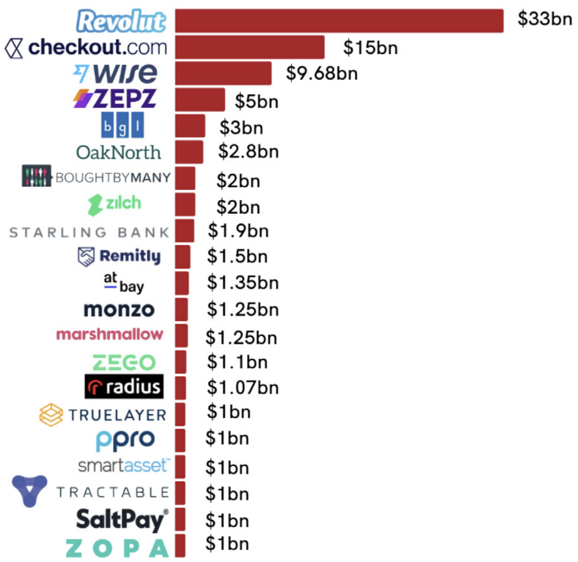
According to a report by Innovate Finance, in 2021, Fintech companies in the UK raised $11.6 billion from investors, accounting for approximately 50% of the total Fintech investment in Europe. This figure is double that of 2020, indicating a strong boom in the industry. London ranks at the top of the list of leading Fintech cities worldwide, competing with major financial centers like New York and San Francisco.

With over 2,500 Fintech companies operating in the UK (according to Deloitte data from 2021), the country has the highest number of Fintech firms in Europe. Many prominent startups like Revolut, Monzo, Starling Bank, and Wise (formerly TransferWise) have quickly become "unicorns" in the global Fintech scene, each valued at billions of dollars. These companies are not only changing the way financial transactions are conducted but also offering innovative solutions to enhance user experience in traditional financial services.

One of the most rapidly growing areas of Fintech in the UK is digital banking and electronic payments. Digital banks like Revolut, Monzo, and Starling Bank have attracted millions of customers by providing convenient banking services through mobile applications, eliminating the need for physical branches, and minimizing service fees. Revolut, one of the fastest-growing digital banks in the UK, had over 18 million users globally by the end of 2021. Revolut offers a wide range of services, from account management and international money transfers to cryptocurrency trading and insurance services. Monzo and Starling Bank have also attracted millions of users in the UK, thanks to user-friendly features such as automatic spending management, easy account creation through mobile apps, and 24/7 customer support. While Monzo focuses on creating a simple and intuitive banking experience, Starling Bank stands out with solutions tailored for small businesses, enabling them to manage their finances more easily.

According to UK Finance data, by 2020, over 40% of consumers in the UK used digital banking services as their primary means of managing personal finances. This percentage continues to rise as traditional banks are forced to undergo digital transformations to compete with Fintech companies. The peer-to-peer (P2P) lending and online lending sectors have also seen robust growth in the UK, led by platforms like Funding Circle, Zopa, and RateSetter. These platforms allow users to borrow and lend directly to one another, bypassing traditional financial intermediaries like banks. Funding Circle, established in 2010, is one of the largest P2P lending platforms in the UK, having lent over £13.7 billion (approximately $18.4 billion) to small businesses globally by the end of 2021.

**Figure 3. Market valuation of fintech unicorns in the UK market valuation in $ billion**




*Source: CFTE*

Zopa, one of the oldest P2P lending companies in the UK, transformed into a fully digital bank in 2020, expanding its services to include traditional banking products but with a fully digitized model. Since its inception, Zopa has provided over £6 billion (about $8 billion) in loans. According to a report by Nesta, the P2P lending market in the UK reached over £8 billion in 2020 and continues to grow due to demand from individual users and small businesses.

