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Printed at Statistical Publishing House - Publishing Licence: 487/GP-BTTTT date 28/10/2016  
Prints and deposits completed in June, 2023.

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In xong và nộp lưu chiểu tháng 6 năm 2023.

# BLOCKCHAIN IN TAX MANAGEMENT: A PARADIGM SHIFT IN TRANSPARENCY AND EFFICIENCY

PhD. Ha Van Sang\* - Assoc.Prof.PhD. Ly Phuong Duyen\*

**Abstract:** *The traditional tax management system faces numerous challenges, including complexities in data handling, lack of transparency, and difficulties in combating fraud and tax evasion. Blockchain technology has emerged as a disruptive force with the potential to revolutionize tax management by introducing transparency, immutability, and efficiency. This paper explores the applications of blockchain in tax management, highlighting its benefits, challenges, and potential future developments. It also discusses relevant case studies and explores the implications of blockchain adoption for tax authorities, businesses, and individuals.*

• Keywords: *blockchain, tax management.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Hệ thống quản lý thuế truyền thống phải đối mặt với nhiều thách thức, bao gồm sự phức tạp trong xử lý dữ liệu, thiếu minh bạch và khó khăn trong việc chống gian lận và trốn thuế. Công nghệ chuỗi khối đã nổi lên như một lực lượng đột phá với tiềm năng cách mạng hóa việc quản lý thuế bằng cách mang lại tính minh bạch, tính bất biến và hiệu quả. Bài viết này khám phá các ứng dụng của chuỗi khối trong quản lý thuế, nêu bật những lợi ích, thách thức và tiềm năng phát triển trong tương lai của nó. Bài viết cũng thảo luận về các nghiên cứu điển hình có liên quan và khám phá ý nghĩa của việc áp dụng chuỗi khối đối với cơ quan thuế, doanh nghiệp và cá nhân.

• Từ khóa: *chuỗi khối, quản lý thuế.*

## 1. Introduction

Tax management is a complex and vital function for governments and businesses. However, traditional tax management systems often struggle with issues such as data integrity, transparency, and combating tax evasion. In recent years, blockchain technology has emerged as a groundbreaking solution with the potential to revolutionize tax management practices.

Blockchain technology, at its core, is a decentralized digital ledger that records transactions across multiple computers or nodes. Each transaction, or "block" is linked together in a chronological

and immutable chain, ensuring transparency and preventing tampering. Additionally, blockchain incorporates the use of smart contracts, which are self-executing contracts with predefined rules and conditions. These contracts automatically enforce compliance and facilitate seamless interactions between parties, eliminating the need for intermediaries.

In the context of tax management, blockchain offers several compelling applications. It can streamline tax reporting and compliance processes, automate identity verification and authentication, enhance auditing and transparency, optimize supply chain and invoice management, and facilitate cross-border transactions and taxation.

This paper aims to explore the applications, benefits, challenges, and future developments of blockchain technology in tax management. It will delve into case studies showcasing successful implementations of blockchain in tax systems. Additionally, it will address the implications of blockchain adoption for tax authorities, businesses and individuals.

## 2. Overview of blockchain technology

### Key concepts

*Decentralization:* Blockchain operates on a decentralized network of computers or nodes, eliminating the need for a central authority or intermediary. This peer-to-peer network ensures that no single entity has complete control over the

\* Academy of Finance; email: [sanghv@hvtc.edu.vn](mailto:sanghv@hvtc.edu.vn); [lyphuongduyen@hvtc.edu.vn](mailto:lyphuongduyen@hvtc.edu.vn)

system, promoting transparency and trust.

*Distributed Ledger Technology (DLT):* Blockchain utilizes a distributed ledger, which is a replicated and synchronized digital record of transactions. Each participant in the blockchain network maintains a copy of the ledger, ensuring that updates are propagated and agreed upon by consensus.

*Blocks and Chains:* Transactions are grouped into blocks, which are cryptographically linked together in a chronological order, forming a chain of blocks. Each block contains a unique identifier, a timestamp, and a reference to the previous block, creating an immutable record of transaction history.

*Consensus Mechanisms:* Blockchain employs consensus mechanisms to validate transactions and achieve agreement among network participants. Common consensus algorithms include Proof of Work (PoW), Proof of Stake (PoS), and Practical Byzantine Fault Tolerance (PBFT).

*Cryptographic Security:* Blockchain relies on cryptographic techniques to ensure the security and integrity of transactions. Digital signatures, hash functions, and encryption are used to verify the authenticity of participants, protect data from tampering, and secure transactions.

*Smart Contracts:* Smart contracts are self-executing agreements with predefined rules and conditions encoded within the blockchain. These contracts automatically execute transactions when specific conditions are met, eliminating the need for intermediaries and enhancing the efficiency of contractual interactions.

#### ***Characteristics of Blockchain:***

*Immutability:* Once a transaction is recorded on the blockchain, it cannot be altered or deleted. The distributed nature of the ledger ensures that any changes require consensus from a majority of participants, making the blockchain highly resistant to tampering and fraud.

*Transparency:* Blockchain provides transparency by allowing all participants to view and verify transactions recorded on the ledger. This transparency enhances trust, accountability, and auditability, as any participant can validate the integrity of the blockchain's data.

*Security:* Blockchain employs advanced cryptographic techniques to secure transactions and prevent unauthorized access or tampering. The

decentralized nature of the network and consensus mechanisms make it challenging for malicious actors to manipulate the data.

*Efficiency:* Blockchain eliminates the need for intermediaries, streamlining processes and reducing costs associated with traditional centralized systems. The automation and self-execution of smart contracts enhance transaction speed and accuracy.

*Scalability:* Blockchain technology faces scalability challenges due to the increasing size of the blockchain and the computational requirements of consensus algorithms. However, advancements such as layer-two solutions and sharding are being explored to address scalability concerns.

### **3. Applications of blockchain in tax management**

Blockchain technology offers numerous promising applications in tax management.

One significant application is in tax reporting and compliance. Blockchain can streamline the process of collecting, verifying, and storing tax-related data, ensuring accuracy and reducing the potential for errors or fraud. Through smart contracts, tax obligations can be automatically calculated and enforced based on predefined rules, eliminating manual processes and improving compliance rates.

Identity verification and authentication is another area where blockchain can enhance tax management. Blockchain-based digital identities can provide a secure and tamper-resistant method of verifying the identity of taxpayers, businesses, and tax authorities. This enables efficient and reliable authentication, reducing the risk of identity theft and fraud in the tax system.

Blockchain technology also enhances auditing and transparency in tax management. The immutable nature of blockchain records ensures that transaction histories are transparent and easily auditable. Tax authorities can access real-time, accurate, and tamper-proof data, simplifying the auditing process and enhancing the ability to detect irregularities or discrepancies.

Supply chain and invoice management can benefit from blockchain in tax management as well. By integrating blockchain into supply chain processes, tax authorities can trace transactions and validate the accuracy of invoices and receipts. This enables efficient tracking of goods and services, ensuring accurate taxation and minimizing the risk of tax fraud or evasion.

Cross-border transactions and taxation can be significantly improved through blockchain technology. Blockchain facilitates the transparent recording of cross-border transactions, enabling real-time visibility into international financial flows. Smart contracts can automate tax calculations and ensure compliance with tax regulations across different jurisdictions, simplifying the complexities of cross-border taxation.

Furthermore, blockchain technology has the potential to eliminate tax fraud and evasion. The transparent and immutable nature of blockchain records reduces the possibility of hiding or manipulating transactions.

These applications demonstrate the transformative potential of blockchain technology in tax management. By leveraging blockchain's transparency, security, and efficiency, tax authorities, businesses, and individuals can benefit from streamlined processes, improved compliance, enhanced accountability, and a fairer tax ecosystem.

#### 4. Benefits of blockchain in tax management

*Enhanced Transparency and Accountability:* Blockchain provides a transparent and immutable record of transactions, enabling tax authorities, businesses, and individuals to access and verify tax-related data in real time. This transparency promotes trust and accountability by ensuring that all parties have access to the same information and can verify its accuracy. Additionally, the decentralized nature of blockchain reduces the reliance on a central authority, mitigating the risk of manipulation or fraud.

*Increased Efficiency and Cost Reduction:* Blockchain streamlines tax processes by automating tasks and eliminating the need for intermediaries. Smart contracts enable self-executing agreements, automating calculations, tax assessments, and compliance enforcement. This automation reduces manual errors, paperwork, and the associated administrative costs. Moreover, the streamlined processes enabled by blockchain can expedite tax filing and refund procedures, reducing delays and improving overall efficiency.

*Improved Compliance and Accuracy:* Blockchain's transparent and tamper-resistant nature improves compliance rates by providing an auditable and traceable record of transactions. Smart contracts can automatically enforce tax obligations, ensuring that taxpayers meet their responsibilities accurately and in a timely manner. The automation

and accuracy of blockchain reduce the likelihood of errors or intentional misreporting, enhancing overall compliance within the tax system.

*Strengthened Security and Fraud Prevention:* Blockchain's cryptographic security features protect tax-related data from unauthorized access and tampering. The decentralized nature of the blockchain network makes it highly resistant to hacking or data breaches. Additionally, the immutability of blockchain records prevents retroactive changes to transaction histories, reducing the risk of fraud and ensuring the integrity of tax data. This enhanced security instills trust and confidence in the tax system.

*Improved Revenue Collection:* The transparency and accuracy offered by blockchain technology can lead to improved revenue collection for tax authorities. By ensuring that all transactions are properly recorded and accounted for, blockchain reduces the opportunity for tax evasion or underreporting. Real-time tracking and validation of cross-border transactions also facilitate accurate taxation of international transactions, minimizing revenue leakage and optimizing tax collection.

#### 5. Challenges and considerations

*Regulatory and Legal Frameworks:* The integration of blockchain in tax management requires the development of appropriate regulatory and legal frameworks. Clarifying the legal status of blockchain-based transactions, addressing jurisdictional challenges, and ensuring compliance with existing tax laws and regulations are crucial considerations. Governments and regulatory bodies need to establish clear guidelines and standards to facilitate the adoption of blockchain while maintaining the necessary oversight and control over tax-related activities.

*Scalability and Performance:* Blockchain networks, particularly public blockchains, face scalability and performance limitations. As the number of transactions and participants increases, the network can experience congestion and slower transaction processing times. This presents a challenge when dealing with the high volume of tax-related transactions. Implementing solutions like layer-two scaling solutions and optimizing consensus algorithms are essential for overcoming scalability challenges and ensuring that blockchain can handle the demands of tax management at scale.

*Privacy and data protection:* While blockchain offers transparency, it also raises concerns

about privacy and data protection. Tax-related information often contains sensitive personal and financial data, requiring careful considerations regarding data privacy and protection regulations. Striking the right balance between transparency and privacy is crucial to maintain public trust in the tax system and comply with data protection laws.

*Integration with legacy systems:* Many tax management systems currently in use are based on legacy infrastructure. Integrating blockchain with existing systems and processes can be a complex undertaking. Ensuring seamless integration, data migration, and interoperability between blockchain and legacy systems is a critical challenge that needs to be addressed to leverage the full benefits of blockchain in tax management.

*Education and skill development:* The successful adoption of blockchain in tax management requires a workforce that is knowledgeable and skilled in blockchain technology. Training tax professionals, auditors, and IT personnel on blockchain concepts, implementation, and best practices is necessary to effectively leverage the technology. Developing educational programs and initiatives to foster blockchain expertise within tax authorities and organizations is vital for a smooth transition.

*Collaboration and standardization:* Collaboration between tax authorities, businesses, and technology providers is essential to drive the adoption of blockchain in tax management. Establishing industry-wide standards, protocols, and interoperability frameworks will promote consistent practices and facilitate the exchange of tax-related information across different blockchain networks. Collaborative efforts can also help address common challenges, share best practices, and ensure a harmonized approach to blockchain implementation in tax management.

## 6. Case Studies

### 6.1. Estonia's e-Residency and blockchain tax system

Estonia's e-Residency program and blockchain tax system have gained international recognition for their innovative approach to digital governance and tax management. The e-Residency program, launched in 2014, allows non-residents to establish a digital identity and access various e-services provided by the Estonian government. This digital identity, built on blockchain technology, enables

individuals to establish and manage businesses remotely, including fulfilling tax obligations.

The blockchain tax system implemented in Estonia leverages the distributed ledger technology to streamline tax processes and enhance transparency. Through the use of blockchain, tax authorities can access real-time, immutable records of transactions, enabling efficient auditing and reducing the risk of fraud or misreporting. Taxpayers can conveniently file taxes online using their secure digital identities, eliminating the need for extensive paperwork and reducing administrative burdens.

One notable aspect of Estonia's blockchain tax system is its simplicity and user-friendliness. The system automatically calculates taxes based on the transactions recorded on the blockchain, making tax compliance easier and more accurate. Additionally, the blockchain tax system facilitates faster tax refunds, reducing delays and improving cash flow for businesses and individuals.

Estonia's e-Residency and blockchain tax system offer several benefits. They promote digital entrepreneurship, attracting international businesses and talent to Estonia's ecosystem. The transparency and efficiency of the blockchain tax system improve compliance rates and enhance the accuracy of tax reporting. Furthermore, the secure digital identities provided by e-Residency ensure the authenticity of taxpayers and reduce the risk of identity theft and fraud.

### 6.2. Australian tax office's blockchain pilot projects

The Australian Tax Office (ATO) has been actively exploring the potential of blockchain technology through its pilot projects. One notable initiative is the ATO's collaboration with the Australian Border Force (ABF) to test blockchain for secure and efficient international trade and supply chain management. The pilot project aims to enhance the visibility and traceability of goods as they move across borders, enabling real-time monitoring and verification of trade transactions. By leveraging blockchain's decentralized and immutable nature, the ATO and ABF seek to streamline customs processes, reduce paperwork, and mitigate the risk of fraud and illegal activities in cross-border trade.

### 6.3. Other global initiatives and pilot programs

United States Internal Revenue Service (IRS): The IRS has been actively exploring blockchain technology for tax purposes. In 2020, the IRS included



a question about virtual currency transactions on its tax form, indicating its focus on monitoring and taxing cryptocurrency activities. The agency is also investing in blockchain analytics tools to enhance its ability to track and identify tax evasion related to cryptocurrencies.

**South Korea National Tax Service (NTS):** The NTS has launched a blockchain-based project called "Smart Tax Administration" to improve tax compliance and transparency. The initiative aims to integrate blockchain technology into various tax-related processes, such as issuing and managing tax invoices, tracking transactions, and verifying income and expenditure records. By leveraging blockchain's tamper-proof and transparent features, the NTS seeks to enhance the efficiency and accuracy of tax administration.

**Sweden Tax Agency:** The Swedish Tax Agency has conducted pilot projects to explore the use of blockchain in tax management. One notable pilot involved testing blockchain for real estate transactions. By using blockchain, the agency aimed to streamline the process of recording and verifying property-related transactions, reducing administrative burdens, and enhancing transparency in the real estate market.

**Singapore Inland Revenue Authority (IRAS):** The IRAS is actively exploring blockchain technology for tax-related initiatives. In collaboration with several private sector partners, the IRAS has piloted blockchain-based systems for digital tax invoicing and goods and services tax (GST) refunds. These pilot programs aim to leverage blockchain's transparency and immutability to simplify tax processes, reduce fraud, and enhance the efficiency of tax administration.

**United Arab Emirates (UAE) Ministry of Finance:** The UAE Ministry of Finance has initiated pilot projects to explore the use of blockchain in tax-related activities. One such project involves leveraging blockchain technology to enhance the efficiency and transparency of the VAT refund process for tourists. By implementing blockchain, the ministry aims to simplify and expedite VAT refund procedures, providing a seamless experience for international tourists while ensuring compliance with tax regulations.

These global initiatives and pilot programs demonstrate the diverse applications of blockchain technology in tax management. These initiatives

serve as valuable learning experiences and pave the way for the widespread adoption of blockchain in tax systems globally.

## 7. Conclusions

Blockchain's applications in tax management are diverse and impactful. From tax reporting and compliance to identity verification, auditing, supply chain management, and cross-border transactions, blockchain streamlines processes, enhances transparency, and improves accuracy. It simplifies tax calculations, reduces manual errors, and automates enforcement, leading to increased compliance rates and improved revenue collection.

Despite its potential, the adoption of blockchain in tax management does present challenges and considerations. Regulatory frameworks, scalability, privacy, integration with legacy systems, education, and collaboration need to be addressed to ensure successful implementation. Governments, tax authorities, and industry stakeholders must work together to establish clear guidelines, standards, and interoperability frameworks to leverage the full benefits of blockchain in tax management.

Global initiatives and pilot programs around the world showcase the growing interest and progress in implementing blockchain in tax systems. Countries like Estonia, Australia, South Korea, Sweden, Singapore, and the UAE have taken proactive steps to explore blockchain's potential and have witnessed positive results in enhancing tax administration and compliance.

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# JUST ENERGY TRANSITION PARTNERSHIP AND POLICY IMPLICATIONS FOR VIETNAM

PhD. Nguyen Binh Duong\*

**Abstract:** Vietnam is currently undergoing a significant energy transition, with a growing emphasis on renewable energy sources and energy efficiency measures. An arrangement between industrialized and developing nations including Vietnam known as a Just Energy Transition Partnership (JETP) allows the former to finance the latter's switch to renewable energy. Grants, low-interest loans, and investments from the public and commercial sectors all contribute to this funding. This paper analyses the Vietnam's energy transition; key targets of Vietnam's JETP Agreement also the current situation of Vietnam's power industry. Although many changes in recent years, the Vietnam's renewable energy weight in the total energy production is still limited. In this context, this paper analyses policy implications for Vietnam to participate more efficiently the in the JETP.

• Keywords: energy, JETP, Vietnam.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Việt Nam hiện đang trải qua quá trình chuyển đổi năng lượng quan trọng, trong đó ngày càng chú trọng đến các nguồn năng lượng tái tạo và các biện pháp sử dụng năng lượng hiệu quả. Một thỏa thuận giữa các quốc gia công nghiệp hóa và đang phát triển bao gồm cả Việt Nam được gọi là Đối tác chuyển đổi năng lượng công bằng (JETP) cho phép nước thứ nhất tài trợ cho việc chuyển đổi sang năng lượng tái tạo của nước thứ hai. Các khoản tài trợ, cho vay lãi suất thấp và đầu tư từ khu vực công và thương mại đều đóng góp vào quỹ này. Bài viết này phân tích quá trình chuyển đổi năng lượng của Việt Nam; các mục tiêu chính của Hiệp định JETP của Việt Nam cũng như tình hình hiện tại của ngành điện Việt Nam. Mặc dù có nhiều thay đổi trong những năm gần đây nhưng tỷ trọng năng lượng tái tạo của Việt Nam trong tổng năng lượng sản xuất vẫn còn hạn chế. Trong bối cảnh đó, bài viết này phân tích hàm ý chính sách để Việt Nam tham gia hiệu quả hơn vào JETP.

• Từ khóa: năng lượng, JETP, Việt Nam.

## Introduction

The term “energy transition” describes the worldwide transition away from the existing reliance on fossil fuels and toward renewable

energy sources like sun, wind, hydropower, geothermal, and biomass. The transition is necessitated by the need to promote sustainable development and combat climate change by reducing carbon emissions. A complex combination of technological, economic, social, and political forces is present during the shift. To enable the integration of renewable energy sources, sizable expenditures are needed in renewable energy infrastructure, such as solar and wind farms, and modernization of existing energy systems. Changes in consumer behavior, patterns of energy consumption, and energy policies are also involved. Vietnam has significant potential for renewable energy development. However, there are still challenges to the energy transition in Vietnam, including a lack of investment in renewable energy. In this context, this paper aims to analyze the Just Energy Transition Partnership (JETP) and implications for Vietnam. The first part presents an overview of Vietnam current energy transition. The second part introduces the key targets of Vietnam's JETP. The next part analyses current situation of power industry in Vietnam and the final part suggests policy implications for Vietnam to participate more efficiently the in the JETP.

\* Foreign Trade University, Hanoi; email: duongnb@ftu.edu.vn

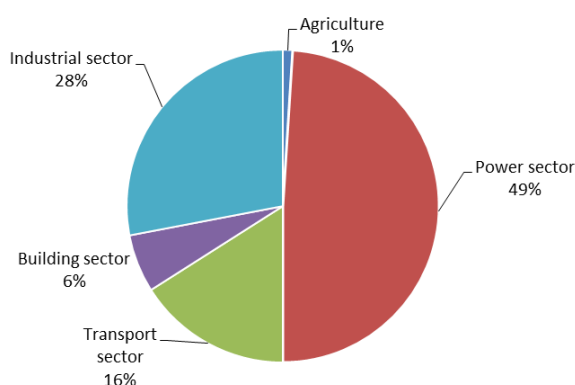
## 1. Vietnam's carbon emission and energy transition

### 1.1. Vietnam's carbon emission

Vietnam is one of the fastest-growing economies in Southeast Asia, and as such, it faces significant energy challenges.

According to the International Trade Agency (ITA, 2022), Vietnam's carbon dioxide (CO<sub>2</sub>) emissions from fuel combustion reached approximately 246 million metric tons in 2019, making it one of the top 20 emitters globally. Vietnam's emissions have been growing rapidly in recent years, with an average annual growth rate of 7.5% between 2000 and 2019. Vietnam's energy sector has traditionally relied heavily on coal-fired power plants, which account for approximately 38% of the country's electricity generation.

**Figure 1: Energy related CO<sub>2</sub> emissions by sector, 2019**



Source: Hannah Ritchie & Max Roser, 2020

Besides that, the Climate Transparency Report of Vietnam in 2020 also illustrated that, the CO<sub>2</sub> emissions of Vietnam is definitely on such a growing trends, leading is the Power Sector with ≈20% growth rate. Many policies, which have been marked as effective and critical, has been enacted in each sector such as in transportation with phase out fossil fuel cars & heavy-duty

vehicles and modal shift in ground public transport; in building sector with near zero energy new buildings and renovation of existing buildings; in industrial sector with highly energy efficiency; and in land use sector with net-zero

deforestation. However, it is of great importance to note that, some policies related to Coal phase-out in the power sector do not yet work.

### 1.2. Vietnam's energy transition

Vietnam is currently undergoing a significant energy transition, with a growing emphasis on renewable energy sources and energy efficiency measures. This transition is being driven by a combination of economic, environmental, and geopolitical factors.

One of the main drivers of Vietnam's energy transition is the country's rapid economic growth, which has led to a significant increase in energy demand. In order to meet this demand, Vietnam has been investing heavily in renewable energy sources such as solar and wind power. The government has set a target of increasing the share of renewable energy in the country's electricity mix to 30% by 2030 (Hannah Ritchie & Max Roser, 2020).

Another driver of Vietnam's energy transition is the need to reduce its dependence on imported fossil fuels, which currently account for a significant portion of the country's energy mix. This dependence makes Vietnam vulnerable to fluctuations in global oil and gas prices, as well as supply disruptions.

Vietnam is also facing significant environmental challenges, including air pollution and climate change. The country's energy transition is aimed at reducing greenhouse gas emissions and improving air quality. In addition to promoting renewable energy sources, Vietnam is also implementing energy efficiency measures to reduce energy consumption and increase energy productivity.

Vietnam has significant potential for renewable energy development, particularly in solar and wind energy. The country has a high solar radiation intensity, particularly in the southern region, and an estimated potential capacity for wind energy of 27 GW. The Vietnamese government has implemented policies to encourage investment in renewable energy, such as feed-in tariffs and tax incentives for renewable energy projects, tax breaks for energy-efficient technologies, and regulations aimed at improving energy efficiency in buildings and transportation.

Despite these efforts, there are still challenges to the energy transition in Vietnam, including a lack of investment in renewable energy infrastructure, limited transmission infrastructure, and issues with land acquisition for renewable energy projects. Additionally, the government has been criticized for its slow pace of implementing policies to support the energy transition.

Therefore, in seeking for support and investment in this issue, on 14<sup>th</sup> December, 2022, Viet Nam and the International Partners Group (IPG) launched a Just Energy Transition Partnership (JETP) on the margins of today's EU-ASEAN summit in Brussels.

## 2. Vietnam's JETP Agreement

### 2.1. Overview of Vietnam's JETP Agreement

On 14<sup>th</sup> December, 2022, Viet Nam and the International Partners Group (IPG) launched a Just Energy Transition Partnership (JETP) on the margins of today's EU-ASEAN summit in Brussels (*Europa, 2022*).

An arrangement between industrialized and developing nations known as a Just Energy Transition Partnership (JETP) allows the former to finance the latter's switch to renewable energy. Grants, low-interest loans, and investments from the public and commercial sectors all contribute to this funding. To assist South Africa, Indonesia, India, Vietnam, and Senegal shift from fossil fuel energy to clean energy while simultaneously addressing social challenges related to their energy transitions, JETPs are a novel funding mechanism.

Between the Socialist Republic of Vietnam and the International Partners Group, a JETP agreement for Vietnam has been made (IPG). The EU, the UK, the USA, Japan, Germany, France, Italy, Canada, Denmark, and Norway make up the IPG. Public and private sector financing will make up the US\$15.5 billion pledged as part of the JETP deal. Over the subsequent three to five years, it is to be mobilized. With \$7.75 billion, public sector finance will make up half of the available funds. This will be given by the nations that have signed the accord, and it should be given on "more favorable terms" than Vietnam might receive on the world capital markets. The

commercial sector will contribute the remaining \$7.75 billion, with the Glasgow Finance Alliance for Net Zero serving as the primary conduit (GFANZ). Keep in mind that this is dependent on securing the public sector financing mentioned above (*Europa, 2022*).

### 2.2. Key targets of Vietnam's JETP Agreement

*Lower the amount of emissions in the electricity industry*

Prior to the agreement, Vietnam intended to reach its peak year for metric tons of carbon dioxide equivalent (MtCO<sub>2</sub>e) emissions into the atmosphere in 2035. According to the JETP agreement, the objective for that peak has been reduced from the original 240 MtCO<sub>2</sub>e to 170 MtCO<sub>2</sub>e by 2030.

*Reduce the number of coal-fired power plants in Vietnam*

By the JETP agreement, the IPG hopes to assist Vietnam in getting off of coal. In particular, they intend to reduce the system's peak coal-fired energy output from 37 Gigawatts (GW) to 30.2 GW. Vietnam currently has over 27GW of coal power under construction or in the planning stages, according to a study from the Global Energy Monitor (GEM) from April 2022. It estimated that just over 22GW was the country of Vietnam's current coal-fired power station production.

*Create a more efficient energy infrastructure and increase the use of renewable energy*

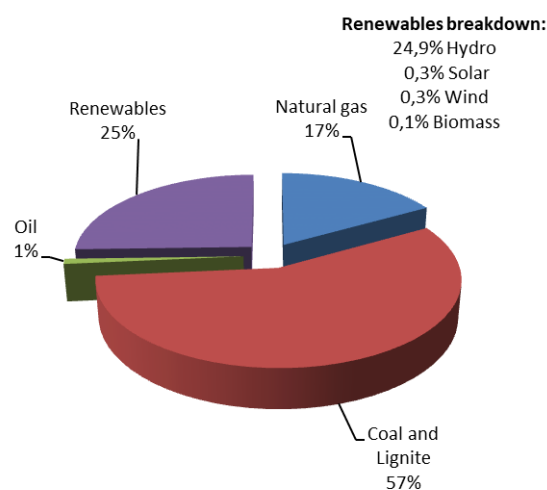
By 2030, Vietnam expected that 36% of its energy production would come from renewable sources. The JETP, however, aims to raise that percentage to 47%. This might be among the most important aspects of this agreement. Vietnam has made significant progress in the development of renewable energy. In instance, it has Southeast Asia's highest installed solar power capacity. Lackluster grid infrastructure, however, has made it difficult to move electricity from where it is produced to where it is needed.

## 3. Current situation of power industry in Vietnam

### 3.1. The Power Generation

For each kilowatt hour of electricity, 521g CO<sub>2</sub> are emitted in Vietnam. The emissions-intensity has increased nearly 25% between 2014 and 2022, largely resulting from the ramp up of coal fired power generation

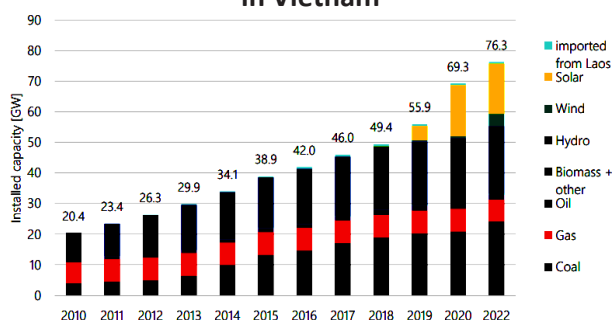
Figure 2: Energy structure in Vietnam, 2022



Source: World Bank Data, 2022

At the same time, the power sector faces several challenges in the medium and long-term development: the growth of the power demand, need for large investment capital and the environmental and climate concerns. In 2019, the Vietnam’s energy production is as follows: Coal and lignite takes into account 57%, natural gas and oil equals to 17 and 1% respectively. Renewable energy takes into account 24,9 % (World Bank Data, 2022).

Figure 3: Evolution of energy production in Vietnam



Source: World Bank Data, 2022

Viet Nam’s electricity system in 2020 has a total installed capacity of about 76 GW today including rooftop solar power. The system has

historically been dominated by coal, natural gas, and hydro power but since 2019 almost 16.5 GW of solar power has been installed, of which around 7.8 GW is rooftop PV. Additionally, 4 GW of wind power is in operation.