The UK is also one of the pioneering countries in the development and application of blockchain technology. Many Fintech startups in the UK have utilized blockchain to enhance financial services, particularly in the areas of payments and security. Elliptic, a Fintech company based in London, uses blockchain to monitor and analyze cryptocurrency transactions, helping to detect fraud and money laundering. Elliptic has attracted the attention of banks and financial institutions worldwide.

Cryptocurrency has also become an essential part of the Fintech ecosystem in the UK. Cryptocurrency trading platforms like Bitstamp, Binance, and Coinbase have established a presence in the UK, attracting millions of users who trade cryptocurrencies daily. The UK government and the Financial Conduct Authority (FCA) have also begun to develop regulatory frameworks to oversee cryptocurrency activities, aiming to ensure transparency and safety for users. Fintech in the UK is not only growing in banking and lending but is also expanding into the insurance sector, with the emergence of Insurtech companies. Companies like Zego and Lemonade have provided flexible and accessible insurance solutions through mobile applications. Moreover, traditional insurance companies in the UK have also begun to adopt Fintech technology to digitize their services, enhancing efficiency and improving customer experience.

**3. Current situation of fintech development in Vietnam**

Financial technology (Fintech) has been rapidly developing in Vietnam in recent years, becoming one of the sectors attracting significant interest from investors and the startup community. Vietnam has a large percentage of young people who are tech-savvy and can quickly access online services. As a result, Vietnam is gradually emerging as a potential market for the Fintech boom. The growth of Fintech in Vietnam is driven by various factors, including the increase in internet and smartphone usage, the trend towards cashless payments, and government support in promoting digital transformation. However, this sector also faces considerable challenges regarding legal frameworks, information security, and building user trust.

Electronic payments are one of the most rapidly developing areas in the Fintech ecosystem in Vietnam. The swift rise of e-wallet services and payment gateways has encouraged people to shift from cash payments to cashless methods. The leading e-wallets in Vietnam include MoMo, ZaloPay, VNPay, and Moca (from Grab). Among these, MoMo is the largest e-wallet, with transaction volumes reaching billions of USD each year. The popularity of MoMo and other e-wallets demonstrates the significant potential to change the payment habits of the Vietnamese people.

**Figure 4. Fintech Vietnam startups map**


*Source: Hyperlead, 2023*

Peer-to-peer lending (P2P Lending) is a rapidly developing area of Fintech in Vietnam, allowing users to access loans quickly without going through the complex procedures of traditional banks. Some notable P2P Lending companies such as Tima, Vay Mượn, and Interloan have developed platforms that connect borrowers with lenders. However, this sector also faces many challenges regarding legality and transparency. Currently, there is no specific legal framework for P2P lending operations in Vietnam, making it difficult for some P2P Lending companies to build trust with users. Regulators are also concerned about risks related to unsecured loans and the potential growth of illegal lending.

Although Vietnam does not yet have a clear legal framework for cryptocurrency, blockchain technology has garnered significant attention from investors and domestic businesses. Many Fintech companies in Vietnam have applied blockchain in financial solutions, ranging from developing cryptocurrency trading platforms to asset management and information security. In addition to these areas, digital insurance (Insurtech) is also beginning to develop in Vietnam, with the emergence of several startups in the online insurance field. Companies like Papaya, Inso, and FWD are exemplary in providing flexible and easily accessible insurance products through digital platforms.

The Vietnamese government has implemented various policies and programs to promote the development of Fintech. In 2020, the State Bank of Vietnam issued a plan to develop cashless payments for the period 2021-2025, aiming for at least 50% of the Vietnamese population to use cashless payment services by 2025. This plan is seen as a crucial driving force for the development of Fintech, particularly in the payment sector. Additionally, the government has launched several programs to promote innovative startups, including Fintech companies, such as the National Innovation Fund (NATIF) and support centers for startups in major cities. However, a significant challenge for Fintech in Vietnam is the lack of a complete and unified legal framework to regulate the activities of Fintech companies, especially in areas like P2P lending and cryptocurrency.