It can be seen that, during the 3 recent years, in accordance with the rising demand for power, the solar & wind energy have been installed at such a rapid rate but the coal-fired has also increase used. In 2022, the output of solar has been triple and output of wind for the first time reach 5GW. This seem to be a good sign for the energy transaction, however, it is still slower than the increase in power demand. Besides that, the hydropower almost remained the same, signifies that this source has nearly reached its limit. Therefore, the resources abundance is important searching for alternatives of coal - fired (World Bank Data, 2022).

### 3.2. Renewable resources capacity in Vietnam

Of the renewable resources, the large and medium-scale hydropower has been mostly utilized, but the small- scale one has not yet been invested. However, in comparison with other resources, this investment is not the top efficient options to replace the coal-fired.

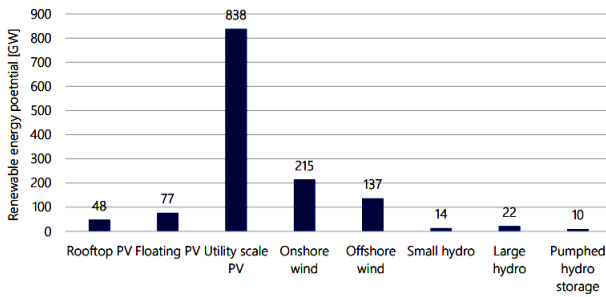
In terms of, wind power, with a coastline of 3,260 km, Viet Nam has large potential for offshore wind power. Topography of Viet Nam is also suitable for the onshore wind power. The wind power has just integrated into the national grid energy and plays good roles. According to a recent study of International Renewable Energy Agency (Irena), the investment cost for this power seems to be lower than operating coal plants. The installation and operation of the wind turbines cannot be done by individuals; therefore, the government and private power institution should consider investing in the turbines farm in replacement of each coal-fired plant. However, it still depends on the weather for a constant output.

The solar plants and farms have been more utilized in recent years and have proved its efficiency. With an aim to replace the coal energy, this is an optimum option.

Moreover, the solar panel can be installed more easily and with lower cost by individual or

household or small organizations, on the rooftop for instance, therefore, the solar can be more effective in dealing with the increasing demand of power, as it has been previously used to reduce peak load and grid impact.

**Figure 4: Vietnam’s renewable energy potential**



Source: International Trade Administration, 2022

At present, most biomass plants in Vietnam are CHP biomass projects which are used for self-generation in sugar mills. It is noted that the scalability and stability of this resource is not certain and also the output is not significant enough, considering other resources, so in the near future, the bagasse and biomass methods, still need more study.

The hydro powers and biomass are not considered to be optimum options to reach JETP targets, only the output winds and of solar - PV will be analyzed besides the coal-fired plants.

*The output of coal-fired plants*

In 2022, there are nearly 39 coal-fired plants under operation in Vietnam and located along the country. According to the EVN, the output of coal - fired on 2022 was 108 TW. There are around 15 plants having output under 330MW, 11 plants in 440 - 1000 MW and 13 plants over 1000 MW (ITA, 2022)

The majority of low output plants was built for a long time ago, quite old and need to be replaced, while some other recently built in the province that has few power options. The medium ones are installed mostly during 2007 - 2017 and the large output plants are recently built.

*The output of winds power plants*

There are around 130 winds power plants in Vietnam recently, but mostly are located in the

Central or South Central of Vietnam due to the characteristics of the resources. The total output of wind power in 2022 is ~ 8,3 TW. The majority of the wind plants has the output under 100MW. The plants that have medium output are KOSY Bac Lieu (400MW), Hai Phong (600 MW) and Ea Nam (400 MW) (ITA, 2022)

*The output of solar plants*

The total output of solar plants in 2022 equals ~ 27,18 TW, account for approximately 142 power plants. The majority of the solar plants have the output under 60 MW. There are 18 plants have output ranging from 100 MW to 300 MW and 5 plants (Loc Ninh 1, 2, 3, Xuan Thien Ea Sup, Trung Nam Thuan Nam, Dau Tieng 1, 2 and BIM 1, 2, 3 Ninh Thuan) have outputs from 330 MW - 900MW. (ITA, 2022)

**4. Policy implications for Vietnam in alignment with the key targets of JETP**

**4.1. Gradually replacement of the low output and old coal-fired power plants by 2030 with wind - solar plants & PV technologies**

The Vietnam’s objective aims to replace 80% of coal-fired low output plants and 20% medium output in 2030. In comparison with the output of coal-fired plants, the renewable energy outputs in Vietnam currently can only account for the low - output coal plants. The measurements are proposed for each area as below:

For Northern midland & Red River Delta: Urgently replaced the coal-fired with solar installation on rooftop, bare ground and mountainside. Set target of planned land fund for solar parks/ farms in every province. Bring down the coal plants when the renewable energy capacity in the province exceeds that of the coal plants. For Northern highlands: Focus investment on wind turbines on the mountain range and installation solar panels on suitable mountain sides or ground. For the Coastal regions: transit 20% of coal-fired output to onshore wind energy by invested in turbines installation, every province should have an area for renewable energy. Develop solar parks in sparsely populated area. For southwest and Southern: zoning solar & PV technologies parks area in every province

#### **4.2. Create incentives for private services and individuals solar panel installation**

Big Cities & Suburbances should encourage private or personal installation of solar panels on rooftop via media, require new public & private buildings, towers, etc. & gradually by phases with the established ones to install solar panels. Industrial cities & provinces should requires every factories & industrial area to installed solar panel on rooftop and promote solar energy services with favor policies & economics incentives.

#### **4.3. Focus on developing utility scale solar areas and invest on small - scale hydro plants & maximize the capacity of hydro plants**

According to commitments of the country, 4 regions in the country should be planned to developing the utility scale solar areas in 2030. Vietnam should do research, develop or purchase utility scale solar technologies from other countries with the support of JETP; plan and develop key projects on utility scale solar areas for 2030 with an aim to generate 10% of total national output. Vietnam should also invest on small - scale hydro plants & maximize the capacity of hydro plants. The small - scale hydro plants can be used to deal with the increasing demand on site to lower the pressure on the main grid power. However, this is should not be the main focus of the investment. Finally, the country should focus on applying the new technologies and latest innovation to increase the maximum output of large & giant hydro plants via upgrade, renovation and build new infrastructure.

#### **4.4. Research deeply into biomass and other energy sources**

Many developed nations in EU have successfully developed the biomass power plants. Further research and study on the methods, technologies, and successful cases should be made to adapt and create a suitable solution to Viet Nam.

Although the nuclear power is not a renewable resource, it has very low CO<sub>2</sub> emission and large output. Many countries have already used this energy model to play as the main sources of

energy. Viet Nam used to have plans to develop the nuclear power plants, but later cancels due to dangerous potential risks. However, this resource should not be ignored but, instead, study more deeply on the technologies, risk management and safety measurements, scales and so on to apply in Viet Nam when it is required.

#### **Conclusion**

Vietnam is also facing significant environmental challenges, including air pollution and climate change. The country's energy transition is aimed at reducing greenhouse gas emissions and improving air quality. In addition to promoting renewable energy sources, Vietnam is also implementing energy efficiency measures to reduce energy consumption and increase energy productivity. The energy transition has the potential to increase energy security, reduce reliance on imports of fossil fuels, and create new jobs. In addition, by lowering air pollution, greenhouse gas emissions, and the overall ecological footprint of energy production, it is anticipated to benefit both human health and the environment. Vietnam has significant potential for renewable energy development, particularly in solar and wind energy. However, the development of renewable energy is still limited. This fact requires appropriate policies to support the country participating more efficiently in the JETP.

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# STATE MANAGEMENT OF POVERTY REDUCTION FOR ETHNIC MINORITIES IN THE MOUNTAINOUS AREA IN KHANH HOA

Ho Van Mung\*

**Abstract:** Reducing poverty is a crucial goal of both the Vietnamese Government and Khanh Hoa province. In recent years, Khanh Hoa has made significant strides in economic development and poverty reduction. However, the rates of poverty and near-poverty households in the two mountainous districts of Khanh Son and Khanh Vinh remain alarmingly high, which is a cause for concern. One of the reasons for this problem is the limitations in the state management of poverty reduction for ethnic minority households in these two districts. This article aims to analyze and evaluate the current state of poverty reduction management in the mountainous areas of Khanh Hoa, highlighting the advantages, limitations, and causes while proposing solutions to enhance the effectiveness of poverty reduction management in the province.

• Keywords: poverty, poverty reduction, state management, Khanh Hoa, Khanh Son, Khanh Vinh.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Giảm nghèo là mục tiêu quan trọng của cả Chính phủ Việt Nam và tỉnh Khánh Hòa. Trong những năm gần đây, Khánh Hòa đã có những bước tiến đáng kể trong phát triển kinh tế và xóa đói giảm nghèo. Tuy nhiên, tỷ lệ hộ nghèo và cận nghèo ở 2 huyện miền núi Khánh Sơn và Khánh Vĩnh vẫn ở mức cao đáng báo động. Một trong những nguyên nhân dẫn đến vấn đề này là do công tác quản lý nhà nước về giảm nghèo đối với hộ đồng bào dân tộc thiểu số ở 2 huyện này còn hạn chế. Bài viết này nhằm phân tích, đánh giá thực trạng công tác giảm nghèo ở miền núi Khánh Hòa, chỉ ra những ưu điểm, hạn chế, nguyên nhân đồng thời đề xuất các giải pháp nhằm nâng cao hiệu quả công tác giảm nghèo trên địa bàn tỉnh.

• Từ khóa: nghèo đói, giảm nghèo, quản lý nhà nước, Khánh Hòa, Khánh Sơn, Khánh Vĩnh.

## 1. Introduction

Khanh Hoa is a region in the South Central Coast area consisting of 9 districts, towns, and cities. It includes 2 mountainous districts, Khanh Son and Khanh Vinh, that face difficult economic conditions. According to a survey of poor and near-poor households, there were 6,968 poor households in

Khanh Hoa province by the end of 2020, accounting for 2.09% of the population, with the majority being ethnic minorities (63.12%). The poverty rate is particularly high in the mountainous districts of Khanh Son (24.28%) and Khanh Vinh (23.09%).

To improve the management of poverty reduction for ethnic minority households in the mountainous areas of Khanh Hoa, it is necessary to fully understand the poverty situation and state management of poverty reduction. This includes analyzing the advantages, limitations, and effectiveness of state management of poverty reduction, such as leadership and direction, the promulgation of policies and mechanisms, and the results of poverty reduction efforts.

## 2. Theoretical foundation of poverty

### 2.1. Definitions of poverty

According to the World Bank, poverty is the inability to maintain a minimum standard of living, which is determined by a minimum kcal requirement of 2100 kcal/person/day and a food basket of 40 products. This minimum requirement is referred to as the welfare index.

The International Labor Organization, the Swedish Agency for International Cooperation and Development, and the United Nations Development Program (2004) established three

\* Institute of Economics, Ho Chi Minh National Academy of Politics; email address: hvmung.khanhhoa@gmail.com



criteria for estimating poverty lines: (i) The poverty line should be based on the minimum necessary material goods, food, and other necessities; (2) Food should make up the majority of the poverty line, as it is the most essential need; and (3) The minimum requirement of kcal per person/day should be 2100 kcal, and the food basket should include the cheapest, most common foods with a minimum amount of nutrients. Other foods can be added to improve their quality of life.

Poverty is defined as a state where a portion of the population cannot meet basic human needs, which are determined by the level of socio-economic development, style, and customs of each region, and that are recognized by society (The Government of Vietnam, 2015).

## 2.2. Poverty Classification

### (1) Absolute Poverty

The World Bank defines absolute poverty as "living at the very edge of existence... struggling to survive in terrible deprivations and in a state of neglect and indignity beyond imagination." These are the people who bear the brunt of poverty, marked by the fortunate life of the intelligentsia (The World Bank, 2016).

### (2) Relative Poverty

In affluent societies, poverty is defined based on an individual's social situation. Relative poverty is the insufficient provision of material and immaterial resources to people of certain social classes relative to that society's affluence.

## 2.3. Multidimensional poverty measures in Vietnam

The Ministry of Labour, Invalids, and Social Affairs aims to switch from a one-dimensional poverty calculation plan to a multidimensional one, as outlined in the 2015 master plan approved by the government (The Government of Vietnam, 2015). The following four guiding principles have been established for this conversion. First, it is the responsibility of the government, political parties, the state, the entire political system, and society as a whole to continuously enhance people's material and spiritual lives, increase access to basic social services, and ensure social security. Second, the multidimensional poverty measurement method must be appropriate for the level of socio-economic development and the country's ability to mobilize and balance resources in each period. Third, the goal

is to ensure every person has a minimum standard of living and access to basic social services gradually. Last, international cooperation will be strengthened to improve the poverty measurement approach in a multidimensional direction, in line with the general international trend, in terms of experience, techniques, and resources.

**Table 1: Multidimensional Poverty Indicators in Vietnam**

Dimension	Measurement Index	Deficiency Threshold	Point
Education	1.1. Adult education level	Households with at least one member aged 15 years or older who did not graduate from lower secondary school and is not currently attending school	10
	1.2. School attendance status of children	Households with at least one school-age child (between 5 and 15 years old) who is not currently attending school	10
Medical	2.1. Access to medical services	Households where someone is sick but does not seek medical care (illness is defined as an illness/injury severe enough that the person has to stay in one place and must have a caregiver at their bedside or is absent from work/school and cannot attend normal operations)	10
	2.2. Health Insurance	Households with at least one member aged 6 years or older who currently does not have health insurance	10
Housing	3.1. Housing quality	Households living in unstable or simple houses (housing is divided into four levels: permanent house, semi-permanent house, unstable house, and simple house)	10
	3.2. Housing area per capita	Household area per capita is less than 8 square meters	10
Living conditions	4.1. Source of domestic water	Households that do not have access to hygienic water sources	10
	4.2. Latrine	Households that do not use hygienic latrines	10
Access to information	5.1. Use of telecommunications services	Households with no members using phone and internet subscription	10
	5.2. Assets for access to information	The household has none of the following assets: TV, radio, computer; and cannot hear the commune/village radio speaker system	10

Source: Ministry of Labour, Invalids and Social Affairs (2015)

### 3. Poverty status in mountainous areas of Khanh Hoa province

#### 3.1. Population and ethnic characteristics of Khanh Vinh and Khanh Son districts

Khanh Hoa province has two mountainous districts, namely Khanh Son and Khanh Vinh, with a total of 21 communes and towns located in Region III and Region I in ethnic minority and mountainous areas in the first phase of the 2021-2025 period (approved under Decision No. 861/QĐ-TTg, dated June 4, 2021 by the Prime Minister). Khanh Son district and Khanh Vinh district are two out of 74 poor districts in 26 provinces.

Khanh Vinh district has a diverse population of 39,823 people, with 15 ethnic groups living together. Khanh Son district has a population of 25,387 people from 13 ethnic groups.

#### 3.2. Socio-economic characteristics in mountainous areas of Khanh Hoa province

##### (i) Khanh Vinh district

From 2015 to 2020, the district's economy grew at an average of 9.3% per year, with total production value expected to reach 867,448 million VND by 2020. This represents a 310,540 million VND increase from 2015. The economic structure has shifted towards industries and services. However, the restructuring has been slow and industries have not yet reached the target set by the Congress resolution. Per capita income is expected to increase by 90.3% compared to 2015 to reach about 23.6 million VND per year, which is equal to 32.46% of the general income of the province (Khanh Vinh District People's Committee, 2021).

In terms of social progress, education and training have developed steadily with schools and classes established and distributed to meet learners' needs. Investment in facilities and equipment has improved, and teachers have been trained to exceed standards, resulting in gradual improvements in quality. Population and family planning policies, as well as healthcare, have made significant progress. Medical facilities have modern equipment and staff with improved professional qualifications and ethics. Preventive health work, food hygiene, and safety have been enhanced, and national target programs on health have been implemented effectively. Cultural activities, sports, and information communication have contributed to improving the spiritual and quality of life of the people.

##### (ii) Khanh Son district

From 2016 to 2020, the district's economic sectors are projected to have an average total production value of 8.56%. The agricultural sector is expected to increase by 8.47%, industry-handicraft by 6.22%, and trade-services and tourism by 10.23%. The economic structure of the district is expected to shift towards "Agriculture-services, tourism-industry, handicrafts" by 2020, with the agricultural sector accounting for 71.65%, trade-services and tourism accounting for 17.07%, and industry-handicraft accounting for 11.28%. The agricultural sector is the leading role in economic development due to the utilization of local climate and soil advantages (Khanh Son District People's Committee, 2021).

Education and training have improved with investments in facilities and teaching equipment. The medical network has been consolidated and perfected, improving the quality of medical examination and treatment, especially through the use of health insurance cards. National health target programs, including expanded vaccination and malaria prevention, are well implemented, and disease surveillance activities are always maintained. Population and family planning are focused, with efforts to raise awareness among all classes of people. Finally, cultural, information, and sports fields have positive changes, with many cultural and artistic activities organized throughout the district.

#### 3.3. Poor and near-poor households in mountainous Khanh Hoa province

**Table 2: Poverty reduction situation of Khanh Hoa province in 2020**

TT	District, town, city	Early 2020			End of 2020		
		Total number of households	Number of poor households	Ratio (%)	Total number of households	Number of poor households	Ratio (%)
1	Nha Trang	111,774	499	0.45	111,995	299	0.27
2	Orange line	36,124	471	1.30	36,425	245	0.67
3	Ninh Hoa	61,875	1,184	1.91	62,116	792	1.28
4	Van Ninh	36,021	1,236	3.43	36,234	730	2.01
5	Dien Khanh	38,305	450	1.17	38,472	318	0.83
6	Cam Lam	31,06	789	2.54	31,453	469	1.49
7	Khanh Vinh	9,715	3,194	32.88	10,259	2,369	23.09
8	Khanh Son	6,968	2,32	33.30	7,190	1,746	24.28
	<b>Total</b>	<b>331,842</b>	<b>10,143</b>	<b>3.06</b>	<b>334,144</b>	<b>6,968</b>	<b>2.09</b>

Source: Khanh Hoa Department of Labour, Invalids and Social Affairs (2021)

**Table 3: Shortage rate of basic social services of poor households in mountainous areas of Khanh Hoa province in 2020**

Index of lack of basic social services of poor households	The basic social service deprivation index of poor households is the ratio of this index among poor households to the total number of poor households	
	Khanh Son	Khanh Vinh
Job	1820 (51.56%)	1744 (36.10%)
Dependents in the household	818 (23.17%)	994 (20.58%)
Nutrition	990 (28.05%)	694 (14.37%)
Health Insurance	6 (0.17%)	36 (0.75%)
Adult education level	1,339 (37.93%)	1,523 (31.53%)
School attendance status of children	277 (7.85%)	427 (8.84%)
Housing quality	651 (18.44%)	764 (15.81%)
Housing area per capita	1,315 (37.25%)	2,120 (43.88%)
Source of living water	195 (5.52%)	516 (10.68%)
Hygienic toilet	2,704 (76.60%)	3,524 (72.95%)
Using telecommunications services	1,787 (50.62%)	1,910 (39.54%)
Means for accessing information	410 (11.61%)	340 (7.04%)

Source: Khanh Hoa Department of Labour, Invalids and Social Affairs (2021)

#### 4. Current situation and challenges in poverty reduction management in mountainous areas of Khanh Hoa province

##### 4.1. Current situation

Regarding leadership and direction, the province has issued documents to promptly direct the implementation of poverty reduction in the area during the 2016-2020 period. Furthermore, policies such as education support and 100% support for purchasing health insurance cards for poor and near-poor households are still relevant and continue to be applied. The province has been actively implementing the National Targeted Program on Sustainable Poverty Reduction for the 2016-2020 period according to Decision 1722/QD-TTg dated September 2, 2016 by the Prime Minister. Additionally, the province issued Decision No. 3646/QD-UBND dated November 28, 2016, which promulgates the implementation plan for the National Target Program on Sustainable Poverty Reduction in the 2016-2020 period in Khanh Hoa province.

In addition to the national target programs of the Central Government, Khanh Hoa province has many specific policies to accelerate the results of poverty reduction in the province, including policies in the two mountainous districts of Khanh Vinh and Khanh Son.

The province has provided educational support policies for 33,328 subjects by allocating a budget of 85,581 million VND, as stated in Resolution No. 17/2012/NQ-HDND dated June 28, 2012 of the Provincial People's Council and Decision 2908/QD-UBND dated October 31, 2014 of the Provincial People's Committee. The province has also implemented policies regarding tuition fee exemptions, reduction, and study expenses for pupils and students, with a total funding of 251,786 million VND, according to Decree No. 86/2015/ND-CP dated October 2, 2015 of the Prime Minister. The government's Decree 116/2016/ND-CP dated July 18, 2016, provided rice and lunch support to 2,164 students from extremely difficult communes and villages, which cost 7,297 million VND. Additionally, the province has implemented other support policies for 19,185 pupils and students, with a budget of 25,185 million VND.

In terms of healthcare, the province fully covers the premium payment for health insurance cards for impoverished and nearly impoverished households, as well as ethnic minorities residing in areas with challenging socio-economic conditions, and those living in areas with extremely challenging socio-economic conditions. Additionally, other ethnic minorities are also supported. In the span of 2016 to 2019, the province has provided medical examinations and treatments for more than 130,000 patients coming from poor and near-poor households. This has resulted in exemptions and reductions in costs that total over VND 72,000 million. Furthermore, food support has also been provided for patients coming from poor households and near-poverty households, amounting to over 10,000 million VND.

In recent years, the province has implemented policies to support preferential credit, utilizing credit capital from the Bank for Social Policies to serve households with low-income, near-poverty, and living in poverty. The positive results of lifting policy beneficiaries out of poverty and investing in production and business have contributed to sustainable poverty reduction in the locality.

For the purpose of providing assistance with electricity bills, the province has formulated a policy to aid underprivileged households and policy households, with a total allocation of 62,233 million VND. The distribution of funds is as follows: 12,041

million VND in 2016, 16,219 million VND in 2017, 12,684 million VND in 2018, 11,549 million VND in 2019, and 9,374 million VND in 2020.

The province has implemented policies to help with production development, livelihood diversification, and poverty reduction. In 2016, the province partnered with the National Target Program on New Rural Development and the Socio-Economic Development Program in ethnic minority and mountainous areas to support 710 impoverished households. The program had a total budget of 6.3 billion VND, funded by the provincial budget. In 2017, the provincial budget allocated 14,023 million VND to support localities in developing production and increasing income for residents. This support included converting 499 hectares of crops, creating production linkages tied to agricultural product consumption, and purchasing 48,209 breeding animals for concentrated breeding. The province also invested 4,495 million VND in supporting 391 households to develop production in ethnic minority and mountainous areas. Additionally, 1,000 poor households received 1,000 breeding calves worth approximately 18,000 million VND from the Thien Tam Fund - Vingroup. The Khanh Hoa Branch of Industry and Trade Bank supported 200 cows worth about 2,500 million VND in 2016 under a program to support breeding cows for poor households. Vietcombank provided support for 100 cows worth approximately 1,500 million VND.

The province has implemented policies aimed at providing legal aid to the underprivileged and ethnic minorities in impoverished districts, communes, and villages with special difficulties. This is in accordance with Decision No. 32/2016/QĐ- Circular dated 08/8/2016 of the Prime Minister, which has allocated a total budget of 1,180 million VND for this purpose.

In terms of housing support, the province disbursed loans to 72 households in 2016 under Decision No. 33/2015/QĐ-TTg.

To support labor and employment, the province is continuing to carry out the project "Vocational Training for Rural Workers until 2020". This project has organized 104 vocational training classes for rural workers and supported vocational training for 2,963 individuals. Moreover, 05 professional training courses for 459 commune-level cadres and civil servants, and 03 vocational training classes for

35 people with disabilities were conducted, with the professions of baking, bamboo and rattan, massage and acupuncture.

The province also implements projects approved by the Provincial People's Committee to support workers in general and ethnic minority workers in particular. These projects aim to create jobs, maintain and expand employment, and ensure social security.

Khanh Hoa is a province that effectively manages its own budget when it comes to poverty reduction resources. Unfortunately, the resources set aside for this program are limited and do not fully meet its needs. Despite efforts to mobilize local resources for poverty reduction within the province, it remains challenging and continues to fall short in helping the impoverished. This has resulted in unsustainable aid, particularly in communes with ethnic minorities. Refer to Table 5 below for the funding allocated for the implementation of the Poverty Reduction Program from 2016-2020.

**Table 4: Funding for the poverty reduction program implementation in the 2016-2020 Period**

YEAR	TYPE OF CAPITAL (Billions dong)			TOTAL
	Budget	Capital of the Social Policy Bank	Sources of mobilization	
2016	114.4	1.855	42	2,011,400
2017	217,383	755, 14	15	987,527
2018	184.161	954.932	83,370	1.222,463
2019	521,859	1.361,700	82,271	1,965,830
2020	374,764	34,712	249,777	659,253

Source: Khanh Hoa Department of Labour, Invalids and Social Affairs (2021)

#### **4.2. Challenges in poverty reduction management in mountainous areas of Khanh Hoa province**

According to the analysis of poverty reduction, there are still limitations in the state management of poverty reduction for ethnic minority households in the mountainous areas of Khanh Hoa province.

Firstly, the province lacks a separate overall plan for poverty reduction for ethnic minority households in the mountainous areas of Khanh Hoa province. Although Khanh Hoa province has issued many directives on poverty reduction, including poverty reduction for the mountainous areas of Khanh Hoa province, there has been no specialized resolution or document on poverty reduction for ethnic minority households in the mountainous areas of Khanh Hoa province.

*Secondly*, the province has a limited budget for investment resources for poverty reduction for ethnic minority households in the mountainous areas of Khanh Hoa province. Mobilizing resources in localities in the province to reduce poverty is difficult, which does not meet the support needs of the poor, leading to helping the poor escape poverty, but with low sustainability, especially in areas with ethnic minority households. Although Khanh Hoa province has issued many policies related to poverty reduction for ethnic minority households in the mountainous areas, the resources to implement most of these policies are integrated.

*Thirdly*, there have not been any separate studies on poverty reduction in the mountainous areas of Khanh Hoa province. Although poverty reduction, especially for the mountainous areas, has been highly concerned by the province and localities through issuing many directives and policies, the poverty rate is still high. Poverty reduction for ethnic minority households in the mountainous areas has its own characteristics, completely different from poverty reduction in delta, urban areas, especially in issues related to ethnic characteristics, customs, habits, cultural awareness, and culture. However, there have not been any in-depth studies on this issue.

### 5. Some policy implications

*Firstly*, identify economically valuable crops and livestock suitable for local conditions and farming practices.

*Secondly*, guidance on business practices and production methods is extremely important for farmers in general and ethnic minority households in particular. Many households have been provided with funding and production tools but have not been successful in their business, leading to continued poverty. Organizing training courses for agriculture, forestry, and fisheries promotion must be in line with the practical needs of local people.

*Thirdly*, building production models that are suitable for ethnic minority communities is necessary. The reality shows that except for those who give up on their fate, those who work hard but still cannot succeed because they lack knowledge and economic models, such as (i) appropriate demonstration economic models for guidance and dissemination (such as the 1+5 model: one Kinh person who is good at production and five ethnic minority people); (ii) studying and introducing crop varieties and livestock that are suitable and have

high economic efficiency in local production, while having plans and solutions to consume agricultural products for farmers and avoid being forced to sell at low prices; (iii) land allocation and management for ethnic minority households, which is the main means of production, requires effective solutions.

*Fourthly*, the government and Khanh Hoa province need to have specific credit policies for ethnic minority households, supporting 100% of production development loan interest rates, while extending loan terms to develop sustainable economic growth and poverty reduction. In addition, loan conditions should be relaxed to create opportunities for ethnic minority households to access credit sources. Furthermore, credit organizations, government agencies, mass organizations, and associations need to strictly manage credit sources and guide ethnic minority households to use credit sources effectively. Minimize the maximum loan for ethnic minority households for consumer purposes.

### 6. Conclusion

Researching and analyzing the current state of state management in poverty reduction in the mountainous regions of Khanh Hoa province is a crucial task. The research results will help identify the strengths, limitations, and causes, with a particular focus on identifying the "gaps" in state management of poverty reduction. This will enable us to propose more effective solutions for reducing poverty among ethnic minority households in the mountainous areas of Khanh Hoa province.