While Fintech in Vietnam has achieved significant milestones, the sector still faces many major challenges. An incomplete legal framework, underdeveloped technological infrastructure, and information security issues are key barriers. Moreover, user trust in Fintech products and services remains low, especially for complex digital financial products like online lending and cryptocurrencies. Nevertheless, Vietnam also faces many significant opportunities to promote the development of Fintech. The rise of the internet and mobile devices, along with the increasing demand for convenient and flexible financial services, creates favorable conditions for Fintech companies to expand their markets. The government is also working to build and improve the legal framework to create a more conducive environment for the sustainable development of Fintech.

**4. Some solutions to promote fintech development in Vietnam**

To promote the sustainable development of the Fintech sector in Vietnam, several key solutions can be implemented.

***First,*** it is essential to improve the legal framework by establishing and refining policies to create a clear and flexible legal framework for Fintech activities such as electronic payments and peer-to-peer lending. This will facilitate Fintech businesses to operate in a stable and transparent legal environment.

***Second,*** enhancing collaboration among stakeholders is crucial. The government should encourage partnerships between traditional banks and Fintech companies to leverage new technologies and create a wider variety of financial products that better meet consumer needs. Moreover, organizing forums and workshops will provide opportunities for Fintech startups, banks, and regulatory agencies to meet, share experiences, and seek cooperation opportunities.

***Third,*** investing in technological infrastructure is also an important solution. The government needs to upgrade telecommunications infrastructure to ensure that the internet and mobile networks are robust enough to support Fintech services, especially in rural and mountainous areas. Simultaneously, developing security technology should be prioritized to enhance consumer trust in online financial services.

***Fourth,*** training and raising awareness about Fintech are indispensable. It is necessary to develop specialized training programs in Fintech for students and professionals in the finance sector to prepare a high-quality workforce for this field. Additionally, organizing communication campaigns to raise consumer awareness of the benefits and risks of Fintech services is also an important task.

***Fifth,*** promoting innovation is a key factor in the development of the Fintech sector. The government and organizations need to support incubator and accelerator programs for Fintech startups, facilitating the realization and development of innovative ideas. At the same time, encouraging research and development of new technologies will enhance competitiveness and innovation within the industry.

***Sixth,*** it is necessary to promote the application of new technologies such as blockchain, artificial intelligence (AI), and big data to optimize business processes and enhance customer experience.

***Finally,*** fostering international cooperation is also an important solution. Opportunities should be created for Vietnamese Fintech companies to participate in global networks, share experiences, and learn from developed markets. At the same time, seeking foreign investment partners will help enhance the financial and technological capabilities of domestic startups.

In summary, by implementing these solutions, Vietnam can create a favorable environment for the sustainable development of the Fintech sector, contributing to the robust transformation of the digital economy in the future.

**References:**

*CFTE (2021), Fintech, Fintech Unicorns. Available at https://blog.cfte.education.*

*Department for International Trad (2019), UK FinTech State of the Nation.*

*Grennan, Jillian, FinTech Regulation in the United States: Past, Present, and Future (August 31, 2022). Available at SSRN: https://ssrn.com/abstract=4045057 or http://dx.doi.org/10.2139/ssrn.4045057*

*Hyperlead (2023), Fintech Vietnam Startups Map 2022.*

*Vo Tien Loc (2024), The Fintech Market in Vietnam: Current Situation and Solutions, Economic and Forecasting Review.*

*Zhibin Tao, Jiaxiao Chao (2022), Research on the Impact of Fintech on China's Banking Industry, Conference: 2022 International Conference on Computer Science, Information Engineering and Digital Economy (CSIEDE 2022), DOI:10.2991/978-94-6463-108-1_61.*