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# IMPROVING THE QUALITY OF VIETNAM'S ACCOUNTING - AUDIT HUMAN RESOURCES IN THE CONTEXT OF THE INTERNATIONAL ECONOMY

PhD. Bui Thi Hang\* - Tran Ngo Trung Nghia\*\* - Le Doan Nam Anh\*\*\*

**Abstract:** *International economic integration, free trade, and fair competition create many opportunities for the circulation of goods and the free movement of financial flows between countries. That requires financial information to be transparent, reliable, and presented according to standards, not only at the national level but at the regional and global scale. At the beginning of the industrial revolution 4.0, the creation of a new structure of the economy based on high-tech applications, the Internet of Things, artificial intelligence, intelligent robots, and technology. Blockchain technology, cloud computing, digital,... have made a great impact on the cycle and methods of accounting and auditing. To develop human resources for accounting and auditing in sufficient quantity and to ensure quality on the basis of innovation and strengthening of training and retraining; at the same time, combine specialized training and retraining and advanced training to create high-quality human resources. At the same time, the strengthening of international integration, building close links, and mutual recognition between Vietnam and countries in the region, the world, and international organizations.*

• Keywords: *international economic integration, industrial revolution 4.0, human resource development, accounting, auditing.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: *Hội nhập kinh tế quốc tế, tự do thương mại và cạnh tranh bình đẳng tạo ra nhiều cơ hội cho việc lưu thông hàng hóa và tự do chuyển dịch các luồng tài chính giữa các quốc gia. Điều đó đòi hỏi các thông tin tài chính phải minh bạch, tin cậy và được trình bày theo những chuẩn mực, không chỉ ở phạm vi quốc gia mà ở phạm vi khu vực và thế giới. Trong giai đoạn khởi phát của cuộc cách mạng công nghiệp 4.0, với việc tạo ra cấu trúc mới của nền kinh tế dựa trên ứng dụng công nghệ cao, mạng lưới internet kết nối vạn vật, trí tuệ nhân tạo, robot thông minh, công nghệ blockchain, điện toán đám mây, kỹ thuật số,... đã làm ảnh hưởng khá lớn đến chu trình và phương pháp kế toán, kiểm toán. Phát triển nguồn nhân lực về kế toán, kiểm toán đủ về số lượng, đảm bảo về chất lượng trên cơ sở đổi mới và tăng cường công tác đào tạo, bồi dưỡng; đồng thời kết hợp giữa đào tạo, bồi dưỡng chuyên sâu theo chuyên ngành và đào tạo nâng cao học vấn nhằm tạo ra nguồn nhân lực chất lượng cao. Đồng thời, việc tăng cường hội nhập quốc tế, tạo dựng mối liên hệ chặt chẽ, thừa nhận lẫn nhau giữa Việt Nam và các quốc gia trong khu vực, trên thế giới và các tổ chức quốc tế.*

• Từ khóa: *hội nhập kinh tế quốc tế, cách mạng công nghiệp 4.0, phát triển nguồn nhân lực, kế toán, kiểm toán.*

## 1. Introduction

Vietnam's accounting and auditing service market is newly formed, young, and full of potential. This means that the scope of operation of the market is still narrow, the elements of the market have not been fully formed, and the legal corridor for this type of service is still lacking and not really interesting to society.

Along with the deepening economic integration process, the demand for qualified accounting and

auditing human resources in Vietnam is forecasted to increase rapidly in the coming time. Especially when trade liberalization agreements with labor mobility are becoming a reality.

In fact, workers in the field of accounting and auditing are competing to get a suitable job position. Even many workers in this field have not been able to promote their strengths, while the number of bachelors of accounting and auditing training

\* *Academy of Finance*

\*\* *CQ60/21.01CLC \*\*\* CQ60/21.02CLC - Academy of Finance*

every year is still relatively large. Therefore, the requirements set for accountants as well as new accounting and auditing students are more difficult. Thus, right from the time you are in school, you must cultivate theoretical and practical knowledge, improve skills and work experience to meet the needs of the employer.

## 2. Research methods

### *Methods of analysis and synthesis of theories:*

Analysis is the study of different documents and theories by analyzing them into parts to learn deeply about the object. Synthesis is the connection of each side, each part of the information has been analyzed to create a new complete, and profound theoretical system about the object.

*Method of classification and systematization of theory:* Classification is the arrangement of scientific documents according to each side, each unit, and each problem with the same sign of nature, in the same direction of developing the knowledge organization into a system based on the theoretical model that makes the understanding of the subject is more complete.

## 3. Results and discussion

Since its establishment and development up to now, Vietnam's accounting and auditing service market has achieved important achievements. The legal environment is relatively complete and clear, in line with Vietnam's conditions, international practices, principles, and standards. Vietnam has constantly reformed the legal system of accounting and auditing, specifically promulgating the Law on Independent Audit (2011), and the revised Law on Accounting (2015) with the idea that the content contains issues of accounting and auditing in terms of integration. The Government also issued Decision No. 480/QĐ-TTg dated 18/03/2013 approving the "Vietnam Accounting - Auditing Strategy to 2020, vision to 2030"...

With the determination to integrate into the international economy in general and the field of accounting and auditing in particular, Vietnam has created favorable conditions for the formation of a system of accounting and auditing firms. From where there were only 2 accounting and auditing service enterprises in 1991, up to now, the whole country has nearly 240 accounting and auditing service enterprises, of which there are more than 140 audit service enterprises and nearly 100 accounting service enterprises with a revenue of about 5,000 billion

VND/year, contributing to the budget about 700 billion VND/year. Accounting and auditing services not only support businesses in creating economic and financial information in accordance with the law, contributing to economic growth, but more importantly, enhancing publicity and transparency of financial information and healthy national finances.

Accounting and auditing service enterprises play an important role in assisting and advising investors and enterprises on the State's laws, regimes, and financial and accounting institutions, as well as such as making, and recording accounting books, calculating taxes, and making financial statements. Besides, the assessment of international professional organizations also shows that, in recent years, human resources in the field of accounting and auditing in Vietnam have been significantly improved. The quality of training in the field of accounting and auditing is becoming more and more professional. Many students studying in Vietnam have proven their ability through recruitment periods and working processes, not inferior to students trained abroad...

In 2017, many important events in the Accounting - Auditing industry took place, helping these activities go deeper in nature, toward quality and transparency. The Ministry of Finance and the State Securities Commission have strengthened the organization of inspection teams to supervise the quality of audit services, detecting and thoroughly handling many violations. The Ministry of Finance has coordinated with the World Bank to publish the Report on Assessment of Compliance with Standards and Rules in the field of accounting and auditing, accompanied by increasing the organization of seminars on orientation, roadmap implementation process as well as supplementing knowledge about International Financial Reporting Standards in Vietnam. Thereby, further enhancing the confidence of international investors in the financial market in Vietnam.

In 2018 and the following years, positive forecasts about foreign investment growth, strong financial market development, and an increase in the number of listed companies and public companies in mergers and acquisitions. Merger and equitization of state-owned enterprises, restructuring plans of enterprises, especially changes in legal regulations related to accounting and auditing... will continue to create excitement for Vietnam's accounting and auditing market.

In 2018, it is expected that the Government will make a decision regarding the application of International Financial Reporting Standards in Vietnam. This will be the premise for the strong development of Vietnam's accounting-auditing field in the coming years, creating a driving force for deep integration with the region and the world, thereby further enhancing the trust of the Vietnamese government with international investors in the financial market in Vietnam, bringing great opportunities for the independent audit market in Vietnam. Meanwhile, the unified market of accounting and auditing services that are forming in the ASEAN region will also open up new opportunities for the development and unification of the accounting and auditing profession in the region.

The starting stage of the Industrial Revolution 4.0 will create a new structure for the economy, thereby greatly affecting the cycle and methods of accounting and auditing. This industrial revolution is based on a digital technology platform, integrating smart technologies to optimize production processes, business processes, business processes, production methods, including processing processes. management, providing information to the accounting and audit departments. In 2018 brings many opportunities for development to the accounting and auditing field, but also many challenges. As the ASEAN Economic Community begins to move towards the recognition of practicing certificates among countries, the biggest challenge for Vietnamese accountants and auditors is the issue of training and updating international standards to improve the capacity of officials and auditors. In the context of economic development, the legal environment is increasingly demanding, requiring an increase in both the quantity, size, and quality of audit services, audit firms will face difficulties in retaining their services. Key staff, experience, especially those with international certificates, well meet the requirements of large domestic and foreign organizations and corporations.

Besides, Vietnam's market size is still small, not commensurate with the potential and socio-economic growth rate. Although, the number of companies providing accounting and auditing services has increased rapidly, only a few companies have the capacity in terms of scale, scope, and quality of operation. Companies providing accounting and auditing services are focusing on operating in a few large markets such as Hanoi, Ho Chi Minh City, and

other localities, although they have branches, they are not evenly distributed. Auditing firms will face many challenges in enhancing the trust of the public, businesses, and investors in the quality of audit services as well as maintaining and improving the quality of human resources to meet the requirements of domestic and international markets... The competition is not only between companies providing traditional accounting and auditing services but also between non-traditional enterprises and public enterprises. There has been a warning about the risk of shrinking the traditional audit service, especially when Blockchain technology is widely applied in the financial sector. At this point, tech companies like Google and Alibaba are already providing financial and tax advisory services...

#### 4. Conclusion and solution

##### 4.1. Conclusion

With the actual situation in recent years in our country with many great changes in the economic and financial fields, it has posed opportunities for human resources in the accounting and auditing professions but also challenges at the same time not small:

- *Opportunity*

According to forecasts, our country's financial industry this year will have much prosperity in terms of growth, foreign investment, a strong financial market, the number of listed companies, and public companies increase mergers and acquisitions, equitization of state-owned enterprises, and restructuring plans of enterprises. Along with that changes in legal regulations related to the field of accounting and auditing.

- It is expected that the Government will make a decision regarding the application of International Financial Reporting Standards in Vietnam. This will create a premise for strong development in the field of accounting and auditing in Vietnam in the coming years.

- The industrial revolution 4.0 has brought many changes to the accounting industry. Digital technologies are popular and applied by businesses, changing the way they practice financial and accounting operations through the application of electronic words, software for synthesis, data processing, and bookkeeping as well as allowing the implementation of audit methods in a computerized environment.



- *Challenge*

- If Vietnam's human resources are still of low quality, with limited foreign languages, and poor competitiveness, they will not take advantage of opportunities to work in countries in the region in the AEC, due to the requirement for qualified human resources. New capabilities are facilitated in moving within the AEC. Thus, we may lose the opportunity brought by the AEC.

- If the competitiveness is not improved, the jobs that Vietnamese human resources are doing in the country will be competed by higher quality human resources, experience, and better expertise than other countries in the region which can reduce income, and even take away jobs of accounting and auditing human resources in the country.

- If Vietnam's human resources are still of low quality and have low competitiveness, they will only be able to participate in the segment that caters to low-demanding objects and businesses. This creates a vicious cycle of low income, and limited financial resources to reinvest to improve qualifications, on the other hand, because the target customer segment is not very demanding, so human resources themselves. In addition to their own financial resources to raise their qualifications, which is very limited, in a certain sense, they have another obstacle as the motivation for them to improve their qualifications is not really strong enough because their market segment is low-wage, low-paying quality businesses, and organizations.

- We cannot compete sustainably with cheap, low-quality labor, but must aim at a high-quality, high-productivity accounting and auditing workforce that brings a lot of added value. Thus, we can take advantage of opportunities and overcome challenges in the process of globalization that has been taking place more and more deeply. Therefore, we must have practical and effective solutions to improve the quality of the accounting - audit team in the country.

- The scale of many enterprises in the Vietnam market is still small, not commensurate with the potential and economic growth rate of the world. Although currently, the number of companies providing accounting and auditing services has increased rapidly, but only a few companies have the capacity in terms of scale, scope, and quality of operation.

- Accounting firms are often distributed in big cities such as Hanoi, Ho Chi Minh City, etc., but in

localities, although there are company branches of the cities, the amounts are still small and distributed unevenly.

#### 4.2. Solutions

##### a. *Raising awareness of accountants - auditors about accounting services*

According to the World Bank's report on compliance with the standards and rules of the 2016 Accounting and Auditing Standards, "the quality of the financial statements of public interest entities in Vietnam is currently not consistent with best international practices", there are still many shortcomings such as not being updated according to the development of IFRS, financial statements of a number of state-owned organizations and enterprises performing socio-political tasks when preparing and presented in preference to compliance with government-specific financial regulations over accounting standards. Accession to trade and international agreements will increase the demand for high-quality financial reporting. Section II of the ROS also stated the requirement to perceive the quality of the financial statements and the audit indicated that, although the financial statements have been prepared and presented in accordance with VAS and have been audited, the quality is not yet satisfactory. Therefore, it is necessary to have solutions to further strengthen the propaganda about Accounting Services, including providing Accounting Services, using Accounting Services, and controlling the quality of Accounting Services,... especially in terms of integration and Vietnam's commitment to implement the AEC. In order to increasingly provide quality accounting services, it is necessary to strengthen competition in service provision and improve awareness of the legal value of accounting information provided. Quality Accounting Services are a very necessary requirement for subjects related to Accounting Services. Quality control of Accounting Services needs to be based on certain criteria that have been built, in order to evaluate, remedy, and promote the available results.

##### b. *Solutions to develop accounting human resources*

- For current human resources:

Requires each employer, requires each individual to be responsible for cultivating and fostering the mandatory goal of obtaining international certificates in foreign languages and considers this one of the mandatory requirements when qualified to practice.

The annual knowledge test update must also include this mandatory condition.

- For future human resources:

In the program of training institutions, there are basic English and specialized English training content. At the same time, there are commitments and output standards of foreign languages, but in reality, due to many reasons, it is still not as expected and cannot be mastered. Therefore, in the annual certification exam program, it is necessary to include foreign language subjects with requirements at a higher level than current regulations. Moreover, foreign language test questions need to focus on majors, law, problem-solving, etc. In addition, strengthening training in soft skills to be able to apply flexibly to work in the future.

*c. Solutions to develop accounting training units - Accounting Service Enterprises*

In order to help accounting training units - Accounting Service Enterprises overcome challenges and develop strongly and professionally, service quality is increasing, in the coming time, it is necessary to have synchronous following measures:

- Continue to improve and renew the system of legal documents on management of accounting practice: The key issue to improve the quality management of Accounting Services is to choose to build a legal document system, to satisfy meeting the requirements of Vietnam's market economy, in accordance with popular international practices and standards, ensuring high legality and consistency, fully and comprehensively covering all aspects of management of the field of operation. In order to improve the quality management of Accounting Service Enterprises, it is necessary to compile a system of legal documents to satisfy the requirements of the market economy in Vietnam, and also to ensure transparency and consistency with international accounting standards. It is necessary to quickly deploy and bring the issued documents to life. The renewal and improvement of legal documents is regular and continuous work. Promulgated documents must be disseminated, taught, and guided so that the law comes to life. Through that, it is necessary to review and consider old regulations that are no longer suitable with current conditions, and adjust points that are still inconsistent; Summarize the points that are not suitable with the requirements of the market economy and international practices, to supplement the existing documents and issue new documents.

Quickly deploy and put the issued documents into practice. Thereby, amending and replacing the old standards that are no longer suitable for the current conditions and are no longer in accordance with International Accounting Standards. The completion of legal documents is first of all the responsibility of the State agencies, but professional associations and accounting and auditing practitioners must also actively participate in choosing a management model suitable to the real economic situation. Currently, the responsibilities of the State agencies for the management of accounting practice have been clearly defined, but the role of the professional association in auditing has been reduced compared to the past. The Accounting Professional Association needs to pay attention to the improvement of the law on accounting, in order to improve the role of the Accounting Professional Association in the management of accounting practice.

- Training and fostering:

Training centers need to study training programs that are appropriate to practice, actively in the process of building a system of Vietnamese accounting standards, and actively exchange and absorb experiences from students in different countries with developed accounting systems as well as international standard-setting organizations. Training institutions need to research and develop training programs in the process of developing Vietnamese accounting standards and need to learn from countries with developed accounting systems. Thereby bringing the training program in line with reality.

The school's training program in the field of accounting needs to be renewed in the direction of equipping students with knowledge and skills that are both suitable for the current situation of Vietnam and prepare for the prerequisite steps to converge with international accounting. The system of programs as well as teaching materials should be appropriately redesigned and regularly updated with the issued accounting standards.

Integrate the practice certificate in the accounting-audit training program. In order to operate across borders, Vietnamese accountants and auditors who have been granted a Certified Public Accountant (CPA) need to be "upgraded" to the ASEAN Certified Public Accountant (ACPA). At that time, ACPA certificate holders will be eligible to practice in all ASEAN countries without having

to ask for permission, take exams, or just register to practice according to the regulations of that country. Improving the quality of training, aiming for accounting graduates who will graduate with the ASEAN Auditor Certificate: ACPA (replaces the Vietnam CPA's accounting practice certificate). As a result, the country's human resources can easily study and develop our capacity in an international environment.

*d. Solutions with authorities, professional associations of accounting - auditing in Vietnam.*

The authorities need to develop a number of additional accounting standards suitable to Vietnamese practice and international accounting standards. To accomplish this, the leading accounting experts in Vietnam from the Ministry of Finance, the State Bank, professional associations, accounting and auditing service companies, universities, etc. need to cooperate with professional cooperation to develop high-quality accounting standards.

In order to improve the quality of management of accounting and auditing practitioners, professional associations must also have qualified and practical professional staff. Thereby, helping management subjects better understand and do right in their practice activities. Professional associations must develop and create effective management tools such as: Professional advice to help practitioners handle problems; There is a process for direct management of each individual and each member company; There is a software program to support member management; The Association has the means to help promote the profession, helping the accounting and auditing career market to become more and more open. To improve the quality of management, the Professional Association needs staff with full knowledge and capacity in the field to provide professional advice to accountants and auditors to better understand current regulations, build management processes directly with each business, and apply AI 4.0 technology to support efficiency improvement.

Strengthening information and communication activities so that businesses can understand that professional accounting services are a reliable companion for businesses in the process of development, advising businesses to comply with the provisions of the law, maximize benefits, support to protect businesses in disputes with agencies and communities, promote business sustainable development. Carry out propaganda and support

businesses to understand the accounting profession, provide legal advice, become a companion of businesses, and develop together with businesses.

Improving the management capacity of activities of the Vietnam Institute of Chartered Accountants (VICA), the Vietnam Federation of Accountants and Auditors (VAA), and professional organizations of accountants and auditors. The Association ensures the best advice and support for members and accountants, protects the legitimate interests of members, propagates and promotes members and accountants, and supports improving the quality and value of professional accounting services and good compliance with accounting professional ethics. To protect the legitimate interests of members, support to improve the quality and value of accounting services, and comply with professional ethics.

Strengthen training and improve qualification for accountants and accounting practice forces, develop accountant training programs, organize regular training courses and accountant exams, focusing on knowledge of management, law, expertise, and foreign languages, ensuring access to training standards of the ASEAN Federation of Accountants (AFA) and the International Federation of Accountants (IFAC). The Vietnamese state needs to have a roadmap to transfer these things to professional organizations for implementation.

Strengthening the inspection and supervision of the accounting service market, inspecting organizations and individuals showing signs of practicing accounting in contravention of the law, and creating a healthy and equal competition environment in the field of the accounting services market.

The State needs to continue to improve the legal framework for the accounting service market and reform administrative procedures in the direction of reducing administrative procedures for businesses and accountants, in registering to practice accounting. and reduce the alarm mode.

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# SUSTAINABLE DEVELOPMENT OF THE SEA AND ISLANDS TOURISM OF VIETNAM: SITUATION AND SOLUTIONS

PhD. Nguyen Thanh Thao\*

**Abstract:** To develop sea and island tourism, it is necessary that islands are large enough, and all constitutive elements of sea and island tourism products fully converge in these islands. On the basis of analyzing the current situation of three pillars of sustainable development of sea and island tourism, which are: economy, culture - society and environment of the 10 largest islands in Vietnam; the researcher can find out advantages and limitations in the development of sea and island tourism in Vietnam over the past time. Moreover, the article suggests some solutions to promote sustainable development of Vietnam's sea and island tourism in the coming time.

• Keywords: sea and island tourism, sustainable development of sea and island tourism, sea and island tourism products.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Phát triển du lịch biển, đảo cần các đảo phải có không gian đủ lớn và hội tụ đầy đủ yếu tố cấu thành sản phẩm du lịch biển, đảo. Trên cơ sở phân tích thực trạng ba trụ cột phát triển bền vững du lịch biển, đảo đó là: kinh tế, văn hoá - xã hội và môi trường của 10 đảo có quy mô lớn nhất Việt Nam; từ đó rút ra những mặt được và hạn chế trong phát triển du lịch biển, đảo của Việt Nam thời gian qua; đồng thời bài viết đưa ra một số giải pháp nhằm thúc đẩy phát triển bền vững du lịch biển, đảo Việt Nam thời gian tới.

• Từ khóa: du lịch biển đảo, phát triển bền vững du lịch biển đảo, sản phẩm du lịch biển, đảo.

## 1. Current status of Vietnam's coastal island system

The coastal island system is understood as a collection of islands, island clusters and archipelagos distributed on the continental shelf, from the shore to the farthest islands such as: Bach Long Vy, Hon Hai, Bay Canh, Tho Chu, Phu Quoc. In Vietnam, the coastal island system has 2,773 islands with a total area of 1,720 km<sup>2</sup> in which 84 islands with an area of over 1 km<sup>2</sup> with a total area of 1,596 km<sup>2</sup>; there are 24 islands over 10km<sup>2</sup> and 3 islands over 100 km<sup>2</sup>; the rest are small and very small islands.

These islands stretch from the West Gulf of Tonkin to the East of the Gulf of Thailand, mainly concentrated in the coastal waters: the North, the South Central and the South. The provinces with the most islands are: Quang Ninh (accounting for 74.94%), Hai Phong (accounting for 8.76%), Kien Giang (accounting for 5.73%), Khanh Hoa (accounting for 3.82%). (See Table 1).

**Table 1. Number and area of coastal island system in Vietnam by regions**

The whole system of islands						Islands with an area of >1km <sup>2</sup>			
No	Regions	Number of islands	%	Area (km <sup>2</sup> )	%	Number of islands	%	Area (km <sup>2</sup> )	%
1	Northern Coast	2.321	83,7	841,15	48,9	50	59,9	761,20	47,68
2	North Central Coast	57	2,06	14,24	0,83	3	3,6	9,42	0,59
3	Coastal South Central Coast	200	7,21	172,0	9,99	16	19	153,54	9,61
4	Southern Coast	195	7,01	693,46	40,3	15	17,9	672,39	42,12
Total		2.773	100	1720,87	100	84	100	1.596,55	100

Source: Overview of coastal island system, General Statistics Office

Vietnam has the coastal area of over 1 million km<sup>2</sup>, 3 times larger than the land area, accounting for nearly 30% of the East Sea area (the entire East Sea is nearly 3.5 million km<sup>2</sup>), therefore, Vietnam is a country with a high marine index, about 0.01

\* Academy of Finance; email: thanhthaonguyenntt@hvtc.edu.vn

(for every 100km<sup>2</sup> of sea area, equivalent to 1 km<sup>2</sup> of land), 6 times higher than the global average marine index. Therefore, the sea and islands play an important role in the economic development strategy as well as tourism in Vietnam.

To develop sea and island tourism, the islands need to have enough space. Of the 84 islands with an area of over 1 km<sup>2</sup>, there are 33 islands with an area of over 5 km<sup>2</sup> (large and medium) and the remaining 51 islands (accounting for 60.7%). They are mainly situated along the northern coast (59.5%), followed by the South Central Coast and the South.

Vietnam's tourism development strategy to 2030 approved by the Prime Minister on January 22, 2020 clearly defines the solution to develop tourism products such as strongly developing a system of sea and island tourism products that can compete with other countries in the world; especially on sea and island resorts, visiting sea and island landscapes. It is necessary to focus on building sea and island tourism areas of high quality, in large scale, supplementing marine sports and marine ecological tourism products.

## **2. Elements constituting sea and island tourism products**

### ***Resources***

Resources are the most important contributing factors in creating a unique identity for a tourism destination and play a decisive role in creating attraction for tourist markets.

Most of the marine and island resources have material and spiritual values. The elements constituting those values have all gone through long stages of development and accumulated for millions of years. Many scenic spots are obtained thanks to a very long geological tectonic process. Therefore, the human impact on these resources has seriously influenced the socio-cultural values. Once these values have gone away, they will never be regained.

The process of exploiting sea and island resources for tourism development requires comprehensive studies on the specific values of these resources; about the form and structure of the elements constituting those values and their changing trends under the influence of time as well as people's impact.

### ***Single tourism product elements***

The consumption of tourism services by tourists means the process by which tourists enjoy the value of resources. Tourism services are means connecting tourists with the value of the resources. Therefore, tourism services require that through the form and content of their activities, tourism service providers should introduce the specific values of the resource to visitors. Construction works such as hotels, restaurants, amusement parks, tourist activities... make great changes to the structure and physical form of resources. In the process of operation, people use single tourism products, which contribute to revenue for the tourism industry, but have a serious influence on the values of natural resources and the environment.

### ***Natural environment and socio-economic environment***

It can be said that these factors directly affect the quality and sustainability of tourism resources. A clean natural environment is not only beneficial to human health but also helps to make the natural landscape, ecosystems, flora and fauna richer, more diverse and attractive. The socio-economic environment with good economic conditions, good infrastructure and technology, understanding and friendliness of the local community will help visitors feel more secure when coming to the tourism destination. Therefore, the regeneration and improvement of environmental quality must be considered an urgent requirement for sea and island tourist destinations.

### ***Bad climate and weather conditions affecting the sea and island tourism***

These elements include climate change factors that change the rainfall regime; the rise of sea level which causes many risks of flooding; the impact of the epidemic on sea and island tourism. These weather factors have a significant influence on the sustainable development of sea and island tourism.

## **3. The current situation of Vietnam's sea and island tourism in recent times**

### ***3.1. Status of tourists:***

#### ***International tourists***

Along with the investment in developing infrastructure system, technical facilities... the sea and islands tourism of Vietnam has been developing

strongly, reflected in the increasing number of international tourists. Specifically, in the period 2015 - 2019, the growth rate of tourists visiting 10 typical islands reached 22.92%, of which, some island districts have achieved relatively high growth such as Co To island district by 64.5% a year, Ly Son island district by 30.25% a year, Cat Ba by 18.92% a year. The emerging bright spots such as Phu Quy island (Binh Thuan), the number of visitors has grown by 100.48% per year. However, the covid-19 pandemic has had a strong impact on the number of international visitors to Vietnam due to the policies introduced by the government to prevent the wave of disease spread. Therefore, the number of visitors to Vietnam has decreased sharply in 2020 and 2021. But some places are still attractive to tourists such as: Van Don, Cat Ba, Cham Island, Phu Quoc.

**Table 2. Number of international visitors to coastal islands in Vietnam in the period 2015 - 2021**

Unit: Visitors

TT	Name of island, island district	2015	2017	2019	2020	2021
1.	Co To	575	2.054	4.200	3.210	2.102
2.	Van Don	11.900	18.000	25.600	20.658	15.711
3.	Bach Long Vy	200	360	550	409	219
4.	Cat Ba	352.400	477.500	700.500	501.720	210.254
5.	Cu Lao Cham	73.392	86.043	75.352	50.205	28.010
6.	Ly Son	557	1.221	1.603	1.022	408
7.	Phu Quy	43	200	700	511	203
8.	Con Dao	28.915	31.197	33.722	9.020	7.340
9.	Phu Quoc	195.466	318.544	671.896	402.009	300.460
10	Kien Hai	263	186	1.150	780	445
<b>Total</b>		<b>663.711</b>	<b>935.305</b>	<b>1.499.273</b>	<b>989.544</b>	<b>565.152</b>

Source: Department of Tourism/Department of Culture, Sports and Tourism of provinces - Department of Culture and Information of island districts

From the perspective of the international tourist market: Currently, two common groups of international tourists to the coastal islands of Vietnam include: (1) guests staying in resort only, guests who combine staying with other activities such as MICE, sea sports or golf. They are middle-aged guests, families, elderly guests or guests traveling with agencies or in groups. This group of guests often have high spending ability, long stay, main purpose is resort; (2) Visitors to explore and

experience culture and nature: this group of visitors are usually students, young people or unemployed people who do not have a fixed job, are passionate about travel, and love to explore.

**Domestic tourists**

**Table 3. Number of domestic visitors to coastal islands in Vietnam in the period 2015 - 2021**

Unit: Visitors

Island names	2015	2017	2019	2020	2021
Co To	180.000	301.000	288.000	201.098	130.210
Van Don	681.100	1.032.000	1.259.400	980.362	687.201
Bach Long Vy	3.000	4.000	5.000	3.502	2.325
Cat Ba	1.215.600	1.682.500	2.109.500	1.375.400	1.020.348
Cu Lao Cham	327.539	323.361	352.208	269.702	189.021
Ly Son	94.430	204.979	222.229	156.910	126.291
Phu Quy	2.157	16.400	41.600	28.387	19.201
Con Dao	105.347	212.737	344.848	210.354	180.230
Phu Quoc	1.442.245	2.64.851	4.434.769	3.127.921	2.821.293
Kien Hai	34.637	194.104	440.509	321.300	251.912
<b>Total</b>	<b>4.086.005</b>	<b>3.971.081</b>	<b>9.498.063</b>	<b>6.774.936</b>	<b>5.428.032</b>

Source: Department of Tourism/Department of Culture, Sports and Tourism of provinces - Department of Culture and Information of island districts

In the period 2015-2019, the average domestic tourist arrivals increased by 23.49% per year. This can be seen via the statistics of the number of domestic tourists visiting 10 typical islands of Vietnam. Specifically: in 2015, the whole coastal island system attracted more than 4 million tourists, by 2019, this number has increased to nearly 9.5 million domestic tourists, achieving an average growth rate in the period 2015 - 2019 is 23.49 % per year. Especially, there are islands welcoming tourists with a very high increase such as: Phu Quy Island increased 109.56% per year, Kien Hai island increased 88.84% per year. Some islands attract a large number of tourists to visit. Typically, Cat Ba island has welcomed over 2.1 million visitors, Phu Quoc is the island that receives the most domestic tourists with nearly 4.5 million visitors. However, due to the impact of the Covid -19 pandemic, the travel restriction policy has caused a sharp decrease in the number of tourists in 2020 and 2021, in many places the number of visitors has decreased by nearly half, the average number of visitors in 2021/2019 has decreased by 42.85%.

Regarding the domestic tourist market: about 70% of domestic tourists travel to destinations that are sea and islands including coastal tourist destinations in the mainland and tourist destinations on coastal islands. However, most tourists go to coastal tourist destinations in the mainland, tourist destinations on coastal islands still account for a small proportion.

### 3.2. The current status of the system of coastal island tourism products

Due to favorable natural conditions, together with rich and attractive topographical features; sea and island tourism products in our country are being exploited to serve tourists' demand quite abundantly and diversely. Specifically, these products include: (1) beach tourism and beach resort products; (2) natural and ecological tourism products, marine landscapes. Vietnam's coastal islands provide a variety of products for ecotourism activities; (3) Cultural tourism and community tourism products create their own unique culture, customs, beliefs, festivals, historical sites, and culinary differences; (4) Additional tourism products such as Sea sports tourism products; MICE tourism products (type of tourism combined with conferences, seminars, rewards); Cruise products...

### 3.3. Actual situation of total revenue from tourists

**Table 4. Total tourism revenue in Vietnam's coastal islands, period 2015 - 2021**

Unit: million dong

Island names	2015	2016	2017	2018	2019	2020	2021
Co To	300.000	350.000	482.000	498.000	700.000	650.000	400.203
Van Don	540.000	760.000	890.000	1.455.000	1.752.000	1.100.298	800.949
Bach Long Vy	200	250	300	350	450	370	280
Cat Ba	769.000	874.000	1.250.000	1.384.000	1.805.000	1.380.870	1.090.400
Cu Lao Cham	12.117	13.971	25.441	27.167	28.750	20.180	14.598
Ly Son	11.440	18.139	22.682	27.638	35.000	26.765	20.132
Phu Quy	4.620	15.510	38.180	46.800	105.750	80.172	51.437
Con Dao	584.563	802.233	1.165.916	1.317.236	1.556.000	1.021.562	880.923
Phu Quoc	650.000	700.000	7.706.000	12.271.000	14.560.000	11.230.912	9.462.560
Kien Hai	102.000	147.000	200.000	434.000	637.000	320.441	300.156
<b>Total</b>	<b>2.424.490</b>	<b>3.681.103</b>	<b>11.780.519</b>	<b>17.461.191</b>	<b>21.179.950</b>	<b>15.182.220</b>	<b>12.621.435</b>

Source: Department of Tourism/Department of Culture, Sports and Tourism of provinces - Department Culture and Information of island districts

Along with the increasing number of tourists to the coastal islands, there has been a significant

source of revenue for the local smokeless industry. In 2015, the total income from tourism activities in the coastal islands of Vietnam was more than 2,974 billion VND, by 2020 it will increase to more than 21,187 billion VND. The average growth rate reached 63.37% per year in the period 2015-2019. However, due to the impact of the Covid-19 pandemic, tourism activities were stalled, most traffic activities were congested, international and domestic tourists plummeted, making tourism revenue. sea and islands in the provinces decreased rapidly, especially in 2020 and 2021; In the short term, when comparing between 2021/2019, the revenue of Van Don island decreased by nearly 50%, Cat Ba island decreased by nearly 40%, Phu Quoc island decreased by 35%, the average income from tourism of 10 major islands of Vietnam was reduced by 40%.

### 3.4. Actual situation of accommodation facilities serving tourists

Number of tourist accommodation facilities on the islands

**Table 5. Tourist accommodation facilities on coastal islands of Vietnam in the period of 2015 - 2021**

Unit: Establishment, room

Island names	2015		2017		2019		2021	
	Accommodation	Rooms	Accommodation	Rooms	Accommodation	Rooms	Accommodation	Rooms
Co To	81	1.000	191	1.850	216	2.800	250	3.485
Van Don	127	1.703	130	1.580	186	2.311	238	2.946
Bach Long Vy	1	20	2	50	2	50	4	120
Cat Ba	178	3.321	211	3.888	242	4.765	281	5.880
Cu Lao Cham	29	78	32	97	41	138	65	287
Ly Son	111	650	120	720	129	800	175	1.750
Phu Quy	20	119	18	150	33	336	47	538
Con Dao	35	750	46	921	106	1.600	146	2.183
Phu Quoc	180	6.040	272	11.802	430	18.351	619	23.148
Kien Hai	31	211	111	719	137	1.028	184	1.791
<b>Total</b>	<b>793</b>	<b>13.892</b>	<b>1.133</b>	<b>21.777</b>	<b>1.522</b>	<b>32.179</b>	<b>2.009</b>	<b>42.128</b>

Source: Department of Tourism/Department of Culture, Sports and Tourism of provinces - Department of Culture and Information of island districts

In order to meet the accommodation needs of guests, 10 coastal island districts have focused on building technical facilities for tourism. According to the statistical reports of the Culture and Information Departments of the island districts; the reports of the Tourism & Culture

Department, as well as the Sports and Tourism Department of the localities, among the 10 coastal island districts by 2015, the island districts mentioned above have invested in building 793 facilities with 13,892 rooms. By 2021, the number of facilities will increase to 2,009 with 42,128 rooms. Thus, the number of facilities increased by 17, 73% a year, and the number of rooms increase by 23.33% a year.

*Quality of tourist accommodation facilities on coastal islands*

**Table 6. Status of quality of tourist accommodation facilities in Vietnam's coastal islands in 2021**

*Unit: Establishment, room*

Island names	Standard Accommodation		1 - 2 star rating		3 star rating		4 - 5 star rating & Resort	
	Accommodation	Rooms	Accommodation	Rooms	Accommodation	Rooms	Accommodation	Rooms
Co To	187	2.025	53	920	10	540		
Van Don	200	1.596	35	1.200	3	150		
Bach Long Vy	4	120						
Cat Ba	221	4.109	40	948	5	273	15	550
Cu Lao Cham	65	287						
Ly Son	167	1.370	6	220	-	-	2	160
Phu Quy	47	538						
Con Dao	111	663	20	550	9	440	6	530
Phu Quoc	516	8.358	65	1.990	8	450	30	12.350
Kien Hai	184	1.791						
<b>Total</b>	<b>1.702</b>	<b>20.857</b>	<b>219</b>	<b>5.828</b>	<b>35</b>	<b>1.853</b>	<b>53</b>	<b>13.590</b>

*Source: Department of Tourism/Department of Culture, Sports and Tourism of provinces - Department of Culture and Information of island districts*

According to the above data, the coastal islands by 2021 have had 2009 accommodation facilities with 42,128 rooms. Of which, there are 53 tourist accommodation facilities rated at 4-5 stars and a system of resorts on the island rated at 4 to 5 stars with the number of rooms is 13,590. There are 35 three-star hotels with 1,853 rooms, the number of 1 - 2 star hotels is 219 accommodation facilities, accounting for 5,828 rooms. It can be said that with the quality of tourist accommodation facilities that meet the standards of 4-5 stars on the islands, it is too few, not enough to meet the types of high-class tourism on the island. Although over the past time, localities have paid great attention to investing in upgrading facilities and service quality; However, due to the influence of seasonal factors, tourism on coastal islands is still limited.

### 3.5. The current situation of human resources in coastal islands

This is an important factor affecting the sustainable development of sea and island tourism. In the period 2015-2019, along with the increase of tourist flows, in order to meet the tourism demand, the labor force in the tourism industry in the coastal island also increased rapidly. In 2015, the number of direct workers in the tourism industry of 10 major islands was 14,097. By 2020, the coastal islands absorbed more than 32,762 workers, with an average growth rate of 23,47% per annum in this period, the highest average increase is: Bach Long Vi island 31.61%, Phu Quy island 35.2%, Phu Quoc island 32.63% and Kien Hai island 51.59%. However, due to the impact of the Covid-19 pandemic, in 2020 and 2021, human resources for tourism in coastal islands have decreased sharply, the total number of employees in 2020 has decreased by nearly 12% compared to 2019, the total number of employees in 2021 decreased by 32.5% compared to 2019.

**Table 7. Employment in tourism in coastal islands in Vietnam in the period of 2015 - 2021**

*Unit: Person*

Island Names/ Years	2015	2016	2017	2018	2019	2020	2021
Co To	2.000	2.650	3.000	3.500	3.700	3.100	2.500
Van Don	1.250	1.250	1.280	1.300	2.000	1.750	1.250
Bach Long Vy	10	15	20	25	30	25	19
Cat Ba	2.660	2.800	3.150	3.500	3.850	3.280	2.450
Cu Lao Cham	65	74	78	81	92	85	60
Ly Son	1.134	1.498	1.720	2.145	2.455	2.100	1.680
Phu Quy	50	51	51	137	198	175	120
Con Dao	1.200	1.300	1.450	1.580	2.200	1.950	1.220
Phu Quoc	5.500	6.135	8.410	15.633	17.017	15.250	12.180
Kien Hai	253	672	937	1.288	1.336	1.120	750
<b>Total</b>	<b>14.132</b>	<b>16.457</b>	<b>20.111</b>	<b>29.214</b>	<b>32.910</b>	<b>28.835</b>	<b>22.229</b>

*Source: Department of Tourism/Department of Culture, Sports and Tourism of provinces - Department of Culture and Information of island districts*

**The quality of human resources in tourism industry:** Employers have paid more attention to training to improve quality. Many corporations and tourism businesses have actively had workers do professional training courses on tourism at reliable training institutions in big cities. According to the report on tourism activities of the coastal islands on



tourism human resources in 2019, direct workers in the tourism sector meet over 50% of job requirements in all three areas: accommodation facilities, travel and restaurants. Especially, up to 70% of employees are local, reflecting the ability to adapt to develop the market economy in accordance with the green growth model. At the same time, in order to attract high-quality laborers to the island and stay on the island to work, tourism businesses all have specific regimes to call for, such as via policies on salary, bonus and other attractive social security.

### **3.6. Catering facilities and other complementary services**

To satisfy the needs of tourists, many recreational and sports services have come into operation in the following seas: Nha Trang, Da Nang, and Ha Long. These services include boating, parasailing, windsurfing, boat racing, sightseeing islands by paragliding, hot air balloons, modeling airplanes; by helicopter (Ha Long Bay) etc., which have improved the competitiveness and attractiveness of sea and island tourism business.

In addition, many different services have been improved, including cafe and bar services at the beach; traditional massage services; food services; souvenir shops; experiential tourism services such as: “trying to be a fisherman”, souvenir photography models, event areas, community activities; sea sports and entertainment services, diving to see corals; Seafood cuisine, fishing, squid on the sea... In the coastal islands, the local governments actively co-operated with the local people to plan and organize various types of services and facilities for tourism such as: walking quarters, homestay accommodation, spiritual tourism, introducing specialty selling points of traditional craft villages...

### **3.7. Actual situation of investment and management of infrastructure, technical facilities for tourism development in coastal islands of Vietnam**

#### ***Transport system and seaports***

*Regarding airline:* Currently, there are only 02 international airports at Van Don and Phu Quoc islands, operating a number of direct flights from a number of countries such as China, Russia, Korea, Japan... In addition, there is one national airport in Con Dao, but the frequency of exploitation is still very limited.

*Regarding waterways and seaport system:* It can be said that these are the main means of connecting coastal and mainland islands; however, at present, this business has not developed commensurate with its potential, significantly affecting the tourism development of our coastal islands.

*Regarding road traffic:* The coastal road network has been relatively developing and gradually been completed. The routes on the coastal islands have now been concreted, paved with asphalt to meet the demand of transporting tourists to destinations, amusement parks and scenic spots of tourist complexes.

*Other infrastructure systems:* The State and localities have paid attention to the power supply system for the development of sea and island tourism; Up to now, 11/12 island districts and 100% of island communes nationwide have been supplied with electricity. The clean water system for tourism is also concerned by the localities. However, due to natural conditions, the ability to supply clean drinking water is very limited, except for some islands with abundant natural water sources such as Cat Ba and Phu Quoc. Waste treatment system has been paid attention to collection and treatment; however, treatment facilities are small, treatment is not completed, waste is not classified that makes it difficult for treatment activities, most of the islands do not have plants and treatment furnaces and are still mainly landfilling. That significantly affects the environment and tourism business activities on coastal island systems.

## **4. General assessment of the current status of sea and island tourism development**

### ***Accomplishments***

*First,* Vietnam has advantage of tourism resources, it is very rich and diverse in all aspects of nature and humanity in Vietnam. This is really a premise for the development of many types of tourism activities, such as sightseeing, ecology, convalescence, sports...

*Second,* Vietnam has advantages of geographical location and topography: in coastal islands, tourism resources have a large concentration, facilitating the development of sea and island tourism. Currently, each island has different strengths, but the connection between them is good, creating unique and special tourism products; a breakthrough step

for the process of linking tourist areas, an important lever for the development of sea and island tourism in particular and tourism in general of the whole country.

*Third*, Vietnam is the most open economy in the world: with openness assessed through the ratio of trade to gross domestic product (GDP) over 200%, per capita income in 2020 (according to 2010 prices and exchange rates) has increased more than 4 times compared to 1990. This is a necessary financial resource for the Government and the island districts to develop tourism infrastructure; opportunities to attract international and domestic tourists.

*Fourth*, Vietnam has a synchronous system of mechanisms and policies: clearly defining the legal basis for sustainable marine economic development, developing sea and island tourism as a key industry in socio-economic development of the country. Recently, sea and island tourism has made rapid development in all three aspects: economy, culture-society and environment.

#### **Limitations**

*First*, the resource exploitation is still fragmented, not based on a common exploitation strategy on a regional scale, linking island and island districts together; services are provided individually. Disputes over the territory and different economic sectors have caused many environmental consequences, even for unsustainable development. Resources are exploited scattered and with low concentration, making it impossible to create high quality specific and competitive tourism products. Infrastructure that has not been synchronously invested is also the cause of many inadequacies in space exploitation and sea and island tourism routes.

*Second*, although the accommodation facilities can meet the requirement in terms of quantity but they are poor in quality, so they still cannot satisfy the increasing demands of the majority of domestic and foreign tourists. Besides, the accommodation facilities are still too monotonous, not suitable for the landscape and environment of the coastal islands.

*Third*, the range of marine and island tourism products is still poor and not diversified, sometimes not suitable for the needs and tastes of tourists. Many tourism products of the island districts were

produced spontaneously with low connectivity and lack of interdisciplinary character. Additional services related to tourism activities such as restaurants, entertainment, sports, seminars... are still poor, leading to limited revenue for tourism of island districts.

*Fourth*, the labor force in the coastal islands is not enough and uneven among island districts, low quality, many localities do not have training facilities for this human resource, the number of highly qualified permanent workers is still small. Besides, the system of means of transport for tourists is limited in both quantity and quality.

*Fifth*, the state management of tourism has many shortcomings: the system of legal documents on tourism is still not synchronized, so it has not created a favorable corridor for the state management of tourism. Management coordination between departments and sectors in protection, exploitation and optimal use of tourism resources has not yet been clearly demarcated.

*Sixth*, there are worries about the tourism environment on coastal islands in some areas such as Ha Long, Cat Ba, Phu Quoc, Ly Son, etc. The cultural environment is threatened by the commercialization of traditional values in festival activities. If not controlled, it can erode traditional cultural values gradually generated and preserved by our fathers.

#### **5. Some solutions to promote effective and sustainable sea and island tourism**

##### ***Group of solutions on mechanisms and policies to develop sea and island tourism:***

- *Specific mechanisms and policies:* There must be policies to support and give investment incentives to investment projects on the sea and islands in terms of land clearance, forms of cooperation, and creating favorable conditions for enterprises to enhance the active role in the development of sea and island tourism.

- *Tax policies:* It is necessary to follow the tax laws strictly. However, it is necessary to have a specific mechanism for priority, exemption, reduction, and unlimited collection in new investment for a number of specific tourism fields, adventure tourism, and discovery tourism.

- *Investment policies:* Vietnam should design preferential policies to attract foreign direct

investment and domestic investment projects in sea and island tourist areas; simplify procedures, preserve capital on the basis of Vietnamese law and the actual situation of localities.

- *Market policies:* We should carefully study Vietnam's tourism market in general as well as the tourist market in coastal provinces and island districts in terms of domestic and foreign tourists; have appropriate mechanisms and policies to maximize the potential of tourist markets. At the same time, there must be mechanisms and policies to support financial services, banking, insurance ... to create the most favorable conditions for domestic and foreign tourists.

- *Policies on product development:* Vietnam should have a policy oriented at high-quality tourism products with specific characteristics of each locality. Developing products on the basis of preserving marine and island ecosystems and marine environment for long-term socio-economic development benefits.

- *Policies in response to climate changes:* Because Vietnam is located in the sea and island area, it is subject to many risks of natural disasters, extreme weather and climate. Therefore, the provinces in the coastal areas must make investments in response to climate changes such as: warning of tsunamis, sea level rise, protection of coral reefs, etc., in order to protect tourism resources for sustainable development of sea and island tourism.

***Group of solutions to develop sea and island tourism products:***

- Vietnam should exploits advantages and differentials in tourism resources in a sustainable way; encourage participation in sea and island tourism activities of all three pillars, namely the government, businesses and the residential community in order to express the local identity in accordance with the needs of the domestic and foreign tourist market, thereby developing sustainable tourism in all three aspects: economy, culture-society and environment.

- We should diversify types of tourism based on the natural resources and human resources. It is advisable to make the most of the existing types of tourism; develop more new types of tourism; maximize the participation of local communities and

island districts; connect different sea and island tours with one another; co-operate with the mainland to create a rich chain of destinations; position tourism images and products through tourism combined with the organization of festivals, cultural events, sea and island tourism on a regular and continuous basis. In order to increase the spending and length of stay of guests, it is necessary to improve the quality of tourism products and the attractiveness of the products. Strengthen the management of product development in island and island districts in order to achieve sustainable development.

***Group of solutions to invest in infrastructure, technical facilities for tourism development:***

- *For transportation:* It is necessary to plan for upgrading, renovating and building new technical infrastructure on the basis of general planning, promoting specific advantages, combined with the development of other marine economic sectors.

- *For the power system:* it is necessary to accurately determine the nature and capacity of regional electricity use in the overall development of the country's general electricity network.

- *For the water supply system:* At present, the supply of clean water on the islands is mainly based on three main sources: tap water from the island's clean water treatment station, rainwater storage, and ships moving from the mainland. If tourism thrives, the demand for clean water will not be enough; Therefore, it is necessary to invest in upgrading the existing supply sources and have a new construction plan suitable to the local situation and characteristics.

- *For the drainage system:* Because most of the islands do not have a wastewater treatment system, the island districts and the community living in the island must strictly implement self-treatment of wastewater before introducing the wastewater treatment system to reduce environmental pollution.

- *For the waste treatment system:* Because there is no waste treatment plant yet, the island districts need to arrange waste treatment yards at the end of the wind, far from clean water sources, away from places of rest and relaxation to attract tourists.

***Increasing awareness and understanding of international and Vietnamese Laws of the Sea:***

- Through training courses to officials and communities of the island districts so that they

understand the guidelines and policies of the Party and the State on sea and island development.

- Learning from international experiences to draw lessons for localities with similar conditions to develop sea and island tourism in accordance with their characteristics and preserve their cultural identity with the motto of integration but not assimilation.

- Developing marine tourism should strengthen promotion, publicity and branding of sea and island tourism; raising awareness and developing human resources for the development of island tourism, encouraging and creating conditions for the community to participate in sea and island tourism activities.

### ***Solutions to protect natural resources and environment of sea and island tourism:***

We should strictly implement domestic and international legal documents related to sea and islands for both natural and cultural resources. Solutions on mechanisms and policies on environmental protection of sea and islands should be devised. Solutions for infrastructure development should be associated with environmental protection; solutions for synchronous coordination between state management agencies in charge of protecting local resources and environment, residential communities, production and business enterprises and tourism business establishments.

### **Conclusion**

Recently, Vietnam's sea and island tourism has had a rapid development, firmly affirming the position of marine economic development in Vietnam's tourism product system and affirming the role of tourism in the cause of socio-economic development of the country, actively contributing to creating a new face in the development of marine economic sectors in Vietnam. In addition to the results of economic development, the development of sea and island tourism is also associated with environmental protection, promotion of cultural traditions, community development and protection of national sovereignty; coordinate with coastal localities through: organizing festivals and events from which to research and propose mechanisms, policies, investment in sustainable development of Vietnam's sea and island tourism.

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# THE USE OF DIGITAL BANKING SERVICES BY INDIVIDUAL CUSTOMERS IN VIETNAM

PhD. Dang Vu Hung\* - Trinh Thi Vy Thuy\* - Luu Phuoc Ven\*

**Abstract:** *This study evaluates the use of digital banking services and determinants for the use by individual customers. Data was collected from a survey of 152 individual customers. Multiple regression analysis results confirm seven determinants for the use of digital banking services of individual customers: subjective norms, attitude, perceived behavioral control, perceived ease of use, perceived usefulness, perceived risks, and bank image. Except for perceived risks, which have a negative impact, the remaining six determinants have a positive impact on the use of digital banking services. Strong determinants are attitude, bank image, and perceived ease of use. Results show that individual customers, who have adopted digital banking services, used the services regularly and more often. Customers often utilized personal information management, banking transfer, and 3G/4G data package registration; they rarely performed shopping on TNEX, chatting with users on TNEX and buying airline tickets. Some practical implications have been grasped: commercial banks are advised to promote communication with customers by using bank fan-page and YouTube channels with short videos which introduce available digital banking services, describe the benefits of the services, and show how to use them effectively.*

• **Keywords:** *digital banking service, individual customers, theory of planned behavior (TPB), technology acceptance model (TAM).*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

**Tóm tắt:** Nghiên cứu này đánh giá việc sử dụng dịch vụ ngân hàng số và các yếu tố quyết định việc sử dụng của khách hàng cá nhân. Dữ liệu được thu thập từ cuộc khảo sát 152 khách hàng cá nhân. Kết quả phân tích hồi quy bội xác nhận 7 yếu tố quyết định đến việc sử dụng dịch vụ ngân hàng số của khách hàng cá nhân: chuẩn mực chủ quan, thái độ, nhận thức về kiểm soát hành vi, nhận thức về tính dễ sử dụng, nhận thức về tính hữu ích, nhận thức về rủi ro và hình ảnh ngân hàng. Ngoại trừ rủi ro cảm nhận có tác động tiêu cực, 6 yếu tố quyết định còn lại đều có tác động tích cực đến việc sử dụng dịch vụ ngân hàng số. Các yếu tố quyết định mạnh mẽ là thái độ, hình ảnh ngân hàng và cảm nhận về tính dễ sử dụng. Kết quả cho thấy khách hàng cá nhân đã sử dụng dịch vụ ngân hàng số thường xuyên sử dụng dịch vụ hơn. Khách hàng thường sử dụng dịch vụ quản lý thông tin cá nhân, chuyển khoản ngân hàng, đăng ký gói data 3G/4G; họ hiếm khi thực hiện mua sắm trên TNEX, trò chuyện với người dùng trên TNEX và mua vé máy bay. Một số ý nghĩa thực tế đã được rút ra: các ngân hàng thương mại nên tăng cường giao tiếp với khách hàng bằng cách sử dụng trang fanpage ngân hàng và kênh YouTube với các video ngắn giới thiệu các dịch vụ ngân hàng số hiện có, mô tả lợi ích của dịch vụ và hướng dẫn cách sử dụng hiệu quả.

• **Từ khóa:** *dịch vụ ngân hàng số, khách hàng cá nhân, thuyết hành vi có kế hoạch, mô hình chấp nhận công nghệ.*

## 1. Introduction

Digital banking plays an increasingly important role in the economy and people's lives in Vietnam. Digital banking allows Vietnamese customers to perform most banking services through an online platform using tools that can connect to the internet. The development of digital banking services is taking

place quite widely at Vietnamese commercial banks. The banks have many outstanding achievements in the process of implementing digital transformation. Commercial banks have actively grasped the trend and constantly invested to implement the digital transformation, thereby contributing to promoting online transactions.

\* An Giang University, VNU-HCM; email: dhvu@agu.edu.vn; ttvy\_20nh@student.agu.edu.vn; lpven@agu.edu.vn

For example, Maritime Commercial Joint Stock Bank has launched a completely new digital banking platform called “TNEX” (Phan, 2020). TNEX is a digital banking platform providing free and convenient financial services for Vietnamese customers. It can be said that 2021 is the time marking many important steps in the journey of the digital transformation of MSB. According to Thuy Linh (2022), MSB has activated the key strategy “Digital Factory” with the companion of BCG Technology Group. MSB was honored to receive the award “Typical Digital Transformation Bank in 2021” and achieved impressive achievements. The number of digitized transactions of customers was recorded at nearly 50 million, approximately 90% of banking transactions.

In Vietnam, there are many studies explaining the factors affecting customer satisfaction when experiencing e-banking service, but so far in the country there are still very few studies on factors that affect the acceptance of digital banking services. Some studies on factors affecting customer satisfaction for digital banking service or e-banking: Factors affecting the satisfaction of e-banking service quality of Tien Phong Commercial Bank by H. Q. Nguyen (2020); Improving customer satisfaction on e-banking service at Joint Stock Commercial Bank for Investment and Development of Vietnam – Cho Lon branch by Huynh (2020); Research on customer satisfaction with e-banking service quality at Joint Stock Commercial Bank for Foreign Trade of Vietnam - Tra Vinh Branch by Vo (2019). Due to the significant growth of digital banking in Vietnam and the lack of studies as mentioned above, it is important to address determinants of the digital banking usage in Vietnam.

The significance of this study is three-fold. Firstly, a theoretical model of the factors affecting the acceptance of using digital banking services is built on the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM). The combination of these two theoretical views makes this paper significant as examining in sight into various determinants of digital banking usage. Secondly, the measurement of digital banking usage and factors affecting the use of digital banking services of individual customers are adapted from previous studies. Finally, managerial implications are grasped.

## 2. Literature review

### 2.1. Theoretical background

This research was built on two theories: the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM). The combination of these two theoretical views has been found in a study by Alam et al. (2018), and Soemitra et al. (2022). TPB was developed by Ajzen (1991), which originated from the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) in 1985 and completed in 1991. Ajzen formulated the TPB theory by adding to TRA a new element called Perceived Behavioral Control, or simply perceived control. According to TPB, three factors directly affect behavioral intention: Attitude, Subjective Norm, and Perceived Behavioral Control. Among them, Perceived Behavioral Control influences both intention and actual behavior. A number of previous studies have tested and confirmed the suitability of the TPB theoretical model in the study of consumer behavior in various contexts relating to technology, such as: online shopping, and online banking (Hoang & Hoang, 2020).

Developed by Davis (1986), TAM is derived from the TRA model, which aims to determine the influence of external factors on factors of trust, including: perceived usefulness and perceived ease of use. TAM provides a theoretical background for evaluating human behavior in accepting the use of technology. According to TAM, Perceived Ease of Use directly affects Perceived Usefulness, and both of these factors affect the “Attitude to Use” technology. The attitude to use affect the intention to use, the intention to use may lead to the actual behavior. According to Phan et al. (2018), the TAM was further researched, edited, and perfected by Venkatesh and Davis (2000). They simplified TAM by removing the “Attitude” factor in the original TRA model.

### 2.2. Definitions and hypotheses

#### *Digital banking service*

Sarma (2017) argues that digital banking is a transformation of all traditional banking activities and services, when customers make transactions at a physical office of banks, to a digital environment. Digital banking is the computerization of traditional banking services, thereby allowing customers to access banking products and use banking services through online and electronic platforms (Haralayya,

2021). Zeithaml and Gremler (2006) documented that services are behaviors, processes, and ways of doing a certain job in order to create use value, and satisfy customer needs and expectations. Digital banking service is the process and way of providing banking products through a technological and digital platform connected to the internet.

#### *The use of digital banking services*

Consumer behavior is the totality of actions that consumers perform in the process of exchanging products, including: investigating, purchasing, using, evaluating and disposing of products and services in order to satisfy their needs" (Schiffman et al., 1997). The use of online newspapers was quantified with the frequency of reading newspapers over a period of time (Malthouse & Calder, 2002). Pham and Vo (2017) used the frequency of reading electronic newspapers, sharing content, and discussing the content of articles by readers with friends and relatives to measure the frequency of using electronic newspapers. In terms of e-banking use, Nguyen and Cao (2011) considered the frequency of using e-banking products and services, when customers have accepted e-banking. Therefore, in this study, the use of digital banking services is also known as the frequency of using digital banking products/services provided by commercial banks.

#### *Factors in accordance with TPB*

Ajzen (1991) documented that attitude, subjective norms, and perceived control have an impact on the intention to perform a behavior, and then the behavior. This impact was discussed in the Theory of Planned Behavior. A number of empirical studies applied TPB to a wide range of research themes.