# EXPERIENCE FROM SOCIAL INSURANCE FUND MANAGEMENT MODELS IN THE WORLD

**MSc. Nguyen Thuy Chi***

**Abstract:** ***The effective administration of social insurance funds is a critical priority to safeguard workers' rights, encourage broader participation in social insurance schemes, and ensure the long-term sustainability of both the fund and the broader social security system. In the context of Vietnam's dynamic economic integration and development, there is an increasing need to reform and strengthen the social insurance fund management framework, with a focus on achieving sustainability, equity, and operational efficiency. To meet these objectives, it is essential for Vietnam to draw on the experiences of other countries, adopting advanced management practices while tailoring them to its unique socio-economic conditions. Therefore, this study examines five key social insurance fund management models implemented in various nations, including European countries, the United States, Canada, Japan, Poland, and Chile, with the aim of extracting valuable lessons to enhance the effectiveness of Vietnam's social insurance fund management system.***

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## 1. Introduction

Vietnam's social insurance system has been established and has made significant strides over time. These achievements are evident in the continuous expansion of insurance coverage and the enhanced quality of service delivery. Furthermore, the system is undergoing ongoing refinements, particularly in pension scheme reforms, to ensure the sustainability of the social insurance fund while extending greater support to vulnerable populations. One notable milestone in this process is the enactment of Social Insurance Law No. 41/2024/QH15 (the 2024 Social Insurance Law), which incorporates several critical reforms aimed at enhancing the flexibility and humanitarian focus of social insurance policies. These changes are intended to broaden social insurance participation and ensure long-term benefits for workers, ultimately contributing to the overarching goal of achieving comprehensive social security and equitable insurance access for all citizens.

Despite these advancements, existing research on Vietnam's social insurance system highlights several challenges. Participation rates, particularly in voluntary social insurance, remain low due to high contribution requirements relative to average income levels and limited public awareness of the benefits of social insurance. Additionally, demographic pressures from an aging population and labor market volatility are increasingly straining the financial stability of the social insurance fund. Without effective reforms, the risk of future fund imbalances is likely to intensify. Consequently, Vietnam must implement comprehensive reforms, encompassing the expansion of insurance coverage, the adjustment of contribution and benefit structures, and the enhancement of fund management efficiency.

In the context of these necessary reforms, it is essential for Vietnam to learn from global best practices by examining advanced models of social insurance fund management. This study aims to analyze and compare different models in order to extract valuable lessons and recommend suitable pathways for Vietnam's social insurance system. The models under review include the Pay-as-you-go (PAYG) model, the Fully Funded model, the Mixed System model, the Notional Defined Contribution (NDC) model, and the Public Pension Reserve Fund (PPRF) model.

By evaluating these models, the research seeks to provide evidence-based policy recommendations to strengthen the sustainable management of Vietnam's social insurance fund. The selected case studies feature countries with advanced and stable social insurance management systems, such as Germany, Sweden, Canada, the United States, and Japan, alongside nations that have undergone systemic social insurance reforms, such as Chile and Poland.

## 2. Advanced Social Insurance Fund Management Models in the World

### *2.1. Pay-as-you-go (PAYG) Model*

The Pay-as-you-go (PAYG) model is one of the most widely implemented frameworks for managing social insurance funds globally. This model operates on the principle of collecting money from the current workforce and employers to fund immediate payouts to retirees and or beneficiaries.

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A distinctive characteristic of the PAYG model is that it does not require a significant accumulation of initial reserves, thereby reducing the financial burden on both governments and workers during the implementation of social insurance systems. This is due to the fact that the model functions on the basis of "working individuals supporting retirees", where contributions collected from active workers are directly allocated to fund current pension and benefit payments. As a result, the PAYG model operates on a continuous contribution-benefit cycle without the need to establish long-term reserves or invest in financial assets such as stocks and bonds, thus mitigating risks associated with market fluctuations. This system is relatively straightforward to implement and it is efficient during periods of young population, with a higher ratio of contributing workers to retirees. Under these circumstances, a consistent flow of contributions can sustain pension payments without necessitating large reserves.