The behavioral intention in digital banking in Malaysia was found to be influenced by attitude, subjective norms, and perceived behavior control (Wahidudin et al., 2023). Ngo et al. (2022) documented that subjective norm is the human perception of social pressure on whether to perform or not to perform a certain behavior. A number of previous research papers have divided the types of impacts that cause pressure on people, which are shown through two aspects, i.e. (i) the impact from the reference group such as friends, colleagues, and family members, (ii) social impact from the media such as radio, television and expert advice (Nguyen & Hoang, 2020). Therefore, the subjective norm,

in terms of digital banking use, is the customer's perception of the influences around them on whether to use digital banking services or not. Research results of Nguyen and Cao (2011) have demonstrated that subjective norm is statistically significant for the acceptance of e-banking. Besides, Nguyen and Nguyen (2022) also found that social influence has an impact on the decision to use the e-Mobile banking service of individual customers of Agribank, one of the big-4 commercial banks in Vietnam. Therefore, the first proposed hypothesis is:

*H1: Subjective norm has a positive impact on the use of digital banking services of individual customers.*

Attitude is an individual's assessment of whether it is good or bad when performing a behavior (Ajzen, 1991). Therefore, the attitude towards the acceptance of using digital banking services is how customers evaluate, think, and feel about digital banking services and they will make decisions about whether to use digital banking services or not. Therefore, the customer's attitude towards the services will influence the customer's decision to use the service. Specifically, for digital banking services, customers who have a positive view of the services are more likely to accept them (T. O. Nguyen, 2020). Research results of T. O. Nguyen (2020) also show that attitude tends to have a positive impact on the intention to use digital banking services. Therefore, the second hypothesis for the study is:

*H2: Attitude has a positive impact on the use of digital banking services of individual customers.*

Perceived behavioral control is a person's perception of the ease or difficulty of performing a behavior or an individual's perception of the ability to perform their own behavior (Alam & Sayuti, 2011). Besides, cognitive factors controlling behavior come from within the individual, e.g. knowledge, and skills, or from outside, e.g. time, opportunity, and economic conditions. Accordingly, when a person possesses a strong controlling belief, that is, they have many favorable conditions for performing the behavior, then that individual will have control higher cognitive control to perform that behavior and vice versa (Ajzen, 1991). For behavior using digital banking services, perceived behavioral control is the customer's perception of how difficult or easy it is to perform a behavior using digital banking services. According to the research results

of Nguyen and Cao (2011), perceived behavioral control has a positive impact on the acceptance of e-banking. The third hypothesis for this study is:

*H3: Perceived behavioral control has a positive impact on the use of digital banking services of individual customers.*

#### *Factors in accordance with TAM*

Recently, Alnemer (2022) used TAM for investigating the determinants of digital banking adoption in the Kingdom of Saudi Arabia. Alnemer found that the adoption of digital banking was positively influenced by perceived ease of use and perceived usefulness. According to Davis (1989), perceived ease of use is what a person believes that using a particular system will be effortless or take a lot of effort. Regarding the use of the e-banking system, according to Nguyen and Cao (2011), perceived ease of use is the fact that customers think that they will not need to make much effort when using the e-banking system. Therefore, customers' perception of ease of use in using banking services is that customers have confidence that they can use digital banking services without any effort. Research results of Nguyen and Cao (2011) also suggest that perceived ease of use has a positive impact on the acceptance of e-banking. Besides, Tran et al. (2020) also documented that perceived ease of use has an impact on the intention to accept online payments in Vietnam. In addition, Nguyen and Nguyen (2022) also found that perceived ease of use affects the decision to use Agribank e-Mobile banking services of individual customers. So, the fourth hypothesis put forward is:

*H4: Perceived ease of use has a positive impact on the use of digital banking services of individual customers.*

Perceived usefulness is what individuals believe when using a particular product/service system as an opportunity to help them improve job performance. Ta and Dang (2021a) argue that perceived usefulness in e-commerce includes convenience, choice of products and services, diverse information, and style. Perceived usefulness in digital banking is customers' perceived convenience of digital banking service, e.g. saving time, high security, and many convenient services.

Therefore, the more advantages digital banking brings to customers, the more digital banking services are used. The intention to use information

and communication technology is strongly influenced by perceived usefulness (Nguyen et al., 2022). Perceived usefulness has a positive influence on the online shopping intention of Generation Z (Ta & Dang, 2021b). Perceived usefulness has a positive effect on customers' intention to use digital banking services (T. O. Nguyen, 2020). Thereby, the fifth hypothesis for this study is:

*H5: Perceived usefulness has a positive impact on the use of digital banking services of individual customers.*

Risk perception refers to the abilities that people may lose in pursuing the outcomes they desire (Featherman & Pavlou, 2003). In which, risk perception has 7 dimensions, namely: security risk, privacy risk, time risk, economic risk, psychological risk, functional risk, and social risk association (Featherman & Pavlou, 2003).

For digital banking, before customers decide to perform the behavior, they will have concerns, obstacles, and worries about possible risks during using digital banking services. Therefore, if there are many risks with high probability, customers will tend to refuse to use digital banking services and vice versa. The factor "risks when transacting online" has a negative impact on the acceptance of using e-banking (Nguyen & Cao, 2011). Risk perception and the decision to use the services have an inverse relationship (Nguyen & Nguyen, 2022). General perceived risk has a direct negative impact on the intention to accept online payments in Vietnam (Tran et al., 2020). Therefore, the sixth hypothesis for this study is:

*H6: Perceived risk has negative impact on the use of digital banking services of individual customers.*

#### *Bank image*

Bank image represents aspects of technology services, the scale of the service system, reputation, and the experience that banks are providing to customers (Huynh, 2019). A bank's image includes the factors that first affect customers, thereby giving customers confidence in the products and services that the bank is providing. Thereby, customers will have their initial evaluation of the product as well as the service, which will influence the decision whether to use that product/service or not.

Image is an important factor that directly affects customers' feelings when deciding to use the services of an organization (Nguyen & Nguyen, 2022).

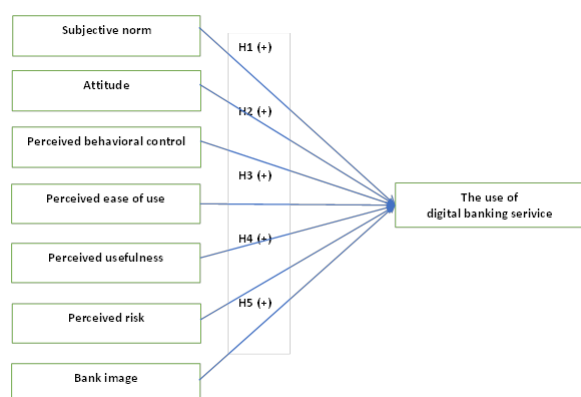


Bank image has a positive impact on customers' acceptance of using e-banking services in Vietnam Research (Nguyen & Cao, 2011). Nguyen and Nguyen (2022) also have similar research results with Nguyen and Cao (2011) that bank image has a positive impact on the decision to use the service. For digital banking services, when a bank's image is positive, customers may have peace of mind and confidence to use digital banking services, which will boost their intentions use and actual behavior. Therefore, the seventh hypothesis for this study is:

*H7: Bank image has a positive impact on the use of digital banking services of individual customers.*

The research model and the above 7 hypotheses are shown in Figure 1

**Fig. 1- Determinants for the use of digital banking by individual customers, adapted from TPB and TAM**



Source: Own research

### 3. Research method

This study was carried out in two main phases: (1) Preliminary research for questionnaire adjustment and (2) Main quantitative research for testing hypotheses. Both paper-based and online questionnaire was sent to individual customers.

#### 3.1. Measurement

##### Independent variables

The measurement of independent variables was adapted from previous studies by Nguyen and Cao (2011) and T. O. Nguyen (2020). Measurement items were presented in Appendix 1. There are 3 to 6 measurement items for each latent variable, making a total of 33 observable variables for 7 latent variables. Five-point Likert scale was used.

*Dependent variable: the use of digital banking service*

Preliminary research results show that there are 23 well-known items of digital baking services. Customers were asked how often each item were used. The answer ranges from 0 to 4: (0) Not used at all; (1) Seldom; (2) Rather regular; (3) Regular; (4) Very regular. As a result, the sum of answers for 23 items ranges from 0 to 92. The use of digital banking services usage was divided into a 5-point Likert scale as shown in Table 1.

**Tab. 1 - The use of digital banking services**

Encode	Point ladder	Usage level
1	Lower than 18 points	Weak
2	From 18 to 37 points	Seldom
3	From 37 to 55 points	Rather regular
4	From 55 - 74 points	Regularly
5	From 74 to 92 points	Very regularly

Source: Own research

*Other concerns why not to use digital banking service*

This study also concerned individual customers, who have not used digital banking services. The questionnaire, as a result, mentioned why digital banking services were not used.

#### 3.2. Data collection

Data was collected in 3 weeks of December 2022. Respondents answered paper-based questionnaires. These surveys were conducted from a readily accessible pool of respondents from the banking staff of commercial banks. There are 152 valid questionnaires. After the screening, 22 customers have not used digital banking services. The sample of 130 customers was used for testing hypotheses.

The sample presented is diversified in terms of gender, age, education, occupation, and income. Table 2 shows that 46.9% of the respondents (individual customers using digital banking services) are females while the remaining 53.1% are males, which shows quite even distribution of the customers' gender. Most of the customers are from 18 to 30 years old; about one-third of them are over 30. Two third of respondents are business people and office staff, and the remaining one-third are students, governmental staff, housewives, retired people, and others. The distribution of the customers' income is approximate. That is, 23.8% of respondents have an income under 10 million VND (about USD 400), about half of them have

an income between 10 and 15 million VND (from USD 400 to 600), and the remaining 27.7% of them have an income more than 15 million (USD 600).

Tab. 2 - Sample

		Frequency	Percent (%)
Sex	Male	69	53.1
	Female	61	46.9
Ages	18 – 25	40	30.8
	26 – 30	54	41.5
	31 – 40	19	14.6
	41 – 50	11	8.5
	Over 50	6	4.6
Education	High School	28	21.5
	Graduate	96	73.8
	Post-Graduate	6	4.6
Occupation	Student	8	6.2
	Business	50	38.5
	Office staff	35	26.9
	Government staff	11	8.5
	Housewife/Retirement	17	13.1
	Other	8	6.2
Income	Under 10 million VND	31	23.8
	From 10 - 15 million VND	63	48.5
	Over 15 million VND	36	27.7

Source: Own research

3.3. Data analysis

Data analysis was performed with SPSS 20 software. Measurement reliability and validity were checked with Cronbach’s Alpha coefficient, and exploratory factor analysis. Regression analysis and descriptive statistics were also applied. Research results will clarify the impact of seven factors on the use of digital banking services.

4. Research results

4.1. Preliminary research

Interview with banking staff

Six interviews with banking staff are to confirm what digital banking services are available at this moment. Results show that there are three types of digital banking services. They are eight card services, five financial services, and ten other services. Card services include credit card statements, card management, opening a credit card online, opening a supplementary card credit, opening a debit card, NAPAS chip card conversion, credit card refund, and paying bills by credit card. Financial services include installment payment, borrowing, quick transfer, investing, and saving. Other services include personal information management, buying

air tickets, signing up for a 3G/4G data package, mobile top-up, bill payment, transfer, opening a beautiful digital account package, e-wallet, chatting with users in the TNEX community, and shopping on TNEX (see Table 6).

Interview with individual customers

Six interviews with individual customers are to confirm whether the questionnaire is understandable and answerable. A majority of customers agree with the statements about factors affecting the use of digital banking services. Some customers are very interested in the “convenience” of digital banking and they consider this to be one of the main reasons why they want to use digital banking services. Therefore, an observable variable “Using digital banking brings many conveniences” was added to the questionnaire, see Appendix 1.

4.2. Main quantitative research

Reliability of the measurement

KMO coefficient reached 0.726, which is between 0.50 and 1, so EFA is suitable for the research data set. Bartlett’s Test of the scale has a chi-squared value of 1843,470 and a Sig value. is 0.000. It can be seen that the analytical model is suitable and the variables are correlated with each other. Besides, the Eigenvalue of all factors is guaranteed to be greater than 1, so all are retained for EFA analysis. The total variance reached 61.7% (greater than 50%). Factor loading coefficients of 33 observed variables of independent variables are all greater than 0.5, so these variables have reliability and practical significance. Only the variable SN3 “I see a lot of people using digital banking services” uploads in both perceived ease of use and subjective norm with a load factor of 0.311 and 0.675 respectively; the difference in load factor is 0.364. The variable should still be kept for analysis in the subjective norm.

Tab. 3 - Exploratory Factor Analysis of independent variable

Independent Variables	Perceived risk	Perceived usefulness	Bank image	Perceived ease of use	Attitude	Subjective norm	Perceived behavioral control
PR5	0.843						
PR6	0.838						
PR2	0.837						
PR3	0.829						
PR1	0.823						
PR4	0.762						
PU1		0.814					

Independent Variables	Perceived risk	Perceived usefulness	Bank image	Perceived ease of use	Attitude	Subjective norm	Perceived behavioral control
PU5		0.794					
PU2		0.772					
PU4		0.753					
PU3		0.665					
BI2			0.753				
BI6			0.717				
BI5			0.705				
BI4			0.683				
BI1			0.680				
BI3			0.625				
PE2				0.729			
PE4				0.671			
PE3				0.660			
PE1				0.640			
PE5				0.635			
AT4					0.787		
AT1					0.779		
AT3					0.748		
AT2					0.718		
SN1						0.824	
SN4						0.699	
SN2						0.698	
SN3			0.311			0.675	
PB3							0.857
PB1							0.788
PB2							0.782

Source: Own research

Cronbach’s Alpha of the seven factors affecting the use of digital banking services is all greater than 0.7. Subjective Norm is 0.766; Attitude 0.773; Perceived behavioral control 0.783; Perceived ease of use 0.752; Perceived usefulness 0.842; Perceived Risk 0.906; Bank image 0.792. At the same time, all item-total correlations are all greater than 0.3. Thereby, this result shows that scale reliability is ensured. In summary, EFA analysis shows that 7 factors with 33 observed variables in the original model are ready for further regression analysis.

*Multivariate regression*

Results in Table 4 show that the adjusted R-squared value is 0.548, which shows that the independent variables included in the regression analysis affect 54.8% of the variation of the dependent variable, and the remaining 45.2% are due to the dependent variable. out-of-model variables and random error. Besides, the Durbin–Watson value reached 1,792, in the critical range of 1.5 and 2.5, so the result does not violate the assumption of first-order series autocorrelation. ANOVA results show that the Sig value of the F test is 0.000, lower than 0.05, so the regression model is evaluated as appropriate.

Tab. 4 - R square and Durbin - Watson

Model	R	R square	Adjusted R Square	Error of Estimation	Durbin - Watson
1	0.756	0.572	0.548	0.369	1.792

Tab. 5 - Regression value

Factor	Non-standardized		Standardized	T	Sig.	Tolerance	VIF
	B	Error of Estimation	Beta				
Con.	0.130	0.341		0.382	0.703		
SN	0.181	0.057	0.215	3.193	0.002	0.776	1.288
AT	0.196	0.042	0.285	4.662	0.000	0.94	1.063
PB	0.177	0.039	0.193	3.039	0.003	0.872	1.147
PE	0.230	0.063	0.253	3.622	0.000	0.721	1.388
PU	0.111	0.044	0.162	2.505	0.014	0.844	1.185
PR	-0.102	0.038	-0.165	-2.704	0.008	0.94	1.064
BI	0.231	0.051	0.277	4.514	0.000	0.928	1.077

Source: Own research

Results in Table 5 shows that Regression of all 7 factors has impacts on the use of digital banking service. Except for the negative impact of Perceived Risk (PR), all other 6 factors, i.e. Subjective Norm (SN), Attitude (AT), Perceived behavioral control (PB), Perceived ease of use (PE), Perceived usefulness (PU), and Bank image (BI), have a positive effect on the use of digital banking service. The variance magnification factor VIF is lower than 10, which shows that the factors do not have a close impact on each other; there is no multi collinearity phenomenon. In sum, all hypotheses are accepted.

*The use of digital banking services*

Table 6 shows that individual customers used digital banking services regularly, with 77 customers (59%). About one-third of the customer has not used digital banking services regularly, and only 4% of the customers used it very often.

Tab. 6 - The use of digital banking services in general

	Frequency	Percent	Cumulative percentage
Weak	0	0	0
Seldom	0	0	0
Rather regular	48	37%	37%
Regular	77	59%	96%
Very regular	5	4%	100%
<b>Total</b>	<b>130</b>	<b>100</b>	

Source: Own research

The use of every single digital banking service is shown in Table 7. Customers mostly use digital banking services for managing personal information

with an average value of 3.51. Other frequent services are transfer (3.49), signing up for a 3G/4G data package (3.45), mobile top-up (3.44), and bill payment (3.37). On the other hand, customers seldom used the following services: shopping on TNEX (1.02), chatting with users on TNEX (1.07), and buying airline tickets (1.61).

**Tab. 7 - The use of digital banking services**

Card service	Minimum	Maximum	Mean
Credit card statement	0	4	2.19
<b>Card management</b>	<b>0</b>	<b>4</b>	<b>3.05</b>
Open a credit card online	0	4	2.25
Open a supplementary card credit	0	4	2.05
Open a debit card	0	4	2.96
NAPAS chip card conversion	0	4	2.10
Credit card refund	0	4	2.24
Paying bills by credit card	0	4	2.62
Financial services	Minimum	Maximum	Mean
Installment payment	0	4	2.49
Borrowing	0	4	2.19
Quick transfer	0	4	2.47
Investing	0	4	2.52
Saving	0	4	2.87
Other services	Minimum	Maximum	Mean
Personal information management	1	4	3.51
Buy air ticket	0	4	1.61
Sign up for 3G/4G data package	2	4	3.45
Mobile top up	0	4	3.44
Bill payment	0	4	3.37
Transfer	1	4	3.49
Open a beautiful digital account package	0	4	2.77
E-wallet: MoMo, Viettel Pay...	0	4	2.97
Chat with users in the TNEX community	0	4	1.07
Shopping on TNEX	0	4	1.02

Source: Own research

#### *Why not to use digital banking services?*

The answers were found from 22 customers in the survey, who did not use digital banking services. The customers claimed that they just want to make face-to-face transactions; there are 10 among them because of this. Some other reasons are found, i.e. not knowing how to use digital banking service, no need to use it, none of their family members use it, or simply don't like using it.

#### **5. Discussion**

This study firmed the impact of all six factors in accordance with TPB and TAM. These results support many other studies on e-banking in Vietnam (e.g., Hoang & Hoang, 2020; H. Q. Nguyen, 2020; Phan et al., 2018). This study once again supports the use of TPB (e.g. Wahidudin et al., 2023) and

TAM (e.g. Alnemer, 2022; Riza & Hafizi, 2019) for predicting customers' intentions and behavior in accepting digital banking and mobile banking.

Given that T. O. Nguyen (2020) investigated factors affecting the intention to use digital banking in Vietnam, this study makes some differences. This study investigated how often digital banking services were used, rather than the intention to use digital banking services as T. O. Nguyen (2020) did. Unlike the study of T. O. Nguyen (2020), study confirm the positive impact of convenience in both preliminary interviews and the survey. Although this study did not concern trust, the influence of bank image was tested and confirmed. The positive impact of bank image was found, which is similar to the result in the study of Nguyen and Cao (2011).

Similar to the study of T. O. Nguyen (2020), attitude towards the service is one of the strongest determinants of the use of digital banking services. As a result, commercial banks need to enhance customer understanding of the usefulness and the convenience of digital banking services, e.g. by advertising and consultancy. Customers should be informed about the benefits of digital banking services. Also, since perceived risk has a negative impact on attitude towards the service, it is necessary to let customers know about how banks handle unexpected risks.

The survey and interviews with customers carry several practical implications for commercial banks to strategically plan, implement, and design efficient digital banking services in Vietnam. Banks may promote communication with customers. For example, the bank fanpage and YouTube channel should include short videos describing the benefits of banking services, and showing how to use digital banking services. Information about the increasing number of digital banking users may help those who have not used want to experience digital banking like everyone else. Banking apps must be updated for more friendly interfaces, also allowing customers to design their interface. It is very important to improve the digital banking system to avoid interrupting customer transactions, saving more time for customers. While many customers are concern about the risks of using digital banking, it is essential to improve the security system, to strengthen warnings to customers about fraudulent acts. As bank image is important to customers, it is necessary to improve competitiveness, i.e. offering

customers more security and benefits of using digital banking services.

## 6. Conclusion

This study was carried out with preliminary qualitative interviews, and a main quantitative survey in December 2022. The research results confirmed the impact of bank image, three factors of TPB, and three factors of TAM on the use of digital banking service. Except for the negative impact of perceived risk, six others, i.e. attitude to digital banking services, bank image, perceived ease of use, subjective standards; perceived behavioral control, and perceived usefulness, influence the use of digital banking service, from strongly to weakly. This study enriches the literature by retesting both TPB and TAM to explain the usage of digital banking in Vietnam. This study also provides valuable insights for commercial banks in promoting the digital banking system in Vietnam.

This study has some limitations. There is a lack of generalization due to a small sample size of 130 respondents. In addition, only a small number of 22 interviews in the preliminary did not provide much information about customers' use of digital banking services. The sample would also not be fully representative of the population being studied as it was not chosen randomly, which undermines the generalization from the sample to the population of digital banking users. Future research can cover more respondents. It would be beneficial for the future researcher to consider some control variables such as geographical locations and other characteristics of customers.

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# FACTORS AFFECTING THE PAYABILITY OF AGRICULTURAL FARMS IN VINH LONG PROVINCE

Ly Thi Ngoc Suong\*

**Abstract:** *This study has identified the factors affecting the payability of agricultural farms in Vinh Long province, VietNam. This study conducted surveys of 626 farmers and filtered out 297 farmers who are currently in debt to credit institutions and whose payments are not due or have been paid within 12 months. Multivariable linear regression method was used to determine factors affecting payability of agricultural farms in Vinh Long province. Based on the data, binary logistic was used for research. SPSS ver26 was used to measure the factors including age, educational level, size of farm, farm income, natural disasters - epidemics, interest rate to the payability of agricultural farms. The result of the study indicates that educational level, size of farm, farm income significantly affected the payability of agricultural farms. The results show five factors affecting the payability of agricultural farms in Vinh Long province, Vietnam, including three positive factors, two negative factors of the six initially factors of the research model. This result provides the basis for lenders to have a realistic view of their loan repayment effectiveness, and to adopt appropriate policies and practices to mitigate risk during operation. On the other hand, it can also help local, state, and local macro managers to adopt appropriate policies, implement poverty alleviation programs and ensure social security.*

• Keywords: *payability, agricultural farms.*

*Date of receipt: 02<sup>nd</sup> May, 2023*

*Date of receipt revision: 15<sup>th</sup> May, 2023*

*Date of delivery revision: 08<sup>th</sup> May, 2023*

*Date of approval: 01<sup>st</sup> June, 2023*

## 1. Introduction

In business and finance, payability is individual's ability to meet their long-term fixed expenses. The payability in developing countries has become a major issue in the management's agricultural credit, particularly for smallholder farmers with limited mortgage assets. Social Policy Bank is one of the economic leverage tools in country to help poor, near-poor farmers and policy beneficiaries to access preferential credit capital, developing production, improving living conditions, rising out of poverty in order to contributing to the implementation's economic development policies associated with hunger eradication and poverty alleviation in social security. Social funds provide for poor and near poor farmers to purchase machinery, equipment, tools, seedlings, fertilizers, livestock feeds... to develop production and business. Although the Social Policy Bank operates for non-profit purposes, is guaranteed the payability by the government, the compulsory reserve ratio is 0%, does not have to participate in deposit insurance, is exempt from tax and budget payables but the risk of capital losses arising when the borrower fails to make repayments of debt, including interest or principal upon maturity or loss of principal. That is a matter for which the social policy banks still have to interested in it, to maintain capital for survival and development.

The payability referred to the total amount loans be paid on time in the contract (Godquin, 2004; Nawai & Shariff, 2012). Thus, when the borrower pays the total amount of the loan on time, repayment is considered effective. Social policy banks are always concerned about the payability or the repayment performance to minimize the risk of their operations. This study focuses on consideration of the factors affecting the payability of agricultural farms in Vinh Long province, Vietnam.

## 2. Literature reviews

In earlier times, the study focused on group-based lending (Besley & Coate, 1995; Ghatak, 1999; Godquin, 2004; Sharma & Zeller, 1997), the researchers said that the group-based lending repayment reduced risk, increased repayment capacity, therefore they recommend that credit institutions provide group-based lending. The recent research has to change, some studies indicate group lending was not necessarily reduce the risk that uses of the direct supervisor, regularly repayment schedule and uses of non-refinancing threats are factors to produce high repayment rates of from low-income borrowers without requiring collateral and without group lending contracts which have a general responsibility (Aghion & Morduch, 2000). These studies focused on the personal lending repayment (Aghion & Morduch, 2000; Nawai & Shariff, 2012; Young-Chul, 1978). The credit institutions providing funds to low

\* Tien Giang University; email: lythingocsuongg@tgu.edu.vn

income groups tend to choose the main market segments as rural and farmers. Many studies have examined the factors affecting to the payability of agricultural farms.

Young- Chul studied the factors affecting the small farm's repayment ability in South Korea. The purpose of this study was to assess the farmer's repayment performance repayment and to examine the factors affecting the small farm's repayment ability in South Korea. Farm size, the process of surveying when the loan is made, the profit of the farm affect the repayment ability, in which farm size has a negative impact to the repayment ability (Young-Chul, 1978).

In another study of the factors affecting the smallholder's repayment ability in Malawi, China et al. (1997) has shown income from the crop, farm size, level of diversification, received conversion income and quality information affecting the farmer's repayment ability (Chirwa, 1997).

Okorie examined the determinants of the small farmers' repayment who were customers of State Agricultural Credit Corporation Ondo in Nigeria. The four key determinants that was identified to have a great impact on the repayment performance of farmers, including: the nature of disbursements, the timeliness of disbursements and profitability of the business has been invested capital (Okorie, 1986).

In Orebiyi's research, the author showed the decisive factors affecting the payability of agricultural farms were the loan amount, age, the literacy level of the borrower, the level of loan supervision(Orebiyi, 2002).

Oke et al studied the factors affecting the payability of agricultural farms in south Western Nigeria.

The study indicated to the factors affecting the payability of agricultural farms include: income, ability of interaction with the bank, amount of business investment, loan amount, level of access to business information, penalties for late repayment. The number of days between loan application and disbursement date, poverty index. Poverty index is a factor hindering repayment (Oke, Adeyemo, Agbonlahor, 2007)

Afolabi showed that Factors affecting the payability of agricultural farms were farming experience, income from agriculture, non-farm income, farm size, non farm expenses, interest rates, cultivation cost. In particular, cultivation cost and interest rate have negative impact on repayment ability. The study identified the reasons for the unpaid debt were crop failures, family commitments, disbursement of loan funds, high production costs, loan amounts, experience, gross farm income, interest rates and non-farm income have a significant impact on repayment ability. However, family size and non-farm expenditure have a negative impact on repayment

ability (Afolabi, 2010).

The factors including the loan purpose, interest rates, income after borrowing, age of farmer, key products to generate farm income, the level of household head's education were factors affecting the repayment ability of farmers in Hau Giang province, following to Loc & Binh (Loc & Binh, 2011).

Nghi pointed out that the educational level, ethnicity, savings and loan purpose have a positive impact on the payability of agricultural farms on time in rural areas of Tra Vinh province; while the factor proportion of dependents, loan purpose, interest rate and age have a negative impact on the payability of agricultural farms on time (Nghi, 2012).

#### Research model and hypotheses

Based on previous studies on the factors affecting the payability of agricultural farms on time in agricultural field (Afolabi, 2010; Chirwa, 1997; Loc & Binh, 2011; Nghi, 2012; Okorie, 1986; Orebiyi, 2002; Yotopoulos, 1976; Young-Chul, 1978), and a number of other studies on the payability of agricultural farms without the agricultural sector, such as services, trade and retail in rural areas (Aghion & Morduch, 2000; Nawai & Shariff, 2012), the study propose a research model with the expectation of variables following.

The research model is defined as follows:

$$\text{Log}(S) = \alpha - \beta_1 \text{Age} + \beta_2 \text{Edu} + \beta_3 \text{FI} - \beta_4 \text{SFarm} - \beta_5 \text{DE} - \beta_6 \text{IR} + e_i$$

Where,

S: The payability (Y = 0; Y = 1) .

Age: Age of the borrower (years)

Edu: Education level of the borrowers

SFarm: Farm size (ha)

FI: Farm income (million VND / year)

DE: Natural disasters, epidemics

IR: Interest rate (% /month)

**Table 1. Interpretation of independent variables in research models and research hypotheses**

Variable	Expected	Source
Age	-	(Aghion & Morduch, 2000; Loc & Binh, 2011; Nawai & Shariff, 2012; Nghi, 2012; Orebiyi, 2002)
Educational level	+	(Loc & Binh, 2011; Nghi, 2012; Orebiyi, 2002)
Size of Farm	-	(Young-Chul, 1978)
Farm income	+	(Loc & Binh, 2011; Oke et al., 2007; Okorie, 1986; Young-Chul, 1978)
Impact of natural disasters, epidemics	-	(Afolabi, 2010)
Interest rate	-	(Afolabi, 2010; Loc & Binh, 2011; Nghi, 2012)

### 3. Methods

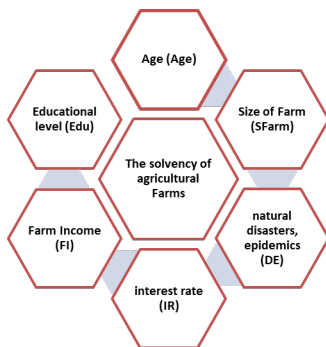
Multivariable linear regression method was used to determine factors affecting payability of agricultural

farms in Vinh Long province, by the questionnaire was designed based on previous research, based on two major studies of Afolabi (2010) and Nghi (2012) (Afolabi, 2010; Nghi, 2012). These test questions have been reviewed by some experts with experience in credit management at social policy banks and farmers with bank loans on production.