However, despite its advantage in initial capital, the PAYG model is highly dependent on maintaining a favorable ratio of contributors to beneficiaries. As populations age, the number of retirees increases while the working population declines, thereby placing the system at risk of financial imbalance. A decline in the number of contributors places pressure on the fund, and if contributions become insufficient to cover the rising number of beneficiaries, deficits will arise. In response, governments may be forced to increase contribution rates or reduce pension benefits, which could undermine both financial and social stability. If the government resorts to using the state budget to address deficits, it may need to raise taxes or reduce spending in other areas, negatively impacting economic growth and social welfare. Additionally, younger generations in an aging society might face increased contribution requirements alongside the possibility of receiving reduced retirement benefits, which could erode public trust in the system and hinder progress toward achieving universal social security. Furthermore, the PAYG model is susceptible to economic fluctuations. During periods of slow economic growth, revenue for PAYG-managed funds can decline while pension payment demands remain constant or even increase. Since contributions are income-based, economic downturns marked by business closures, rising unemployment, and wage stagnation can result in reduced inflows to the fund. Inflation further exacerbates these challenges, as rising living costs necessitate higher pension payments to retirees while contributions stagnate. Economic instability also limits the government's capacity to provide additional financial support to social insurance funds when needed. To mitigate the challenges posed by an aging population, governments managing PAYG-based social insurance funds often adopt various measures. These may include raising the retirement age to extend contribution periods, implementing hybrid systems that combine PAYG with fully funded schemes and encouraging immigration to increase the labor force and rebalance the contributor-beneficiary ratio. Nevertheless, enhancing labor productivity remains a fundamental solution as higher incomes lead to increased contributions, thereby strengthening the fund's financial stability.

Many European nations, including Germany, France and Italy use the PAYG model to manage their social insurance funds. France's social security system is recognized as one of the most comprehensive and advanced globally, offering a wide range of social benefits including pensions, unemployment support, and healthcare. The country's social insurance fund is managed through the PAYG model, wherein contributions from employees and employers are allocated to cover pension payments and other benefits for current retirees.

A key factor that contributes to the stability of France's social insurance fund is the retirement age, which is currently set at 62, although variations exist depending on factors such as the duration of contributions and specific occupational conditions. Individuals who have completed the required contribution period can retire at 62 without facing pension reductions, while those with insufficient contribution years may need to work additional years to qualify for full benefits. Contribution rates, which are determined as a fixed percentage of salaries, are subject to periodic adjustments based on economic conditions and government policy. Employers also contribute a similar amount.

However, like many other nations, France faces significant challenges associated with population aging, which has disrupted the balance between contributors and beneficiaries. To address these challenges, the French government has introduced reforms, including gradually raising the retirement age and adjusting contribution rates to counteract the effects of population aging.

Italy also employs the PAYG model to manage its social insurance fund. Despite having a well-established social insurance system, Italy faces similar challenges related to an aging population, leading to potential imbalances between contributors and beneficiaries. To ensure long-term sustainability, the Italian government has implemented several key reforms. One notable measure is the incremental increase in the retirement age, which has been rising by one month annually since 2012 and is expected to reach 67 by 2029. The government also incentivizes older workers to remain employed beyond the standard retirement age by offering higher pension benefits for extended work periods and implementing policies to support older workers in the labor market. Additionally, contribution and benefit levels have been adjusted flexibly to reflect changing economic and demographic conditions in order to maintain a sustainable balance between contributors and beneficiaries.

Germany, another country that employs the PAYG model, faces similar demographic challenges despite its robust social insurance system. As a result, the German government has taken measures such as increasing the retirement age and periodically adjusting contribution and benefit levels to ensure the continued stability and sustainability of the social insurance fund.

***2.2. Fully Funded Model***

The fully funded model is a social insurance fund management approach designed to secure workers' retirement benefits. Unlike the Pay-as-you-go (PAYG) system, contributions made under this model are not immediately used to pay current beneficiaries. Instead, they are accumulated over time and invested to generate returns. When contributors retire, they receive benefits derived from the funds they have built up throughout their working years.