The questionnaire has questions that are used to collect general information on respondents such as gender, education, experience, ethnicity, age, occupation; the question's information to assess the payability of agricultural farms on time.

Respondents were farmers using bank loans in Vinh Long province, Vietnam. Samples were selected by random sampling. The questionnaires were sent directly to the respondents (the farmer borrows money from the bank, with a deadline for compulsory loan before February 2018), with a total of 626 questionnaires. Collection of questionnaires was conducted by the research team for a period of approximately three weeks. After eliminating invalid responses, the total number of questionnaires were 297. Data after being stored and processed on two software are excel and SPSS ver26.

Figure 1. Research Model



4. Data Analysis

According to the survey results, 297 farmers in Vinh Long province have 51,3% of primary school, 27,8% of lower secondary and 20,9% of upper secondary education. The survey also shows that the age of the head of household is mostly from 20 to 60 (accounting for 22% to 68%). The farm size ranges from 1 to 3 hectares. Most of the income of household is from 100 million to less than 300 million VND (65%).

As a result of the survey on household's loans, interest rates ranged from 0.8% per month to 0.98% per month.

The model determines the repayment ability based on six independent factors, including Age, Edu, Sfarm, FI, DE, IR and dependent variable are R.

Binary dependent variable has two values 0 and 1 corresponding to default and debt repayment.

Table 2. Omnibus Tests of Model Coefficients

		Chi-square	DF	Sig.
Step 1	Step	84.395	6	.000
	Block	84.395	6	.000
	Model	84.395	6	.000

Table 3. Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
first	36.536 <sup>a</sup>	.461	.783

a. Estimation terminated at iteration because parameter estimates changed by less than .001.

On the Model Summary table: The -2 Log likelihood index of the model is 36.536<sup>a</sup> shows the suitability of the overall model of the authors proposed above.

Table 4 Classification shows the classification of payables and defaults on two criteria: real and predicted observations. Of the 22 observed cases of default, 18 were unlikely to be repaid, with a predicted rate of 81.8%. In 113 cases of debt repayment, 109 cases were expected to be paid, so the predicted correct rate was 96.5

Table 4. Classification

Observed		Predicted			Percentage Correct
		S			
		0	1		
Step 1	S	18	4	81.8	
		1	109	96.5	
Overall Percentage				94.1	

a. The cut value is .500

Table 5. Results table of variables in the equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Edu	2.591	1.168	4.925	1	.026	13.349
	Sfarm	1.147	.431	7.088	1	.008	3.149
	FI	1.163	.527	4.875	1	.027	3.199
	DE	-2.801	1.414	3.923	1	.048	.061
	Age	-1.537	.825	3.469	1	.063	.215
	IR	-23.425	6.762	12.000	1	.001	.000
	Constant	18.161	6.330	8.231	1	.004	77147508.701

a. Variable(s) entered on step 1: Edu, Sfarm, FI, DE, Age, IR.

Analysis of Binary Logistic regression on SPSS ver 26 to find the factors affecting the timely repayment ability due to the above model, with the hypothesis test Sig.F = 0.00 < 5%. The analysis showed that in the six independent variables included in the model, Age variables (Age) was not statistically with significant level at the 5%, the remaining five variables were statistically with significant level at the 5%, in which the educational level (Edu), size of farm (Sfarm), and farm income (FI) have a positive influence on the timely repayment ability. While the remaining factors as the interest rate (IR), impact of natural disasters, epidemics (DE) have a negative impact with the ability timely repayment ability of the farmers in Vinh Long province, Vietnam; in which, the interest rate factor



has the strongest impact on timely repayment ability of the farmers.

### 5. Findings and Implications

The result shows that the education level (Edu) of the farmers (borrower) has a positive impact on timely repayment ability. In general, the higher level of education can lead to the higher level of awareness, leading to a better management capacity, a better organization of production and business activities, thus generating better income. This finding is consistent with the initial hypothesis of the study and is consistent with the results of previous studies (Loc & Binh, 2011; Nghi, 2012; Orebiyi, 2002). In order to enhance the efficiency of timely repayment ability, the state managers, stakeholders in agricultural and rural development projects, hunger eradication and poverty reduction should have support programs, training, career counseling, agricultural production techniques for farmers to help them have better knowledge, organize the production process better.

Farm income (FI) has a significant positive effect on timely repayment ability of farmers. Obviously, the higher the income, the more likely timely repayment ability, because farm income is considered to be the main source of farmers' income. This result is consistent with the initial hypothesis of the study and consistent with the results of all previous studies (Loc & Binh, 2011; Oke et al., 2007; Okorie, 1986; Young-Chul, 1978)

The age of the farmer (borrower) (Age), the interest rate (IR) are two factors that have a negative impact on timely repayment ability. This can be explained. The higher the borrower's age, the higher the risk of repayment ability. Interest rates are a significant factor affecting timely repayment ability because interest rates are the cost of borrowing that the borrower has to pay, which is a reduction in net income of the farmer. Therefore, when reviewing loan applications to ensure the effectiveness of loan repayment, lenders should carefully assess the case of high age borrowers, the high number of dependents in the farmers. On the other hand, lenders need to have a reasonable interest rate policy so that the borrower can better guarantee their timely repayment ability. High interest rates can easily lead to low repayment ability. This result is consistent with the initial hypothesis of the study and consistent with the results of all previous studies (Afolabi, 2010; Aghion & Morduch, 2000; Loc & Binh, 2011; Nawai & Shariff, 2012; Nghi, 2012; Orebiyi, 2002)

Size of farm (Sfarm), according to research results, have a positive impact on household's timely repayment ability in Vinh Long province, Viet Nam. However, this result refutes the initial hypothesis of the study that there

is a negative relationship, which is also contrary to the results of previous studies (Afolabi, 2010; Young-Chul, 1978). In particular, Afolabi pointed out that family size has a negative impact on household's timely repayment ability, Young-Chul points out that farm size has a negative impact on farmer's timely repayment ability.

### 6. Conclusions

The results show five factors affecting the payability of agricultural farms in Vinh Long province, Vietnam, including three positive factors, two negative factors of the six initially factors of the research model. This result provides the basis for lenders to have a realistic view of their loan repayment effectiveness, and to adopt appropriate policies and practices to mitigate risk during operation. On the other hand, it can also help local, state, and local macro managers to adopt appropriate policies to implement poverty alleviation programs and ensure social security.

There are some limitations in this study, the factors only have a simple linear relationship, New research model may increase other factors and build a complex linear, nonlinear relationships due to show better influence, which may have intermediate variables. The sample size of the study, although appropriate, may increase further to ensure better representation for the whole.

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# TRANSPARENCY OF FINANCIAL INFORMATION AT LISTED BUSINESSES IN VIETNAM TODAY

Assoc.Prof.PhD. Ngo Thi Thu Hong\* - Lê Thanh Thanh Vy\*\* - Le Doan Minh Hien\*\*\*

**Abstract:** *Financial information of listed companies is always paid special attention by investors in particular and many economic actors in the market in general. In recent years, scandals related to information and disclosure of listed companies have raised doubts about the transparency of information disclosed in the market. The current situation of information disclosure of listed companies on the Vietnamese stock market has revealed a number of shortcomings, such as the number and types of violations on information disclosure of listed companies on the stock market. Although the stock market has decreased, the number of violations is still very large, the status of late submission of financial statements, the quality of information on the financial statements is not reliable. The article points out the above inadequacies as well as the causes and proposes some solutions to focus on perfecting the legal framework and guiding documents system, increasing the enforcement capacity of the market regulator, improving the responsibility of the market authorities social responsibility of listed companies thereby strengthening investors' confidence as well as market stability.*

• Keywords: *financial information, information disclosure, listed companies, stock market.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Thông tin tài chính của các doanh nghiệp niêm yết (DNNY) được các nhà đầu tư nói riêng và rất nhiều chủ thể kinh tế trên thị trường nói chung luôn dành một mối quan tâm đặc biệt. Trong những năm gần đây, những vụ bê bối liên quan đến thông tin và công bố thông tin của các DNNY đã làm dấy lên những nghi ngờ về tính minh bạch thông tin được công bố trên thị trường. Thực trạng công bố thông tin của các DNNY trên thị trường chứng khoán Việt Nam hiện nay bộc lộ một số bất cập như: số lượt và loại hình vi phạm về công bố thông tin của các DNNY trên thị trường chứng khoán tuy giảm nhưng số vi phạm vẫn còn rất lớn, tình trạng nộp báo cáo tài chính trễ hạn, chất lượng thông tin trên các báo cáo tài chính không đáng tin cậy. Bài viết chỉ ra những bất cập trên cũng như nguyên nhân và đề xuất một số giải pháp tập trung hoàn thiện khung pháp lý và hệ thống văn bản hướng dẫn, tăng khả năng thực thi của cơ quan quản lý thị trường, nâng cao trách nhiệm xã hội của các DNNY từ đó củng cố niềm tin của các nhà đầu tư cũng như tính ổn định của thị trường.

• Từ khóa: *thông tin tài chính, công bố thông tin, doanh nghiệp niêm yết, thị trường chứng khoán.*

## 1. Ask the problem

After more than a decade of operation, the stock market in Vietnam has gradually become stable and professional with the growth in both size and quantity, thereby contributing to creating favorable conditions for capital raising of enterprises. However, besides the achievements, the stock market in recent years also has many scandals, mainly related to the transparency of financial information disclosure of listed companies. This situation has greatly affected investors, causing serious impact on the stability of the market, making the stock market less transparent.

Around the world, research on information disclosure began to be carried out two decades ago. Paul M. Healy et al. (2001) studied the motivations for corporate disclosure and came to the conclusion: In order to improve the quality of information disclosure, the responsibility not only belongs to the management agency but also depends on the subjects participating in the information disclosure activities of the enterprise such as the audit department, media or business

\* Academy of Finance

\*\* CQ59/21.01CLC \*\*\* CQ59/22.03CLC - Academy of Finance

leaders. Zhang Yuemei and Li Yanxi (2008) studied the relationship between corporate governance and the quality of disclosed information of listed companies, drawing conclusions about the quality of disclosed information and the number of leaders. Independence in the corporate leadership, the corporate governance system and the enterprise's preferential regime have a close relationship with each other. Research by Frank Heflin et al. (2000) shows that the quality of financial information is fundamentally dependent on the information that enterprises will publicly disclose through the form of annual or quarterly financial statements, rather than in-depth analysis by business managers themselves... In our country, there have been some initial studies on different aspects of financial information disclosure, for example: Research by Le Trung Thanh (2010) based on secondary trading information on Ho Chi Minh City Stock Exchange (HOSE) from 2000-2008, using linear regression model to test efficiency of the stock market in Vietnam, the author concludes: the quality of information disclosure and the quality of information of listed companies are still low. Nguyen Thi Lien Hoa (2007) assesses the status of information disclosure activities on the stock market and proposes solutions to apply the construction and development of a digital information disclosure system using XML. Nguyen Trong Hoai and Le An Khang (2008) use econometric models to measure the level of asymmetric information of listed companies with investors.

Thus, it can be seen that, although there have been a number of domestic studies on the issue of information disclosure, up to now, the research works are no longer topical and have not fully updated the variables. The latest in stock market activity today. Therefore, this study to identify more fully the status of information transparency of listed companies is really necessary to provide the most comprehensive and fresh view. Thereby helping policy makers make reasonable adjustments to enhance the quality of information as well as help shareholders realize the need to strengthen corporate governance to improve the transparency of information.

## 2. Research methods

Overview method: Research and synthesize documents and information related to regulations on information disclosure of listed companies issued by the State Securities Commission, the Ministry of Finance and the Stock Exchanges. promulgate; the current status of information disclosure activities of enterprises listed on Vietnam's stock market.

Descriptive statistics method: This method is applied to study the current situation of information disclosure as well as the quality of information on the Vietnamese stock market. Studying many individual situations each year, the author generalizes about the situation of information disclosure in the market, thereby pointing out the causes and proposing solutions.

## 3. Results and discussion

**3.1. Result 1: Evaluation of the completeness and completeness of the legal framework on information disclosure of enterprises in Vietnam stock market**

The legal framework on information disclosure of enterprises listed on the Vietnamese stock market is quite complete and complete in terms of form. The highest legal document regulating the content of information disclosure includes the Law on Securities No. 70/2006/QH11 dated June 29, 2006; Law on Securities amending and supplementing No. 62/2010/QH12 dated November 24, 2010; Law on Enterprises dated November 29, 2005; Law on Accounting No. 03/2003/QH11. Besides, on the basis of economic integration, the Ministry of Finance has studied international accounting standards and promulgated Vietnamese accounting standards in order to unify the recognition and disclosure of financial and accounting information. companies on the stock market. Circular No. 200/2014/BTC on the corporate accounting regime clearly and strictly regulates the system of accounting accounts, the system of financial statements, the regime of accounting vouchers, the accounting book regime. In particular, regarding information disclosure on the stock market, the Ministry of Finance has issued Circular No. 52/2012/TT-TC guiding information disclosure on the stock market. According to Circular 52, a

number of contents on information disclosure are mentioned in detail and clearly, such as: subjects of information disclosure, time limit for information disclosure, types of information to be disclosed, means and means of disclosure form of information disclosure, financial reporting system, annual report. The violation of information disclosure is also regulated with a fine level depending on the nature and seriousness of the violation.

### 3.2. Result 2: Survey on the current situation of information disclosure of listed companies on Vietnam's stock market

The component disclosure indicators including the mandatory disclosure index and the voluntary disclosure index are also calculated to assess the compliance and voluntary disclosure level of enterprises. The compulsory information disclosure index is calculated based on the information indexes specified in the "Financial reporting system" according to Circular 200/2014/BTC. The voluntary disclosure index is calculated according to the remaining information index system, which is required to be disclosed in the Vietnamese accounting standard system. Through the calculation we have the following results:

**Table 1: Descriptive statistics of disclosure index**

Variable	Medium	Standard deviation	Smallest	Biggest
Disclosure index	0,7574533	0,05972758	0,55152	0,87879
Mandatory disclosure index	0,8765144	0,04713998	0,76316	0,99138
Voluntary disclosure index	0,4728125	0,1696668	0	0,83333

From Table 1, it can be seen that the average level of information disclosure of companies is 75.7% compared to the requirements, the maximum value is 87.9% and the smallest value is 55.2%. The values of disclosure indicators also differ significantly: The compulsory disclosure index has an average value of 87.7%, a maximum of 99.1%, a high of 76.3% of a minimum. much higher than the voluntary disclosure index, the average is only 47.3%, the maximum is 83.3% and the minimum is 0%. From this, it can be concluded that the level of information disclosure of companies is not high.

In fact, according to data from the State Securities Commission (SSC), the number and

types of violations on information disclosure by enterprises listed on the Vietnamese stock market are still many, however it has been on a downward trend in recent years. In 2010, breaches of information disclosure related to financial statements and corporate governance accounted for 72.58% of violations. In which, breaches of information disclosure related to corporate governance accounted for 30.93%, however, by 2016, the number of violations on information transparency in total violations decreased to 60.7% and decreased to only about 50% in 2018. Although the proportion of information disclosure violations has decreased, the level of violations and the number of violations tend to increase. According to this agency's statistics, in the period 2010-2016, the State Securities Commission issued more than 1,000 decisions to sanction administrative violations on the stock market. In 2017 alone, this number was 214 decisions sanctioning 80 individuals and 134 organizations.

In 2018, there were 397 violations of 129 organizations and 268 individuals, of which, 9 individuals were punished for manipulating and creating fake supply and demand; forced information correction for 3 cases of inaccurate reporting or disclosure of false information, forced relinquishment of voting rights for 1 case of violation of public tender.

The violations mainly focused on the reporting and information disclosure regime of public companies and listed enterprises; violations on stock trading reports of internal shareholders and major shareholders; stock manipulation; operate in contravention of the contents specified in the license. Thus, the overview of Vietnam's stock market in the period 2010-2020 shows that the percentage of listed companies that strictly comply with regulations on information disclosure is still very low.

The problem of delay and even failure to submit financial statements is a common violation, the publication of financial statements is still slow, must apply for an extension. To explain the delay in disclosing information about financial statements In the main, many businesses often give objective reasons such as accounting and auditing work that

takes a long time; subsidiaries... According to statistics of Ho Chi Minh City Stock Exchange, the number of violating enterprises on the floor due to late submission of financial statements is very large, specifically:

**Table 2: Percentage of enterprises that are late in submitting financial statements**

Year	2020	2021	4/2022
Number of violations of late payment	95	114	41

Late submission of financial statements of enterprises not only occurs in many enterprises but also repeats many times in the same enterprise. Typically, from 2015 to now, Hanoi Kinh Bac Agriculture and Food Joint Stock Company (HKB) has had more than 20 errors about delay in information disclosure, or Hoang Anh Gia Lai Group Joint Stock Company (HAG) and its subsidiary, Hoang Anh Gia Lai International Agriculture Joint Stock Company (HNG), were reminded by the Ho Chi Minh City Stock Exchange about the late submission of audited financial statements in 2015. mother and merge; late submission of audited financial statements in 2016 of the parent company and the consolidation, thus these two enterprises have been delayed in submitting audited financial statements for 2 consecutive years.

In addition to the late submission of financial statements, the unreliable quality of information in financial statements is also a common violation. This is reflected in the significant difference in the pre- and post-audit financial data of listed companies. For example, there are a few violations from 2010 to 2018. In 2010, most of the listed companies mainly suffered a decrease in profits after the audit. At the top is Sara Group Joint Stock Company (SR) with a reduction in profit after audit of more than 60%. Even, there are cases of converting from profit to loss as in the case of Dong Do Maritime Joint Stock Company, the profit after tax in 2010 before the audit was 473.6 million, but according to the financial statement after the audit, the Company was loss to 74.3 billion dong. The year 2011 can be considered as a typical year of the status of post-audit profit transition, from profit to loss, from light loss to heavy loss, a very few change from loss to profit. Typically, Vietnam

Italy Steel Joint Stock Company (VIS), the profit after tax in the pre-audit report was 110 billion dong, but after the audit it was 27.2 billion dong, equivalent to 75% of the difference. The review shows that the audit adjustments are mainly in financial expenses. In the same year 2012, the coal industry left its mark with the fact that all 8 listed coal enterprises had significant deviations in their financial statements after the audit. A sharp increase and a deep decrease after the audit caused a lot of dissatisfaction and even damage to investors. In 2013, the deviation of audit data does not seem to have decreased. Some typical enterprises in the difference in data before and after the audit in 2013 can be mentioned as: Vinh Plastic Packaging Joint Stock Company (VBC) has a profit after tax after audit of 22.26 billion VND, down 141 million dong. In 2016, Hoang Anh Gia Lai International Agriculture Joint Stock Company (HNG) was also fined 85 million VND for publishing false information. Accordingly, HNG has announced the target of profit after corporate income tax in 2016 in the separate financial statements of the fourth quarter of 2016 is 209 billion VND, in the 2016 audited separate financial statements is 106 billion VND... And most recently, on January 14, 2019, the State Securities Commission issued a Decision on sanctioning administrative violations in the field of securities and stock market for Rubber Joint Stock Company. Tan Bien - Kampongthom (TKR). Specifically, TKR was fined VND 85 million for disclosing inaccurate and misleading information about the use of capital obtained from the 2017 private placement in the notes to the 2017 Consolidated Financial Statements. has been audited. In addition to violations due to late submission of financial statements and dishonest financial statements, many listed companies have not disclosed unusual information fully and responsibly. It can be seen that, from large enterprises to small enterprises, the level of fulfillment of the obligation to disclose information on the stock market in general or the responsibility for shareholders in particular is still very weak.

#### 4. Solution and conclusion

Assessing the status of information disclosure and transparency of enterprises listed on Vietnam's

stock market in recent years, a representative of the State Securities Commission said that the quality of information disclosure has improved. benevolent. Enterprises when issuing shares, in order to attract the attention of domestic and foreign investors, must strive to achieve the conditions of the offering. When enterprises list securities or register for stock trading, the management agency and the market have conditions to control the publicity, transparency, business activities as well as the quality of public administration. company of the enterprise. Therefore, basically, listed companies have become more conscious in complying with the reporting obligations, information disclosure and corporate governance according to regulations. However, there are still many violations of information disclosure on the stock market, and the level of information transparency is still very low.

The above limitation has both other objective and subjective reasons such as incomplete legal regulations on information disclosure; awareness of compliance with regulations of some organizations and individuals participating in the market is still incomplete; sanctions are not strong enough...

It can be affirmed that the phenomenon of impartially listed enterprises violating information disclosure is because the sanctioning decisions of the management agencies are too light. For example, in the case of Kim Vi Stainless Steel Import-Export Production Joint Stock Company (KVC). This is an enterprise that regularly violates regulations on information disclosure on the Stock Exchange. Recently, KVC was sanctioned by the State Securities Commission for a series of violations such as: late submission of financial statements, late submission of explanations for profit differences, land transfer contracts, decisions on financial investment in the Company. Ben Thanh Long Hai shares... Although the State Securities Commission mentioned the aggravating circumstances due to administrative violations many times, but the sanction was only 100 million dong.

Similarly, with more than 20 violations of information disclosure delay from 2015 to now,

Hanoi Kinh Bac Food and Agriculture Joint Stock Company (HKB) was only sanctioned by the State Securities Commission 70 million dong. Or like the case of Passion Investment Joint Stock Company (PIF), which was fined VND 62.5 million by the State Securities Commission for a series of violations in the purchase and sale of shares but did not disclose information. With HAG, despite continuous violations for a long time, this business was only fined 60 million VND.

With the above sanction, it is not difficult for the enterprise to impartially violate information disclosure. According to PhD. Truong Huy Mai, an independent financial analyst, the State Securities Commission needs to have a more resolute solution to ensure the publicity and transparency of audited financial statements of public companies. to the market; strengthen supervision of information disclosure of listed organizations, supervision of audit quality of financial statements of approved auditing organizations; strictly handle organizations disclosing information with inaccurate or misleading content in financial statements; handle audit organizations; audits that perform audits do not meet quality requirements.

However, the most important thing is still the sense of the business. If the breach of information disclosure is not remedied, it will negatively affect the image and the ability to attract capital on the Stock Market will also decrease significantly. Enterprises should not consider information disclosure simply as compliance with the law, but should be viewed as an act of responsibility.

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# R-SQUARED AS THE MEASURE OF RETURN SYNCHRONICITY: A REVIEW OF EMPIRICAL LITERATURE

PhD. Nguyen Trung Giang\* - PhD. Vu Thi Phuong Lien\*

**Abstract:** As mentioned in Roll (1988), the maturity of science is defined by its forecasting ability of the phenomenon. In finance, stock return is, perhaps, the most important phenomenon that captures the attention of many stakeholders. However, our ability to predict it is highly limited. The ability to predict a phenomenon depends on the availability of information about it. Financial literature commits huge sources to quantify the extent to which stock return reflects the available information. One of the streams of literature relies on the variation of an individual stock return that calls stock return synchronicity to measure the information content of stock price. This paper summarizes what we have known about return synchronicity and suggests potential research areas in developing markets.

• Keywords: R-squared, stock return synchronicity, co-movement, information.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Như Roll (1988) đã đề cập, sự trưởng thành của khoa học được xác định bởi khả năng dự báo của nó về hiện tượng. Trong tài chính, lợi nhuận chứng khoán có lẽ là hiện tượng quan trọng nhất thu hút sự chú ý của nhiều bên liên quan. Tuy nhiên, khả năng dự đoán của chúng tôi rất hạn chế. Khả năng dự đoán một hiện tượng phụ thuộc vào sự sẵn có của thông tin về nó. Các tài liệu về tài chính cam kết cung cấp các nguồn khổng lồ để định lượng mức độ mà lợi nhuận chứng khoán phản ánh thông tin sẵn có. Một trong những luồng tài liệu dựa trên sự thay đổi của tỷ suất sinh lợi cổ phiếu riêng lẻ gọi là tính đồng bộ của tỷ suất sinh lợi cổ phiếu để đo lường sự tranh chấp thông tin của giá cổ phiếu. Bài báo này tóm tắt những gì chúng ta đã biết về tính đồng bộ của lợi nhuận và đề xuất các lĩnh vực nghiên cứu tiềm năng tại các thị trường đang phát triển.

• Từ khóa: R-squared, đồng bộ lợi nhuận cổ phiếu, đồng chuyển động, thông tin.

## 1. Introduction

Much research showed that emerging markets exhibit higher stock price synchronicity than developed economies. Stock synchronicity refers to the tendency of a stock market to move in the same direction in a particular period of

time; such as a given day or week, and it could be upward or downward depending upon the overall movement of the stock market. Morck et al. (2000) are among the first who propose two models to measure stock return synchronicity over a particular period of time, and both models capture the level of firm-specific information that is reflected in individual firm share prices.

Stock return synchronicity is estimated as the logit transformation of the R-squared statistic from a two-factor regression, which reflects the proportion of variation in the return of an individual stock, explained by the market and industry return. Stock return synchronicity measures the degree to which individual stocks commove with the market, reflecting the amount of systematic volatility relative to idiosyncratic volatility (or total volatility). In empirical analyses, stock return synchronicity is typically measured by the R-square derived from the standard market model.

While extensive studies have been written on stock return synchronicity, whether a higher R-square reflects a higher or lower level of informativeness of stock prices remains a point of debate. Morck, Yeung, and Yu (2000), Wurgler (2000), Durnev, Morck, and Yeung (2004) suggest that companies have higher stock return synchronicity because less firm-specific

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information is being incorporated into the stock prices. Therefore, stock prices for companies with a higher R-square are less informative. However, Kelly (2005) and Dasgupta, Gan, and Gao (2010) argue that the rapid incorporation of information into stock prices reduces idiosyncratic return volatility and raises the R-square. As a result, higher stock return synchronicity reflects a higher level of price informativeness. Chan, Hameed, and Kang (2013) find a positive relation between stock return synchronicity and liquidity, arguing that stocks with less firm-specific information face less information asymmetry. It means when there is no or little analyst coverage, investors are more concerned about the information asymmetry of a company with lower stock return synchronicity.

This paper summarizes what we have known about return synchronicity and suggests potential research areas in developing markets.

## 2. Definition of return synchronicity

Forecasting ability is a measure of the maturity of a science. Astronomy has a mature system to predict the positions of planets and the reappearance of comets with a high degree of accuracy. The trivial prediction errors in forecasting astronomical phenomena are because of the extraordinary regular pattern. Financial economists also put significant effort in predicting stock returns, however, almost financial models cannot capture the price behavior accurately.

To forecast stock prices with available information, researchers incorporate authenticated information into it. These pieces of information include (1) the macro-pervasive economic factors, (2) changes in the firm's market environment, i.e., industry information, and (3) firm-specific events. Quantifying to what extent the stock price movement captures these pieces of information, financial researchers (pioneer is Roll (1988)) rely on the R-squared of a regression model in which, individual stock return is regressed on the market return and industry return<sup>1</sup>.

Basically, R-squared is estimated in an asset pricing model. The model may be a single factor or multiple factors. The general form of the model is as follows:

$$r_{j,t} = a_j + b_{1,j}f_{1,t} + \dots + b_{k,j}f_{k,t} + e_{j,t} \quad (1)$$

Where  $r_{j,t}$  is the total return on stock  $j$  in period  $t$ ,  $f_{i,t}$  is systematic factor  $i$  in period  $t$ , the  $a$ 's and  $b$ 's are estimated regression coefficients, and  $e_{j,t}$  is the "unexplained" return. The adjusted R-squared from such a regression is defined as

$$R^2 = 1 - \left[ \frac{T-1}{T-k-1} \right] \left[ \frac{s^2(e)}{s^2(r)} \right] \quad (2)$$

Where  $T$  is the time-series sample size and  $s(x)$  is the sample standard deviation of  $x$ . From the general form, the model is adjusted to incorporate the appropriate piece of information. For example, if the model is to test the reflection of market events on an individual stock return, it will be a single-factor model with one independent variable of the market return.

## 3. Stock return synchronicity as a measure of firm-specific information

Following the comment of Roll (1988) that low R-squares seem "to imply the existence of either private information or else occasional frenzy unrelated to concrete information", the link between stock return synchronicity and firm-specific information has been extensively explored and has triggered much debate. Two dramatically different views on the information implication of the stock return synchronicity have emerged.

One school of research supports the information-based explanation of stock return synchronicity. Morck, Yeung and Yu (2000) find that stock return synchronicity is higher in countries with weaker protection for private property rights. They argue that weak property rights discourage informed arbitrage, leading to a slower incorporation of firm-specific information into stock prices and larger stock return co-movement across firms. In a firm-level study within the US market, Durnev, Morck, and Yeung (2004) examine the relation between stock return synchronicity and the accounting measures of stock price informativeness. They find that greater firm-specific stock return variation (or lower R-square) is associated with the more informative stock price, which price informativeness is defined as how much information stock price contains about future

<sup>1</sup> After Roll (1988), there are many researchers rely on R-squared as a measure of stock price co-movement (Ashbaugh-skaife, Joachim and Ryan, 2006; Eun, Wang and Xiao, 2015; Morck, Yeung and Yu, 2000)



earnings. Since these findings, Piotroski and Roulstone (2004); Jin and Myers (2006); Hutton, Marcus, and Tehranian (2009) provide evidence that supports the extent to which stock return co-movement conveys market level, industry level, and firm-specific information. They all rely on the R-square as the measure of stock price informativeness and find that firms that are in a more transparent environment have lower R-square. Gul, Srinidhi, and Ng (2011) confirm that the stock return synchronicity is higher if there is less firm-level information in the market and provides evidence of the validity of R-square as an information measurement in China.

There are two papers that provide a direct measure of firm-specific information and link the effect of these information measures to stock return synchronicity. Gul, Srinidhi, and Ng (2011) propose a measure of firm-specific information as the geographic distance from investors to the firm. They find that firms located in metropolitan areas have higher firm-specific return variation and that holdings and trading by local institutional investors positively affect firm-specific return variation. Their findings indicate that higher firm-specific return variation is indicative of more informative stock prices. Dang, Moshirian, and Zhang (2015) developed a measure of firm-specific information using a unique global news dataset. They quantify the firm-specific information by co-movement of news sentiment between the firm and the market. They provide evidence that the availability of firm-specific information is an important factor driving stock return synchronicity.

Another school of research supports the opposite view that low stock return synchronicity is associated with stock prices that contain less firm-specific information because of limits to arbitrage or noise.

West (1988) theoretically proves that lower R-squared is associated with less firm-specific information and more noise in returns. In an empirical study in an international context of six large equity markets, Ashbaugh-skaife, Joachim, and Ryan (2006) find little support for using firm-specific return variation as a measure of firm-specific information. Kelly (2014) provides evidence that low R-square stocks have a poor information environment: high information costs

and greater impediments to informed trade, and the author concludes that low stock return synchronicity is not indicative of information. Teoh, Yang, and Zhang (2011) find high firm-specific return variation is related to the poor firm-level information environment, as measured by earnings quality, earnings persistence, and earnings predictability, and have a higher probability of distress. In a theoretical study, Dasgupta, Gan, and Gao (2010) develop a model that a more transparent information environment can lead to higher stock return synchronicity, and also have empirical evidence that supports the theoretical prediction.

Two recent papers have attempted to reconcile the opposing views on stock return synchronicity as a measure of information efficiency. Xing and Anderson (2011) propose that stock price synchronicity can be low in either good or bad firm-specific information environments because stock price incorporates both public and private information. The authors provide evidence supporting an inverse U-shaped relation between synchronicity and public information. Lee and Liu (2011) propose a theoretical model in which price informativeness and idiosyncratic volatility follow a U-shaped relation.

#### **4. The determinant of stock return synchronicity**

As suggested by Roll (1988), the ability to forecast stock return - one of the most important financial phenomena is a key that proves the maturity of finance. Since his study, numerous studies have been conducted to find the factors that impact stock return synchronicity in cross-country and firm-level contexts.

In the series of cross-country analyses, the authors argue that the heterogeneity of the information environment caused by the difference in institutional contexts decides the level of stock return synchronicity. Morck, Yeung, and Yu (2000) find that stock return synchronicity is higher in emerging markets than in developed markets due to weak protection for property rights. Jin and Myers (2006) theoretically complement the findings of Morck, Yeung, and Yu (2000) and observe that stock return synchronicity is greater in countries with more opaque information environments. They show that a lack of transparency enables insiders

to control firm-specific information flows to the public and therefore to absorb some firm-specific variation. Studying the effect of analyst coverage on cross-country stock price synchronicity, Chan and Hameed (2006) find that higher levels of analyst coverage enhance cross-country stock price synchronicity. They draw from their writing that analysts primarily produce market-level information. Studying the shock to the macro information environment, Fernandes and Ferreira (2009) show that stock prices are more informative after the enactment of insider trading laws in a sample of 48 countries. The effect is stronger in the developed markets. Yu (2011) provides evidence that the quality of corporate governance is positively related to the price non-synchronicity. She also attributes the positive relationship is stronger in these countries with better institutional infrastructure.

Another stream of literature focuses on firm attributes and stock return informativeness. Piotroski and Roulstone (2004) study how different market participants (including financial analysts, institutional investors, and insiders) affect a firm's information environment. Their findings show that stock return synchronicity positively related to analyst forecasting activities and inversely related to insider trades. Ferreira and Laux (2007) study the effect of the market for corporate control on the information disclosed to the market. They find that idiosyncratic risk is weaker in the group of firms those degree of insulation from takeovers is higher. Their result suggests a tight link between openness to the market for corporate control and the openness of information flow to the market. Hutton, Marcus, and Tehranian (2009) examine the opaqueness at the firm level and stock return synchronicity and provide evidence that is consistent with the previous findings of an association between opacity and higher stock return synchronicity. Brockman and Yan (2009) argue that with the informational advantage, the activities of blockholders will increase the idiosyncratic information of the firm. Their findings support the conjecture. Blockholders increase the probability of informed trading and idiosyncratic volatility and decrease the firm's stock return synchronicity. These results hold for both inside and outside blockholders but are insignificant for blocks

controlled by employee stock ownership plans (ESOPs). Gul et al. (2011) show that stock prices of firms with gender-diverse boards reflect more firm-specific information, and the relationship is stronger for firms with weak corporate governance suggesting that gender-diverse boards could act as a substitute mechanism for corporate governance that would be otherwise weak.

In an international context, Morck et al. (2000) and Jin & Myers (2006), China expresses a very high stock return co-movement. In the forty countries sample of Morck et al. (2000), the stock return synchronicity of the Chinese stock market is ranked as the second high across the full sample. Jin and Myers (2006) propose a new test in the same sample of countries as Morck et al. (2000) but in the different periods. Their findings show that Chinese stocks express the highest stock return synchronicity. These results bring the attention of financial researchers to the Chinese market. Gul et al. (2001) find that the stock return synchronicity is associated with the concentration of firms' ownership structure, foreign shareholders' ownership, and audit quality. Their finding supports the view that R-squared is a good measure of information quality. They also prove that the R-squared of Chinese stocks is associated with firms' ownership structure, foreign shareholder ownership, and audit quality. Hou, Kuo and Lee (2012) provide evidence that share structure reform in China improves the information environment of Chinese listed firms. Xu *et al.* (2013) confirm the positive role of analysts' coverage on stock price informativeness in the Chinese context. They further provide evidence that the higher quality analysts (star analysts) can strongly reduce the return co-movement. Digging deeper into the ownership structure and information quality, Ding *et al.* (2013) find the positive role of fund ownership on information contained in the stock price. Their findings, however, point out that the positive impact of fund ownership is diminished by state holdings.

## 5. The consequences of stock return synchronicity

### \* *The capital allocation of domestic firms*

Considering stock return synchronicity as the measure of information transparency, Wurgler

(2000) the tongue motor area was located significantly more superior to the Sylvian fissure and more anterior to the central sulcus than was the tongue motor area of patients without organic lesion. Both motor and sensory responses were found outside of the classic precentral or postcentral area on the lateral surface of the cortex. Motor responses ('parietal motor responses' shows that stock return synchronicity is negatively associated with the capital allocation efficiency of domestic firms across countries. Providing consistent findings, Durnev, Morck and Yeung (2004) showed that firms with higher firm-specific stock return variation are associated with higher quality capital budgeting in that their marginal Tobin's Qs are closer to one. They argue that the private information is stuck in price, as measured by price non-synchronicity, which enhances investment efficiency. Chen, Goldstein and Jiang (2007) argue that stock price is better reflecting corporate policy when the corporate information environment is more transparent. They use stock return synchronicity and probability of informed trading (PIN) as the measures of stock price informativeness. They find that non-synchronicity is strongly correlated with the sensitivity of investment to price.

**\* *The stability of the capital market***

They argued that the private information in price, as measured by price non-synchronicity, enhances investment efficiency. Chen et al. (2007) find that price non-synchronicity is strongly positively correlated with the sensitivity of investment to price, suggesting that stock prices with large content of private information provide managers with more new information, which, in turn, affects managers' investment decisions. Ferreira et al. (2011) find a negative relation between price informativeness and board independence, suggesting that firms with more informative stock prices have less demanding board structures. The higher stock return synchronicity can not only impact the efficiency of capital allocation and corporate governance, but also the stability of the capital market. Jin and Myers (2006) find opaque stocks with high synchronicity is more likely to crash. Managers conceal the bad news to protect their jobs, however, stock price crashes when accumulated bad news suddenly becomes publicly available.

The empirical results of Hutton et al. (2009) also support Jin and Myers' (2006) this prediction.

**\* *The corporate governance mechanisms***

Corporate governance mechanisms have a strong impact on R-square synchronicity values. Some research found that 'voice and accountability' is significantly associated with the R-square measure values. Previous studies also show that countries with high corporate governance mechanism exhibit a low level of stock market synchronicity. Examples include Germany and Japan. In addition, countries do not respect the private property rights has high level of corruption and also ranked low in corporate governance index, thus exhibits a high R-square values. Example includes China and Turkey (La-Porta et al. 1998).

**\* *The country geographical size***

There is also evidence that country geographical size has some impact on its R-square values thus stock synchronicity measure. For example, it is found that most of the countries of the world conduct the major part of their trading internally and large countries often have structured debt and equity markets which directly influence the growth of the economy; such as Australia and the USA. In contrast, smaller countries tend to have fewer large firms in their capital market which can manipulate the financial markets and could lead to higher stock price synchronicity (Morck et al 2000). However, it is assumed that the geographical size impact is not statistically significant in this case due to the small number of large countries in the sample. The study presented evidence that stock market synchronicity is higher in emerging markets than the developed economies using the R-square measure.

**\* *The inflation***

There is also evidence that high inflation, the country's geographical size, low level of corporate governance mechanism and inflation causes the stock price to move in the same direction in emerging economies. It is found that R-square values are lower in high inflationary economies than in low inflationary economies though the result is not statistically significant. Morck et al. (2000) argued that high inflation causes high stock price synchronicity in emerging economies. Further, the study finds evidence that emerging

countries like Turkey exhibits higher R-square values and also exhibit a high level of inflation. However, in recent years Turkey exhibits lower level of inflation which also affects its R-square values in sub-period 2002-03 and 2004-05.

#### \* *The firm's information environment*

Existing literature has taken the perspective that if a firm's information environment causes stock prices to reflect more firm-specific information, market factors should explain a smaller proportion of the variation in stock returns. The stock prices respond only to announcements that are not already anticipated by the market. When the information environment of a firm improves and more firm-specific information is available, market participants are able to improve their predictions about the occurrence of future firms. As a result, the surprise components of stock returns will be lower when the events are actually disclosed, and the return synchronicity will be higher.

#### 6. Conclusion

Overall, the co-movement of stock returns is an indicator of market-level, industry level and firm-specific level information transparency. It is measured by  $R^2$  in a regression model which quantifies the relationship between single or multiple factors on the focal firm stock return. There are many determinants of stock return synchronicity are identified at both firm and market levels. However, these findings are concentrated in the developed markets or an international context and lack evidence on the determinants and consequences of return synchronicity in the developing world. This gap motivates the development of a stream of literature committed to study developing contexts./.

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# PEER-TO-PEER LENDING: FINANCING SOURCES ALTERNATIVES FOR SMALL AND MEDIUM ENTERPRISES IN VIETNAM

PhD. Phung Thanh Loan\* - MA. Phung Thị Trang\*

**Abstract:** *In recent years, peer-to-peer (P2P) lending has emerged as an alternative to bank lending. P2P lending platforms connect lending-ready investors with borrowers looking for a loan, eliminating the need for banks to act as intermediaries. Given the widespread failure of banks to provide adequate loans to small and medium-sized enterprises (SMEs), this development could present a significant opportunity for SMEs. The potential of P2P lending for SMEs in Vietnam is clear, and the sector continues to grow. More and more SMEs are taking advantage of this financing model to access capital and grow their businesses. With the right support and regulation, this sector will continue to expand and provide a much-needed source of financing for SMEs. This paper aims to analyze the current situation of P2P lending in Vietnam and propose recommendations to encourage it to become a safe and effective capital supply channel for SMEs.*

• Keywords: *peer-to-peer lending, alternative financing, SMEs.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Trong những năm gần đây, cho vay ngang hàng đã nổi lên như một giải pháp thay thế cho vay ngân hàng. Các nền tảng cho vay ngang hàng kết nối các nhà đầu tư sẵn sàng cho vay với những người đi vay đang tìm kiếm khoản vay, loại bỏ sự cần thiết của các ngân hàng đóng vai trò trung gian. Với sự thất bại phổ biến của các ngân hàng trong việc cung cấp các khoản vay đầy đủ cho các doanh nghiệp vừa và nhỏ (SME), sự phát triển này có thể mang lại cơ hội đáng kể cho các SME. Tiềm năng cho vay ngang hàng dành cho các doanh nghiệp vừa và nhỏ ở Việt Nam là rất rõ ràng và lĩnh vực này đang tiếp tục phát triển. Ngày càng có nhiều doanh nghiệp vừa và nhỏ tận dụng mô hình tài chính này để tiếp cận vốn và phát triển kinh doanh. Với sự hỗ trợ và quy định phù hợp, lĩnh vực này sẽ tiếp tục mở rộng và cung cấp nguồn tài chính rất cần thiết cho các doanh nghiệp vừa và nhỏ. Bài viết này nhằm phân tích thực trạng cho vay ngang hàng tại Việt Nam và đề xuất các khuyến nghị nhằm khuyến khích hình thức này trở thành một kênh cung ứng vốn an toàn và hiệu quả cho các doanh nghiệp vừa và nhỏ.

• Từ khóa: *cho vay ngang hàng, tài chính thay thế, doanh nghiệp vừa và nhỏ.*

## 1. Introduction

Small and medium enterprises (SMEs) have an important role in the Vietnamese economy. According to the Ministry of Planning and Investment, in 2022, there were 785,000 SMEs, making up more than 98 percent of the total number of businesses in Vietnam. These SMEs created jobs for 70 percent of the total employees in Vietnam. SMEs are contributing to reducing the unemployment rate. Besides, SMEs contributed about 50% of the GDP.

From the data above, it can be said that SMEs are an important tool for Vietnam to develop its economic condition and reduce poverty and unemployment. However, SMEs themselves have some difficulties, such as difficulty raising capital from traditional banks. Lack of collateral and detailed financial information are the main problems that make it difficult for SMEs to access financing. If SMEs are not offered more financial opportunities, they may find it difficult to survive. Since SMEs are a crucial part of an economy, and employ a major part of the workforce, their failure of SMEs can have negative consequences for the economy. Therefore, any new practices that could potentially contribute to meeting the liquidity needs

\* Academy of Finance

of SMEs should be investigated. In this context, we investigate whether Peer-to-Peer (P2P) lending technologies (a type of financial technology (Fintech)) can enhance the financing of SMEs.

This article consists of six sections. Apart from the introduction, the literature review provides the definition, characteristics of P2P lending, and the implications of P2P lending for SMEs. The next part presents the situation of P2P Lending in Vietnam and some recommendations to develop P2P lending in Vietnam. The final part of the paper is the conclusion.

## 2. What is Peer-to-Peer lending?

When discussing P2P lending, we start with two other concepts, *Fintech* and *Crowdfunding*, which are highly related. Peer-to-Peer lending is part of Crowdfunding, an area of the Fintech landscape.

Financial Stability Board describes Fintech as technologically enable financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services. Fintech innovations are affecting many different areas of financial services.

Moving forward, *Crowdfunding* is the provision of funding for projects, individuals, commercial and non-commercial entities by raising funds, small and large, from large groups of individuals and institutions. Crowdfunding is usually performed online and has become a part of FinTech. There are four types of crowdfunding: donation-based crowdfunding reward-based crowdfunding, equity-based crowdfunding, and debt-based crowdfunding.

*Donation-based crowdfunding* is a form of donating to a cause or project while expecting nothing in return but the hope of a successful outcome, such as charity programs.

*Reward-based crowdfunding*: funders invest in a project or business with the expectation of receiving a non-financial reward in return. Rewards can vary from something simple such as a thank-you postcard or a T-shirt with a firm Logo to a unique service or a new product (pre-selling) in return for investment.

*Equity-based crowdfunding* involves raising capital from a large number of investors online through the sale of securities in a private company, typically a start-up or SME.

*Debt-based crowdfunding*: funders supply funds for a certain period, expecting to get the money back and a given interest. It is also called P2P lending.

P2P lending is used to describe online marketplaces where lenders (also referred to interchangeably as investors) can lend to individuals or small businesses. P2P lending involves the matching of borrowers and investors via an online platform with the P2P operator managing the repayment obligations of borrowers and acting as an agent for investors. P2P operators provide a quality assessment of the loan being offered and manage the obligations interest and principal repayments of the borrowers over several years. Based on the technology platforms of P2P Lending, information of borrowers is collected, appraised, screened, and sent to lenders. Lenders select possible funding requirements and decide on investment based on mutual consent (Davis & Murphy, 2016).

### *Key characteristics of P2P lending*

P2P lending is an innovation that uses new techniques to overcome financial frictions such as information asymmetry and transactional costs, making it attractive to borrowers because of its access to credit and/or the ability to receive more attractive interest rates than traditional loans. Initially, P2P lending was aimed at individuals and small businesses but it is now also expanding into trade credit and mortgages. The platform connected only small investors with borrowers, but gradually it has attracted the participation of institutional investors.

The P2P operator uses the online platform to directly match borrowers and investors. The P2P operator evaluates the loan requests and anonymously listed them on the platform if eligible. Information regarding the risk of the loans is also made public for investors to choose or type of loan based on their risk appetite. Investors are either forced or highly recommended to invest in smaller fractions of multiple loans rather than being

exposed to the risk of investing in a single loan. Once the loan has been fully funded, the borrower is granted the loan and the P2P operator will perform monitoring and management of borrowers on behalf of investors.

### 3. Implications of P2P lending for SMEs

P2P lending offers several potential benefits and drawbacks to both borrowers and lenders. On the plus side, P2P loans can serve credit needs in markets where traditional financial institutions would not lend. Beaumont et al (2022) show that SMEs have few tangible assets, thereby they face difficulties obtaining funding from banks. However, FinTech platforms can improve SMEs' access to finance by relaxing firms' collateral constraints. P2P lending platforms may be able to assess the credit risk of SMEs more accurately due to utilizing big data to incorporate factors that conventional banks may not consider. Therefore, the possibility for SMEs to get a loan will increase.

In addition, P2P lending platforms can reduce search costs for borrowers and lenders due to using proprietary credit scoring algorithms. This decrease in costs makes it economical for lenders to provide smaller and/or shorter-term loans to firms on which less information is available. Beaumont et al (2022) argue that P2P lending platforms have adopted streamlined and semiautomated screening processes, allowing them to make quicker decisions. Borrowers also benefit from reduced search costs, as P2P lending operators offer simple online forms and rapid application processing. Decreasing application time and credit requirements removes a significant barrier to capacity access loans of SMEs.

On the negative side, P2P loans tend to carry higher interest rates than traditional bank loans, or even business credit cards in certain circumstances. Afonso Eca et al identified that P2P loans are more expensive than the other types of debt that firms in obtain from traditional financing sources. Most loans are unsecured and lenders bear all risks, if a small business cannot make its payments, lenders have no recourse.

In conclusion, P2P loans offer the benefits of expedited application processing, smaller loan amounts, and shorter terms, but borrowers pay for

these conveniences in the form of higher interest rates.

### 4. Situation of P2P Lending in Vietnam

Compared to the world's P2P lending market, P2P lending in Vietnam remains quite small and inceptive. The trading volume of Vietnamese P2P lending companies accounts for 1.6% of the Southeast Asia region's trading. According to the State Bank of Vietnam (SBV), the number of Fintech companies in Vietnam has increased rapidly from about 40 companies at the end of 2016 to about 200 companies in 2022. There are about 100 operating companies in the P2P lending area, among them, many companies have foreign investments. Currently, Vietnam P2P lending companies are divided into four groups. The first group is the model of companies providing technology (also known as traditional P2P), these companies only provide a technology platform, receive a fee, and act as intermediaries connecting lenders and borrowers. These technology companies can cooperate with banks in payment and account management of customers at banks. For example, Lendbiz collaborates with PGbank and VIB to deploy account services for investment customers in Lendbiz. The second group is the technology companies that collaborate with some banks to lend to individual customers and micro-enterprises. For example, three companies (Dragon Bank, The bank, and Gober) connect with banks in finding potential customers. The third group is that P2P Lending companies mobilize capital by themselves via technology platforms such as apps or websites before lending. In nature, this is a banking activity and must be licensed. Finally, pawn companies create their apps and websites to lend in usury or link to technology companies to apply for pawn lending.

After 5 years of presence in Vietnam, P2P lending companies have attracted a significant number of borrowers and investors. The total amount of money transacted through Tima is up to nearly 100 trillion VND with nearly 3 million lenders. Lenbiz has attracted nearly 7,000 investors with more than 980 fundraising campaigns. By the end of 2021, this application has disbursed about 756 billion VND to businesses and business

households. Products of P2P Lending companies in Vietnam are quite diverse, including secured loans and unsecured loans. For individual customers, loan products such as unsecured loans according to salary, loans according to household registration books, loans according to motorbike registration, installment loans, and loans according to electricity and water bills. For corporate customers (mainly SMEs), lending products include receivables financing, buyer financing, working capital financing, and e-commerce financing. Lending interest rates range from 20-30%/year, much higher than that of commercial banks, but still lower than informal capital sources such as black credit.

*First*, at the beginning of 2023, thousands of SMEs are registered in Vietnam in the form of digital lending support. Fintech firms are establishing connections with commercial banks in the country to lend unsecured loans to individuals as well as to SMEs. There is a number of different ways to offer credit facilities from international funds or corporations for Vietnamese businesses, especially for SMEs. For example, Singapore-based Funding Societies is using a US\$22.5 million investment from gaming and payments platform provider VNG Corporation to develop a more physical system comprising 150,000 agents and retail locations, with the aim of disbursing US\$2 billion worth of unsecured loans to prospective SMEs. Meanwhile, Indonesian fintech Kredivo collaborated with local FI VietCredit and e-commerce platform Sendo to introduce buy now-pay later services for both consumers and SME businesses and micro-small businesses.

P2P Lending is growing gradually in Vietnam, but there is a lack of legal framework for this activity. First, there is no specific legislation for P2P Lending. Lending is one of the forms of credit extension and is regulated by the Law on Credit Institutions (2010). Meanwhile, P2P Lending is not stipulated by this law. Fintech companies operating P2P Lending or blockchain platforms are not licensed as credit institutions and are prohibited from conducting any banking activities including lending, providing guarantees, receipts of deposits, and payment services. P2P Lending operators are obliged to comply with the regulations of general laws such as the Civil Code 2015, the Law on

Investment 2020, and the Law on Enterprises 2020. Therefore, P2P companies in Vietnam are limited in their business activities and require registration of several conditional business lines if they wish to conduct some functions of a model P2P business (provision of guarantee for the repayment of loans, trading, and collecting overdue debts). P2P companies in Vietnam can only offer the most basic function of the model P2P business: the connecting of borrowers and lenders via their platforms. This is done through having licensed business lines such as financial management consulting, IT service, and brokerage.

*Second*, online loans from non-bank lenders are not subject to following specific requirements for the underwriting process like credit institutions. Article 17, Circular 39/2016/TT-NHNN stipulates for loans to be provided by credit institutions, lenders have to carry out an assessment of loan applications and a customer's ability to satisfy loan requirements. However, many fintech companies are applying various underwriting solutions using scorecards, transaction history data, assessment from professional rating service providers, AI, and big data on their P2P lending platforms.

*Third*, the law does not stipulate the sources of funds for a loan from non-credit institution lenders. According to Article 108.1 and Article 112.1 of the Law on Credit Institutions (2010), finance companies are not allowed to take deposits from individuals to fund their loans. However, in practice, most non-bank online loans on P2P platforms come from individuals' investment money. The laws are currently silent on the sources of loans provided by non-credit institution lenders.

*Fourth*, Circular 42/2011/TT-NHNN only governs the provision of syndicated loans by credit institutions to customers. P2P Lending platforms/applications can perform loan syndication but the laws have not stipulated this issue.

*Fifth*, P2P lending companies are operating under the Civil Code 2015, article 468 of the Civil Code, which stipulates that the lending interest rate is agreed upon by the parties but must not exceed 20%/year of the loan amount. Therefore, the lending interest rate of P2P lending companies usually does not exceed 20%/year. However, P2P



lending companies will charge additional fees associated with the loan. Therefore, the fees and interest that borrowers have to pay can be up to 30-50%/month, of which the consulting price is about 100,000 - 200,000 VND/a loan. Thus, there is a lack of regulations on lending interest rates and fees in P2P Lending.

### 5. Recommendations

The development of P2P lending platforms as an alternative financing model in the country makes it easier to mobilize capital from investors for SMEs. This paper gives some recommendations to develop P2P lending in Vietnam becomes a new capital supply channel for SMEs.

**First**, issuing regulations on licensing operations for P2P lending platforms. The licensing mechanism for P2P Lending companies should be based on the standards of minimum capital, technology capacity, management, and staff standards, and credit risk reserve. In addition, the SBV is the agency that manages lending activities in the economy, so it is necessary to clearly define the governing body for P2P lending as the State Bank.

**Second**, regulations on ensuring operational safety for P2P lending companies. P2P lending companies must build a public and transparent credit risk scoring system to ensure the interests of participants. Besides, there should be specific regulations on interest rates and fees related to P2P lending activities.

**Third**, regulate the policy of periodic inspection and supervision to protect the interests of investors and avoid negative impacts on the financial market. Establish regulations and monitor compliance on investment limits relative to investors' income, regulations on capital contribution limits of each investor, and regulations on the right to access information.

**Fourth**, upgrade the country's information technology infrastructure, especially the personal identification data base. Information technology risk management of the financial system.

**Fifth**, promote financial education for SMEs, business households, and people to raise awareness about P2P Lending and the risks for both lenders and borrowers when using this service.

### 6. Conclusion

When the production and business activities of enterprises gradually return to normal after Covid 19 - pandemic, the demand for loans to enterprises has increased as production and business activities slowly normalize. However, due to the inherent limitations of SMEs such as lack of collateral and incomplete financial information, these enterprises still face difficulties in accessing bank credit. In the context that the credit limit of many commercial banks has run out and market interest rates tend to increase, borrowing bank credit to finance production and business activities is an unfeasible option for SMEs. Therefore, it is necessary to develop an effective capital supply channel for SMEs in Vietnam. The Industrial Revolution 4.0 has changed many activities of the economy, and the lending sector is no exception. With the application of technology, P2P lending companies are becoming an effective capital supply channel for SMEs, replacing the traditional credit channel. To ensure safe and effective P2P lending activities for SMEs, Vietnam should perfect the legal framework to encourage these P2P lending activities for SMEs shortly.

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# BASEL III IN BANK RISK MANAGEMENT - A CASE STUDY OF BARCLAYS BANK

PhD. Vu Duc Kien\* - PhD. Dang Cong Hung\*\*

**Abstract:** *Barclays (in the United Kingdom) emerged as one of the banks having good management systems for credit risk, market risk, and capital risk. However, other principal risks also simultaneously arose which required improvement in risk management. Besides, Basel III is considered a good guideline for banks to control liquidity risk, credit risk, and capital risk, which contribute to ensuring operational risk, conduct risk, and reputational risk, as well as limit systematic risk in the financial system. Moreover, Basel III indicates banks' responsibility to stakeholders such as limiting equity exposure and controlling capital requirements. Through the case of Barclays bank, this study aims to provide regulation implications for the Vietnam State bank, and commercial banks when implementing Basel III.*

• Keywords: *Basel III, banks, risk management, Barclays bank, case study.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Ngân hàng Barclays (Vương quốc Anh) là một trong những ngân hàng có hệ thống quản lý rủi ro tín dụng, rủi ro thị trường và rủi ro nguồn vốn tốt. Tuy nhiên, các rủi ro chính khác đồng thời phát sinh đòi hỏi ngân hàng này nâng cao công tác quản trị rủi ro. Bên cạnh đó, Basel III được coi là một hướng dẫn tốt cho các ngân hàng trong việc kiểm soát rủi ro thanh khoản, rủi ro tín dụng và rủi ro nguồn vốn góp phần đảm bảo rủi ro hoạt động, rủi ro đạo đức, rủi ro uy tín cũng như hạn chế rủi ro hệ thống trong hệ thống tài chính. Hơn nữa, Basel III chỉ ra trách nhiệm của các ngân hàng đối với các bên liên quan như hạn chế rủi ro vốn chủ sở hữu và kiểm soát các yêu cầu về vốn. Thông qua trường hợp của ngân hàng Barclays, nghiên cứu này nhằm đưa ra các hàm ý chính sách cho Ngân hàng Nhà nước Việt Nam và các ngân hàng thương mại khi triển khai Basel III.

• Từ khóa: *Basel III, ngân hàng, quản trị rủi ro, ngân hàng Barclays, nghiên cứu trường hợp.*

## 1. Introduction

The biggest difference between banks and other organizations is their role in risk management as Walter Wriston, the former chairman of Citicorp,

said: “managing risk is the business of banking” (Salz, 2013). The 2008 financial crisis was like a test for the risk management of banks. In that context, Barclays emerged as one of the banks having good management systems for credit risk, market risk, and finding risk. However, simultaneously, other principal risks also arose which have required improvement in risk management. Basel III was offered as a Guideline for banks' risk management with the aim of avoiding another systemic crisis, but its impact on banks' risk management is still controversial and will be more thoroughly discussed in this paper. A review of Barclays bank's risk management during the financial crisis and the impacts of Basel III may provide lessons for Vietnam State bank and commercial banks when implementing Basel III.

## 2. The types of risk in Barclays bank and the way they have been managed since 2005

### 2.1. Distinguishing the different types of risk in Barclays bank

There are many types of risk relating to banking management. Due to the difference in objectives and strategies in different periods of business, banks concern about different types of risk. Table 1 presents seven principal risks in Barclays Bank and how they are managed.