In this model, social insurance contributions are professionally managed and invested in financial assets such as stocks, bonds, real estate, and other investment instruments. The goal is to increase the fund's value through investment returns, ensuring that it grows over time and retains its purchasing power, thus safeguarding workers' future benefits.

A key advantage of this model is the reduction of dependency on the future generation to cover retirees' benefits. Each worker receives retirement payments from their own accumulated savings rather than relying on current contributors. The model's reliance on investment returns further enhances the fund's financial stability by growing it over time. In addition, because contributions are systematically accumulated and invested, the fully funded approach strengthens the long-term financial foundation of the social insurance system.

However, implementing the fully funded model presents some challenges. A substantial initial fund is required to create a sufficient capital base for effective investments and returns, which can be an obstacle for low-income or developing economies. Moreover, the success of this model depends on the efficiency of fund management. Poor investment decisions could lead to deficits, thereby undermining workers' benefits.

Investment-related expenses must also be taken into account. Managing a fully funded social insurance fund incurs costs, including fees for professional fund management services and financial transactions. These expenses are deducted directly from the fund, which can impact its overall value if not carefully managed.

Countries with a focus on long-term financial sustainability and accumulated fund management principles often adopt variations of the fully funded model based on their unique economic and social structures. Chile, for instance, pioneered the adoption of this model in 1981 through a system based on individual retirement accounts. In this model, workers contribute to personal accounts managed by professional fund management companies.

In the United States, social insurance fund management also follows the fully funded approach. Workers can either manage their own retirement funds or entrust professional financial institutions to invest on their behalf. Popular retirement investment vehicles, such as 401(k) plans and Individual Retirement Accounts (IRAs), allow workers to grow their savings by investing in stocks, bonds, and other financial instruments. This system not only safeguards retirement benefits but also fosters a culture of long-term saving and investment.

Singapore's Central Provident Fund (CPF) operates on a similar principle. CPF is a mandatory savings scheme requiring contributions from both employees and employers. These funds are then prudently invested in low-risk assets, such as government bonds, real estate, and stable stocks. Due to disciplined management and effective investment strategies, the CPF has consistently delivered sustainable benefits for retirees while maintaining financial stability.

Thus, the fully funded model represents a sophisticated approach to social insurance fund management. Its key strengths lie in providing stable retirement benefits and utilizing investment returns to enhance the fund's value. Nevertheless, its successful implementation depends on securing substantial initial capital and employing effective, low-risk investment strategies to minimize financial vulnerabilities. With careful planning and sound investment management, the fully funded model can contribute significantly to the development of a sustainable and resilient social insurance system.

***2.3. Mixed System Model***

The Mixed System represents an advanced approach to social insurance fund management, mixing elements of both the Pay-As-You-Go (PAYG) and Fully Funded models. Under this hybrid framework, a portion of the fund is allocated for immediate pension payments in line with the PAYG model, while the remainder is invested to generate long-term returns following the Fully Funded approach.

This dual strategy is designed to reduce the financial pressure associated with an aging population while maximizing the advantages of each model. By leveraging the PAYG method to secure short-term liquidity and the Fully Funded model to strengthen long-term resources, the Mixed System balance the current obligations and future growth. However, administering this model is complex, requiring sophisticated coordination between government regulatory bodies and financial institutions to ensure seamless fund management. Transparent regulations, financial oversight mechanisms, and effective risk management practices are essential to protect workers' rights and maintain the stability of the social insurance fund.

Countries including Sweden and Canada have successfully implemented the Mixed System, creating resilient and adaptable social insurance frameworks that cater to workers' present and future needs.

In Sweden, the Mixed System is particularly successful in promoting equity between generations of workers. The PAYG component ensures that retirement benefits for current pensioners are funded by active workers' contributions, thereby maintaining consistent cash flow and financial stability. This setup ensures the distribution of financial risks across generations, mitigating the impact of demographic shifts, such as an aging population. Simultaneously, the Fully Funded portion allows a segment of the pension fund to be invested in various financial assets, including stocks and bonds, which enhances the overall value of the pension fund, potentially increasing the benefits that retirees receive.

The system's design balances short-term stability with long-term growth, fostering cooperation between generations and ensuring the benefit of both current and future workers. By reducing the burden on any single generation, Sweden's model effectively maintains fairness and sustainability in its social insurance fund management.

Canada has also successfully adopted the Mixed System to address the challenges posed by an aging population. By integrating PAYG and Fully Funded elements, Canada has built a flexible and enduring social insurance system that helps alleviate financial pressures on the fund as the demographic structure shifts toward an older population. This approach strengthens the system's resilience, ensuring that retirement benefits remain secure while preserving financial sustainability over the long term.

***2.4. Notional Defined Contribution (NDC) Model***

The Notional Defined Contribution (NDC) model is a pension fund management system in which each worker maintains an individual account. Retirement benefits are determined based on the total contributions made to the account during the worker's career and the projected length of their retirement. This model promotes transparency and fairness by allowing workers to monitor their contributions and understand how their pension benefits will be calculated. As a result, it increases confidence in the pension system while raising awareness of the importance of contributing consistently to the social insurance fund. Moreover, the transparency associated with this model mitigates financial risks as workers can easily observe how the fund is managed and allocated.

However, the NDC model also presents some challenges. Unlike systems that rely on investments, the NDC model does not capitalize on investment opportunities to grow the fund's value. Additionally, the sustainability and effectiveness of the model may be influenced by government policies and administrative capacity. Workers may also experience pressure to increase their contributions to achieve their desired retirement income.

One successful example of NDC model implementation is Poland. Before transitioning to this system, Poland's pension fund faced serious financial and administrative issues, raising concerns about its ability to meet future retirement obligations. In the early 2000s, Poland began adopting the NDC model by enhancing technological infrastructure, training administrative personnel, and educating the public on the model's advantages. These efforts helped improve transparency, fairness, and stability in the national pension system. Although some challenges remain, the NDC model has strengthened Poland's pension benefits and created a foundation for the long-term sustainability of its social insurance fund. This demonstrates the flexibility and innovation that modern pension management can offer.

***2.5. Public Pension Reserve Fund (PPRF) Model:***

The Public Pension Reserve Fund (PPRF) model is a pension fund management approach where the government oversees and invests the social insurance fund in secure assets such as government bonds, real estate, and large-cap stocks. The primary objective is to generate investment returns that help establish a strong financial base for the national pension system.

By managing social insurance funds under the PPRF model, the government can accumulate significant capital, as both worker and employer contributions are pooled together. This capital can be strategically invested in diversified assets to maximize returns while promoting the long-term stability of the pension fund. Investments typically include low-risk assets including government bonds and shares of well-established corporations, which offer steady returns and reduce the impact of market volatility. This, in turn, enhances financial security for retirees. Furthermore, the government's transparent oversight of the fund increases public trust and supports the sustainable development of the national pension system.

Despite its benefits, the PPRF model has its drawbacks. One major challenge lies in the government's management capacity. Inefficiencies, lack of transparency or poor financial oversight could lead to waste, financial losses, or even corruption. Additionally, excessive reliance on political decision-making may reduce the fund's investment efficiency and expose it to unexpected risks.

Japan's experience with the PPRF model illustrates its potential for success. The country's pension system is managed by the Government Pension Investment Fund (GPIF), one of the largest pension funds globally with assets valued at billions of dollars. Japan's effective implementation of the PPRF model is credited to a prudent investment strategy, portfolio diversification, and strict government oversight. GPIF invests in various stable assets such as government bonds, real estate and equities to optimize returns while minimizing risk. Transparent fund management and professional expertise have enabled GPIF to maintain a stable and sustainable pension system, ensuring that workers receive financial security upon retirement.

**3. Lessons for Vietnam**

Currently, Vietnam manages its social insurance fund under a Pay-As-You-Go (PAYG) system combined with partial investment. This model operates on a "contribute-and-benefit" principle, where contributions from the current workforce are used to pay pensions for retirees. However, with the country's rapidly aging population, the number of active workers contributing to the fund is decreasing, while the number of retirees continues to rise. This demographic shift is creating considerable financial pressure on the social insurance fund. As a result, Vietnam must explore and gradually transition to more advanced, globally proven fund management models. This transition should focus on several key goals:

- Diversifying revenue sources and reducing pressure on the social insurance fund as the population age: To achieve this, Vietnam could consider adopting a mixed system or a fully funded model. These models balance contributions with investments in secure assets to enhance financial stability and reduce reliance on contributions alone.

- Investing in safe and diversified assets: Vietnam should expand its investment portfolio to include government bonds, shares of big enterprises, real estate, and other alternative assets. This strategy would mitigate risks and ensure stable returns, strengthening the financial sustainability of the social insurance fund.

- Enhancing transparency and management efficiency: Strict monitoring mechanisms should be implemented to ensure transparent management and investment practices. Public disclosure of investment activities and fund management will build trust and consensus among workers and stakeholders.

- Strengthening fund management skills: Vietnam should focus on training and developing a highly skilled workforce in fund management. This includes equipping social insurance fund managers with in-depth financial and investment knowledge to ensure effective and sustainable fund operations.

- Applying advanced technology in social insurance fund management: Leveraging modern technology can enhance efficiency, optimize operations and improve accessibility for workers, businesses, and government agencies. Digital transformation in social insurance management will increase transparency, simplify processes and encourage greater participation in the system.

**4. Conclusion**

Vietnam is currently facing ] significant challenges in managing its social insurance system, including limited coverage and concerns over long-term sustainability due to an aging population. Therefore, it is crucial for Vietnam to learn from advanced social insurance management models implemented in developed countries to enhance the efficiency, fairness and resilience of its own system.

This article highlights how various nations have successfully adopted different strategies to improve their social insurance fund management. These strategies include reforming revenue and expenditure policies, expanding system participation, and enhancing transparency. By learning from these experiences, Vietnam can work toward developing an efficient and sustainable social insurance system that better accommodates its aging population and aligns with its broader socio-economic development goals.

However, any transition to new management models must be carried out with flexibility and tailored to Vietnam's specific circumstances. This process requires thorough research, careful policy adjustments and efforts to raise public awareness about the importance and benefits of participating in the social insurance system. Only with a strong social insurance system can Vietnam ensure long-term social security, contribute to sustainable economic development, and improve citizens' quality of life.

**References:**

*Bảo hiểm Xã hội Việt Nam (2024), Tình hình phát triển đối tượng tham gia bảo hiểm xã hội, bảo hiểm y tế, bảo hiểm thất nghiệp (Tính đến hết tháng 6/2024), Hà Nội.*

*ISSA (2018), 10 Global challenges for social sercurity, International Social Security Association, ISBN 978-92-843-0178-2, Geneva, Switzerland.*

*ISSA- Julien Damon, (2016), The socio-economic impact of social security, International Social Security Association Geneva, Switzerland.*

*Kay, Stephen J, and Kritzer (2024), Pension Reform in Latin America: Lessions for International Policymaker, ISBN 978-0792378822, Kluwwer Academic Publishers Boston, America.*

*Louis D. Enoff and Roddy McKinnon, (2011), Social security contribution collection and compliance: Improving governance to extend social protection.*

*Martin Feldstein (2015), Rethinking social insuarance, ISSN 1944-7981, American Economic Association.*

*Mai Thị Dung (2019), Quản lý thu bảo hiểm xã hội đối với doanh nghiệp có vốn đầu tư nước ngoài tại Việt Nam*

*Oxfarm (2021), Tổng quan và phân tích chính sách bảo hiểm xã hội.*

*Palmer Edward (2000), The Swedish Pension Reform model: Framewwork and Issues, Worldbank.*