\* Academy of Finance

\*\* Chief Accountant, People's Police Academy

**Table 1. Types of risk and the way they are managed in the Barclays**

	Objectives	Organisation and structure
<p><b>Credit risk</b> The risk of potential financial loss when any of the Bank's <b>customers or counterparties</b> defaulting on <b>payment obligations</b> to the Bank.</p>	<ul style="list-style-type: none"> <li>- Ensure that credit risk-taking is based on credit risk management principles</li> <li>- Identify, assess and measure credit risk clearly and accurately</li> <li>- Control credit risk-taking in line with external stakeholder expectations</li> </ul>	<p>Wholesale and retail portfolios are managed separately to reflect the differing nature of the assets:</p> <ul style="list-style-type: none"> <li>+ Wholesale balances tend to be larger and are managed on an individual basis</li> <li>+ Retail balances are larger in number but smaller in value and are, therefore, managed on a homogenous portfolio basis.</li> </ul>
<p><b>Market risk</b> Market Risk is the risk of <b>movement in market rates or prices</b> which will negatively affect on the Bank's earnings, capital, or ability to meet business targets.</p>	<p>Ensure that market risk in the businesses is controlled according to the allocated appetite.</p>	<p>Market risk oversight and challenge is provided by:</p> <ul style="list-style-type: none"> <li>+ Business committees</li> <li>+ Group committees including the Market Risk Committee and Group Market Risk.</li> </ul>
<p><b>Capital risk</b> is the risk that the bank has <b>insufficient capital resources</b> to:</p> <ul style="list-style-type: none"> <li>- Meet minimum regulatory requirements in jurisdictions where regulated activities are undertaken.</li> <li>- Support its credit rating.</li> <li>- Support its growth and strategic options.</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain adequate capital to cover the Group's current and forecast business needs and to withstand the impact of the risks.</li> <li>- Support a strong credit rating to lower the cost of the fund.</li> </ul>	<p>Capital demand and supply is actively managed:</p> <ul style="list-style-type: none"> <li>+ at a business level</li> <li>+ at a local entity level</li> <li>+ on a regional basis.</li> </ul>
<p><b>Liquidity risk</b> is the risk that the bank, although solvent, does not have sufficient financial resources available to enable it to meet its obligations as they fall due.</p>	<p>Maintain liquidity resources:</p> <ul style="list-style-type: none"> <li>+ sufficient in amount and quality,</li> <li>+ appropriate to maintain market confidence</li> <li>+ meet the liquidity risk appetite as expressed by the Board.</li> </ul>	<p>Liquidity is monitored and managed by:</p> <ul style="list-style-type: none"> <li>+ Barclays Treasury;</li> <li>+ Treasury Key Risk Officer;</li> <li>+ The Board;</li> <li>+ The Treasury Committee.</li> </ul>
<p><b>Operational risk</b> Any instance where there is a potential or actual impact to the bank resulting from <b>inadequate or failed internal processes, people, systems, or from an external event</b>. The impacts can be financial or non-financial.</p>	<ul style="list-style-type: none"> <li>+ Minimize the impact of losses suffered.</li> <li>+ Improve the effective management of the Group and strengthen its brand and external reputation.</li> </ul>	<p>Operational risk is monitored and managed by:</p> <ul style="list-style-type: none"> <li>+ The Head of Operational Risk</li> <li>+ The Operational Risk &amp; Control Committee (OR&amp;CC).</li> <li>+ Board Audit Committee (BAC).</li> </ul>

	Objectives	Organisation and structure
<p><b>Conduct risk</b> The risk that detriment is caused to customers, clients, counterparties or the Group because of <b>inappropriate judgement in the execution of the Group's business activities</b>.</p>	<ul style="list-style-type: none"> <li>+ Providing good customer outcomes;</li> <li>+ Protecting market integrity.</li> </ul>	<p>Conduct risk is monitored and managed by:</p> <ul style="list-style-type: none"> <li>+ The Conduct and Reputational Risk Committee (CRRC);</li> <li>+ The Conduct Risk Committee (CRC)</li> </ul>
<p><b>Reputation risk</b> The risk of damage to the Bank's brand arising from any association, action or inaction which is perceived by stakeholders to be inappropriate or unethical.</p>	<p>Support businesses and functions in dealing with reputation risks arising in their areas of activity.</p>	<p>Conduct risk is monitored and managed by:</p> <ul style="list-style-type: none"> <li>+ The Conduct and Reputational Risk Committee (CRRC);</li> <li>+ The Group Reputational Committee is a sub-committee of the CRRC.</li> </ul>

Source: Barclays Annual Report 2014

## 2.2. Evaluating risk management in Barclays Bank

### a. Credit risk, market risk, capital risk, and liquidity risk

Management of these four kinds of risk is essential in all banks and was strictly tested through the global financial crisis. For Barclays, these risks have been quite effectively managed. To be specific, Barclays had leading activities in risk management such as the early development of a formal risk appetite process for these kinds of risk (Salz, 2013), establishment of Group-level 'Mandate and Scales' framework to avoid risk concentration and manage large exposures (Barclays PLC, 2005). Besides, the stress testing and reporting process were well-managed (Salz, 2013). As a result, Barclays has overcome the financial crisis without a bailout from the government.

### b. Operational risk and conduct risk

While operational risk has had its own framework and possible losses from it can be measured to facilitate the management, there has not been a formal framework for conducting risk management. This is due to that operational risk has been managed for a long time, whilst conduct risk has just been on the list of principal risks of the bank since 2012, after some conduct-related matters (Barclays PLC, 2012).

The system of Barclays is quite complicated and need manual intervention, even in important processes such as the calculation of risk-weighted asset, client money segregation, or transaction reporting (Barclays PLC, 2012). This shortcoming in operation as well as lack of conduct risk management before 2012 led to the Libor-rigging Scandal in 2012. From 2005 to 2007, some employees of Barclays lied about the borrowing interest rate of the bank to benefit their traders. In the crisis of 2007-2008, some managers of Barclays mitigated Libor by providing the Libor calculator with a less expensive borrowing rate with aim of protecting their trading position (Fisher et al., 2013).

Barclays also was fined for a few events before and after the crisis such as breaches of US Sanctions in 2010, Gold fixing 2004 - 2012, and Forex fixing 2015, which revealed conduct-related problems inside the bank.

### *c. Reputational risk*

Before 2012, Barclays stated that individuals had responsibility for the impacts of their decisions on the bank's reputation. This lack of reputational risk management led to negative impacts after conduct-related problems were revealed. For example, in 2012, Barclays was downgraded by Moody's from Aa3/P-1/C to A2/P-1/C-, and by DBRS, from AA High/R-1 High to AA/R-1 High after the scandal of manipulating Libor and gold price (Barclays PLC, 2012).

Since 2012, Barclays tried to restore trust in the public by classifying reputation risk as one of seven principal risks. It created a reputational risk framework and a Board Conduct and Reputation Risk Committee in 2013 to manage reputational risk systematically. Training on reputational risk has been frequently conducted to convey knowledge and culture to employees. Reputational risk in Barclays has been consistently managed to reinforce its prestige among investors and regulators.

However, the Forex fixing scandal in 2015, which has been widely debated in media means, shows the problem in controlling the media of Barclays, which will be discussed more in part 3.

### **3. Barclays' regulation relationship in risk management**

According to Barclays Annual Report (2014), Barclay Group' daily regulations are controlled by Bank of England (BOE), which mainly includes: Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA). The Prudential Regulation Authority is considered as financial regulation that is responsible for prudential regulation and supervision of financial firms (Hanies, 2011). In addition, The Financial Conduct Authority is defined as a financial conduct works independently with UK government, and regulates business activity of financial corporations and maintains effectiveness of UK's financial markets (Kovas, 2015).

There are main Barclays' scandals that indicate some problems in their regulatory implication and fundamental roles of the Financial Service Authority (FSA) in controlling the risk management of Barclays, which are Fare Gold-Fixing, Libor-Fixing, and Forex Fixing.

According to Schäfer et al. (2014), Barclays was fined £26,033,500 by breaching principles 3 and 8 of FCA's principles for business associated with Gold-price-Fixing between 2004 and 2013. Barclays was accused of failing to adequately manage conflict of interest with customers as well as a control system for Gold Fixing (Treanor, 2014). Barclays had two policies to reduce conflict of interest such as Global conflict of interest (2011) and Global Code of Conduct (2012). However, FCA considered they are continuously failing to identify a conflict between consumers and banks in Gold Fixing (Financial Conduct Authority, 2014). Consequently, Barclays has improved systems by providing instruction for Precious Metal Desk and modifying the Conduct risk committee.

According to FSA (2012), Barclays was imposed a financial penalty of £59.5 million for breaching principles 2, 3, and 5 of FSA's Principles for Business by the misconduct of rate submission in terms of LIBOR and EURIBOR setting process. In addition, Barclays made inappropriate submissions by following derivative traders and avoiding negative comments, which were based on the failure of its system and compliance. With

the purpose of enhancing its systems and controls, Barclays released The December 2009 Policy that is based on Money Markets Desk. On the other hand, FCA considered this policy as a lack of guidance to LIBOR. Barclays continues to evaluate an enhancement of systems and its regulation based on FCA's evaluation.

The final penalty of Barclays for breaching Principle 3 of the Authority's Principles for business is £284,432,000. Barclays is accused of ineffectively managing and controlling its risk management system in accordance with the foreign exchange market in London (Financial Conduct Authority, 2015). One of the main problems is that Barclays mainly depended on front office FX business to evaluate its managing operational risk. On the other hand, FRA considered these offices' inadequate risk assessment has no automatic communication monitoring system. In Feb 2013, it did not solve the problem despite creating some automatic chat rooms. Furthermore, after Authority released its final notice, Barclays developed some programs to assess problems of benchmark and data submission. However, FCA considers it enhances management information tools and strengthens compliance actions but it does not focus on FX trading roots.

#### 4. Lessons from Barclays risk management

Despite being one of the most qualified banks, it inevitably has problems in its risk management system. There will be some lessons that are mainly based on three recent crises that Barclays had.

In the Gold Fixing crisis, the first problem is that Barclays' lack of regulation and procedures in operation and conduct to monitor trader orders and train staff. In addition, its policy limits its demonstration of how conflict might happen as a solution for customers. Therefore, Barclays should have specific policies and process guidance for employers to conduct related to Gold Fixing. In addition, Barclays should provide more instruction for training staff to adequately identify and manage risk from conflict of interest to customers.

In the case of LIBOR fixing case, Barclays was firstly not well-observed for standard application by following derivatives traders as LIBOR/EURIBOR submission is based on borrowing and

lending in the interbank market. Secondly, to avoid media suspicions of liquidity problems, Barclays maintains high LIBOR submission as it considered another bank submission is low and not well market reflection. The extension of system control LIBOR/EURIBOR is inappropriately reviewed and managed. Finally, Barclays' business conduct fails to consider due, care and diligence related to LIBOR submission and ineffective communication to FSA. Barclays should have a clear classification of the internal role of LIBOR. In addition, external sources should be analyzed in terms of information collection to manage media coverage. Moreover, the authority should provide a framework for Barclays to consider operations outside regulation for better application.

Forex fixing scandal demonstrates that Barclays inadequately identify steps to risk assessment and lacks proper controls over staff activities. In addition, general policies ineffectively control confidentiality, conflict of interest, insufficient trading, and guidance to regulations' application. Therefore, Barclays should provide more policies for employers' guidance in the FX market. Additionally, the authority should modify detailed steps and demonstrations for banks to evaluate their risk to resolve interest conflict in FX market operation. It is essential for FCA to modify more confidential information restrictions to enhance market efficiency.

Due to shortcomings in risk management, Barclays has applied Basel III as Guidelines to solve these problems and strengthen its advantages, which will be discussed critically.

#### 5. Basel III in risk management with reference to micro and macro prudential policy

Basel III, which was upgraded from Basel I and II, presents a guideline with a higher requirement in liquidity assets, net stable funding ratio, and capital holding in order to avoid risks faced by banks (BIS, 2010). Firstly, it increases the minimum capital requirement equal to 10.5% of risk-weighted assets, an increase of 2.5% higher than the previous one for purpose of mitigating credit risk. Secondly, the liquidity coverage ratio (LCR) was pegged at 30 days with aim of dealing with liquidity risk. Furthermore, the leverage ratio

which suggests total assets should not be higher than its capital by 33 times, regulates on amount of lending amount that a bank can raise related to its assets.

### ***5.1. Referencing micro-prudential policy and regulation***

Micro-prudential policy concentrates on helping individual banks prepare to fight financial downturns by forcing standards on assets and liability (BIS, 2010). Following Basel III, Barclays has created a target of 11% core tier 1 ratio from 9.6% in 2014 and increase the leverage ratio from 3.3% to 4% (Trefis Team, 2014). Given an individual bank, such as Barclays, using Basel III as a guideline for setting standards has both positive and negative results in risk management.

On the one hand, applying this guideline minimizes bankruptcy risk for the individual bank. This is the result of raising equity by creating more share capital. By holding more capital and liquidity assets enough to go through financial depression, banks will become less risky that boots investment and consumption in consequences of lower credit and liquidity risk. Admati et al. (2010) and Macroeconomic Assessment Group (2010) found results that are consistent with the above arguments.

Basel III hinders bank financing. In this paper, we will not talk about shortcomings that banks faced in terms of profit, but in terms of risk management when applying Basel III in micro-prudential regulation. As a consequence of raising more share capital, the lending cost grows up in case the cost of equity financing is greater than that of debt financing. This will break the equilibrium in supplying finance and funding risk. This slows down the forecast of economic growth by banks (Chiuri et al., 2002; Angelini et al., 2011).

### ***5.2. Referencing macro prudential policy and regulation***

In contrast to micro-prudential policy, the macro one focus on enhancing financial stability as a whole, which is eliminating the shock of all financial firms in case of endogenous risks happen (Akram, 2014). In order to do that, these regulations have to control the economy partly.

In view of regulators, strengthened regulation is one of the ways to manage and reduce systemic risk in the whole system, especially managing banking industry. There have been many arguments supported for time-varying capital requirement (Bank of England, 2009; Brunnermeier et al., 2011) and they proved that the higher the capital requirement the lower chance for destabilizing credit growth. Better than Basel II, Schwerter (2011) argued that new aspects of Basel III result in an increase in the financial stability of the whole system from the stability of individual financial institutions.

However, when financial stability increases, there will be a decrease in the efficiency of the financial market. López-Espinosaa et al. (2013) show that Basel III is good for the financial health of an individual bank but it is inefficient in its macro-prudential objective. Stringent liquidity requirements will reduce the volume of liquidity intermediated in the money market which adds systemic risk to the economy. Furthermore, increasing capital requirements and holding more liquidity assets results in a sharp contraction of trading activities which leads to difficulty transferring risk between market participants. Furthermore, economic growth is affected negatively with the estimation of a 0.08% loss in economic output for each percentage point increase in NSFR (Angelini et al., 2011), especially when lending becomes scarcer because of high lending costs.

## **6. The Basel III in ensuring the responsibility of banks in risk management to stakeholders**

### ***6.1. Shareholders***

According to Basel III, it sets an increase of 2.5% higher than the previous capital requirement for risk-weighted assets. The increase in capital requirement means banks hold more capital, especially common equity. The effect of this is reducing its level of exposure so as to maintain a sufficient return on equity.

However, one of the most important causes resulting in the recent crisis is banks own too many subprime mortgages but Basel III does not tie up standards for loans of banks. The effect of this is banks still offer subprime loans once they

can ensure the rate of capital requirement. If the number of loans is too high, the possibility of default might increase, leading to more serious losses faced by shareholders. Furthermore, banks can delay dividends to shareholders - the easiest and most effective way to raise capital - which resulted in higher risk to shareholders when their incomes are not ensured.

### 6.2. Supervisor

Basel III was made with the aim of ensuring banks' responsibility for the economy that they operate within and acting as a safeguard against crises in the future. Countries in G-20 committed to using Basel III in supervisory regulation in order to create supervisory integration across countries. Risk weighting formulas in Basel III are made on a specific mathematical model in that capital requirement for bank loans should be based on risk from that loan only, not on the portfolio to which it belongs (Gordy, 2013). This is easier and more convenient for application across countries and easy to combine with local regulations.

However, Basel III arouses regulatory arbitrage issues. Even Basel III is not a regulation but if banks ignore it in G-20 countries, they will be subjected to an ethical violation. However, in countries that are outside G-20, it depends on banks to apply for Basel. It means their capital requirement in those countries will be lower. In order to gain higher returns by accepting higher risk, banks will move their assets off the balance sheet to lighter-regulated countries (Milcheva, 2013). Banks will shirk their responsibilities in their home countries which results in difficulty supervising by regulators in both home and host countries. In 2009, Barclays transferred more than \$12 billion from its account in British to an entity named Protium in Cayman Island which is owned by Barclays' people who had already quit to join this new firm (Carney, 2009). It was the action of moving toxic assets from a Basel country to a non-Basel one to evade responsibility with supervisors.

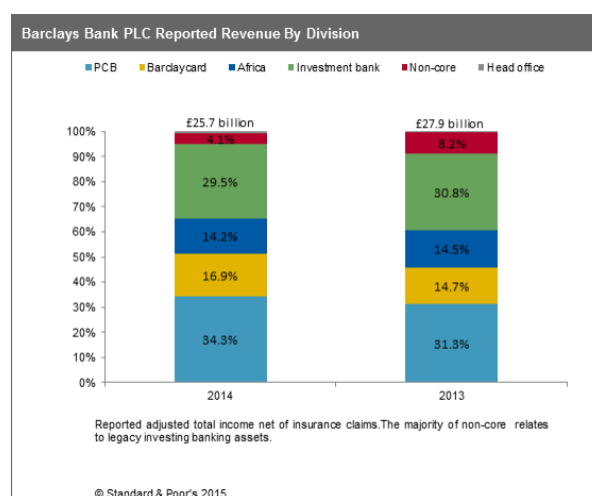
### 6.3. Taxpayer

To taxpayers, Basel III has an indirect effect to prevent risk and secure them from banks' activities. These new rules set macro-regulatory views through micro-level scrutiny which focuses on the

safety and soundness of individual banks (Michel & Ligon, 2014). By transferring financial difficulty to the broader economy, individual institutions can avoid collapse, thus they do not need a bailout from taxpayer funds the government. In case of a financial meltdown, Basel III also ensure banks use taxpayer fund provided carefully.

However, Basel III only can protect banks if banks are willing to apply this. Otherwise, it is impossible to ensure the responsibility of banks to the money of taxpayers because they based on their important role in the financial system feel free using government protection. The best way to address the "too big to fail" problem is a commitment by governments not to use taxpayer funds to save firms in financial trouble. When government lets firms fail, the private sector will price risk as accurately as possible and a formal capital requirement is not needed.

### 6.4. Rating Agencies



Source: Standard & Poor's 2015

Basel III put a strategy question for banks in light of increasing attention from rating agencies to banks' balance sheets. Since this rule set up interdependence between capital, assets, and funding, banks cannot optimize their assets and liability independently (Härle, et al., 2010). This requires balance sheet restructuring which provides more accurate and high-quality data for the rating and requires banks to put an effort into ongoing balance sheet management capabilities. This may be a significant challenge for banks to update new

system and balance sheet tools but it brings more transparent information for rating agencies, which contribute to ensure banks' effective operation and reputation.

Since the publishing of Basel III in 2010, Barclays has applied the "Transform" program to its restructuring goal (S&P, 2015). In this strategy, they reduce the size of an investment bank as well as decline risk-weighted assets allocated to the investment bank from 50% out of the total to just 30%. The new division structure in Barclays is now reducing the focus on investment banks, which reduces implicit risk in Barclays' business and improve the accuracy of the rating given by rating agencies.

### 7. Conclusion

In conclusion, Barclays has been analyzed as having good management in credit risk, market risk, and funding risk. However, it has problems with operational risk, conduct risk, and reputational risk, which indicates through analyzing three banking scandals: Gold Fixing, LIBOR Fixing, and Forex Fixing. In addition, PRA and FCA plays important role in managing and influencing Barclays' risk management system by influencing its capital requirement and legal actions. There are some lessons based on the analysis of Barclays' failure in regulatory implication.

Basel III is considered a good guideline for banks to control liquidity risk, credit risk, and funding risk, which contribute to ensuring operational risk, conduct risk, and reputational risk, as well as limit systematic risk in the financial system. Moreover, Basel III indicates banks' responsibility to internal stakeholders such as limiting equity exposure and controlling capital requirements. Banks control regulatory arbitrage to supervisors; prevent tax exposures and provide qualified data to Credit Agency by applying Basel III. Through the case of Barclays bank, this study aims to provide regulation implications for the Vietnam State bank, and commercial banks when implementing Basel III.

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# FACTORS AFFECTING INDIVIDUAL INVESTORS' TRUST IN VIETNAMESE LISTED STOCK INVESTMENTS - AN APPLICATION OF PLS-SEM MODEL

PhD. Le Phuong Lan\* - PhD. Le Thi Yen Oanh\*\* - Nguyen Thi Khanh Linh\*  
Vu Ba Toan\* - Hoang Thi Thuy Dung\* - Nguyen Viet Thanh\*

**Abstract:** *The stock market plays an essential role in attracting investment capital towards facilitating the advancement of a nation's economy. The research focuses on identifying and measuring the trust index of individual investors in the Vietnamese stock market and the impact of 9 different factors on investor trust. The research paper uses the PLS-SEM model based on data obtained from conducting surveys through questionnaires developed by the authors. The study shows that the confidence level of Vietnamese individual investors is at an average high level. One of the primary determinants of an investor's decision-making process is their personal investment experience and the prevailing conditions of the stock market.*

• **Keywords:** *Vietnam stock market, investors' trust, structural equation model PLS-SEM, Smart-PLS.*

*Date of receipt: 02<sup>nd</sup> May, 2023*

*Date of delivery revision: 08<sup>th</sup> May, 2023*

*Date of receipt revision: 15<sup>th</sup> May, 2023*

*Date of approval: 01<sup>st</sup> June, 2023*

**Tóm tắt:** *Thị trường chứng khoán đóng vai trò quan trọng trong việc thu hút vốn đầu tư, tạo điều kiện thúc đẩy nền kinh tế của một quốc gia. Nghiên cứu này tập trung xác định và đo lường chỉ số niềm tin của nhà đầu tư cá nhân trên thị trường chứng khoán Việt Nam và tác động của 9 yếu tố khác nhau đến niềm tin của nhà đầu tư. Bài nghiên cứu sử dụng mô hình PLS-SEM dựa trên dữ liệu thu được từ việc thực hiện khảo sát thông qua bảng câu hỏi do nhóm tác giả xây dựng. Nghiên cứu cho thấy mức độ tự tin của các nhà đầu tư cá nhân Việt Nam ở mức trung bình cao. Một trong những yếu tố chính quyết định quá trình ra quyết định của nhà đầu tư là kinh nghiệm đầu tư cá nhân của họ và các điều kiện phổ biến của thị trường chứng khoán.*

• **Từ khóa:** *thị trường chứng khoán Việt Nam, niềm tin của nhà đầu tư, mô hình phương trình cấu trúc PLS-SEM, Smart-PLS.*

## 1. Introduction

The rapid growth and development of Vietnam's stock market in recent times has attracted the participation of many investors, especially individual

investors. In fact, the market's growth or decline is directly correlated with investor trust. Previous studies have concluded that trust is a factor that drives individual investors' decisions to participate in the market, with higher levels of trust resulting in an increase in the frequency of stock trading (Bu, 2022).

Investors' trust in the market is influenced by a variety of factors, including macroeconomic issues as well as other aspects such as stock market conditions and financial literacy (Lusardi and Mitchell, 2014), business performance (De Long et al., 1990; Riccardi and Simon, 2000).

The aim of the study is to identify and offer a theoretical and scientific foundation for the variables influencing investor trust in the Vietnamese stock market.

## 2. Literature review

Barber and Terrance Odean (2008) measured the level of trust based on the level of interest in the functioning and expansion of the stock market. A wider range of indicators are used in Kim and Ryu's study (2020), including the relative strength in technical analysis, sentiment flow indicator, volume indicator, adjusted turnover ratio, logarithm of trading volume and index of the difference in

\* *Foreign Trade University, Hanoi*

\*\* *Academy of Finance*

buying and selling volume of individual investors. In addition, a number of additional forms of data are also employed as input in the study by Zimei Huang and Zhenghui Li (2021), including textual sentiment data, thorough multi-index data, turnover ratio, and stock price volatility. Malcolm Baker and Jeffrey Wurgler (2007) examined the impact of six factors on market sentiment including the volume of transactions, the number of new secondary issues, the dividend premium, the volume of closed-end fund certificate transactions, the number of shares made public for the first time, and the stock's rate of return.

In Vietnam, several factors impacted to investor's trust are also examined, such as dividend rate, income expectations, dividend policy and stock market price (Nguyen Thi Ngoc Diep and Nguyen Minh Kieu, 2013), financial advisor opinions, company reputation, herd effect, quality of financial reports, and overconfidence (Pham Ngoc Toan et al., 2018), the influence of anchoring decision-making factors, existing biases, typical scenarios, gender variations, and securities-investment experience (Vo Thi Hieu et al., 2020). Phung Viet Ha et al (2022) applies theories related to macroeconomics and financial behaviour when measuring investor trust.

### 3. Theoretical framework and hypothesis development

#### 3.1. Group of macro factors and stock market

##### 3.1.1. Macroeconomic (MAR)

In some practical research by Reddy (2012), Phan Thi Bich Nguyet and Phan Duong Phuong Thao (2013), macroeconomic factors such as GDP growth, decreasing inflation rate, increasing money supply, decreasing bank interest rates will stimulate stock market growth. As a result, it will bring more profits to investors, which in turn raises their confidence.

*H1: Macroeconomic factors have a positive impact on investor trust.*

##### 3.1.2. Current stock market situation (SMS)

Ricciardi (2000) noted that a positive market outlook with strong growth rates will maintain investors' trust in a positive state.

De Bondt and colleagues (1985) provided evidence that prolonged exposure to negative news will result in biased investors' perceptions, leading to inaccurate valuations and deviations from the intrinsic value of stocks.

*H2: The positive situation of the stock market has a positive effect on investor trust*

##### 3.1.3. Laws (LP)

Research by Lynn. A. Stout (2002) shows that investors participate in the stock market not because they completely trust the advice of financial advisors or stock brokerage companies, but actually because of their trust in the legal system. Investors believe that they will be legally protected against negative acts, fraud, manipulation of securities transactions - one of the prerequisites for investors to continue investing in listed businesses. In short, legal factors are considered extremely essential in maintaining a transparent and effective economic environment, bringing positive impacts on investor trust.

*H3: Laws have a positive impact on investor trust*

### 3.2. Group of micro factors

#### 3.2.1. Level of understanding of the business being invested in (BI)

The level of individual investors' understanding of the business has an impact on their own confidence in the shares of that listed enterprise. An investor who understands the value proposition of the firm with the advantages of distinct products, customer base or business model and risks will be able to take advantage of the above information to make projections about the company's future revenue, profit, and financial health. On the contrary, investors who lack the necessary expertise to make objective assessments about the current situation and potential growth of the company could easily make wrong decisions and be influenced by information from many different parties, leading to procrastination, skepticism and a decline in trust.

*H4: The level of understanding about the investing business has a positive impact on investor trust*

#### 3.2.2. Companies' financial results (FR)

Research by De Long et al (1990) has shown that stock price volatility and profitability are one of the important factors affecting the psychology of individuals when investing. When the stock price increases dramatically, the demand for that stock increases and vice versa.

*H5: The financial performance of the enterprise has a positive impact on investor trust*

3.2.3. Market News (MN)

Research by Giannetti and Wang (2014) shows the negative impact of information such as manipulation and fraud of listed companies on investors' intention to invest since their trust has decreased. Investors with prolonged exposure to negative news of the market or listed companies will have an unfavorable view of the stock market.

*H6: Market news has a positive impact on investors' trust*

3.3. Group of factors related to investor subjectivity

3.3.1. Social interaction (SI)

Research by Ellison, G. and D. Fudenberg (1995) found that social interaction is a popular method for investors to obtain up-to-date market information. Behavioral Finance attributes this to herd psychology, or the tendency for individuals to follow the crowd. This phenomenon is widespread in the financial market, and exposure to positive market attitudes reinforces investor confidence over time.

*H7: Social interaction has a positive impact on investors' trust*

3.3.2. Investment experience (EX)

Investment psychology, a subfield of Behavioral Finance, focuses on studying cognitive behavior of different economic participants and how their decision-making process affects the supply - demand and equilibrium prices of the market. Heuristics-based investment psychology suggests that investors often make decisions based on the experience drawn from their past trading. In other words, investors' investment trends will gradually be formed through a process of learning from successes and failures in their investment history.

*H8: Investment experience has a positive impact on investors' trust*

3.3.3. Financial Knowledge (FK)

Studies by Lursardi (2014) has shown that individuals with sufficient financial are more likely to participate in the stock market, while those lacking basic financial understanding tend to be less trusting and reluctant to participate in the market.

*H9: Financial Knowledge has a positive impact on investors' trust*

4. Research models and methodology

4.1. Building investor trust index in the stock market

The trust that our research focuses on is the investors' belief that the stock market is the channel that will bring more and greater profits than other channels and that it does not cause heavy losses to investors. Four aspects selected by the group to assess investors' confidence in investment activities on Vietnam's stock market are presented as follows:

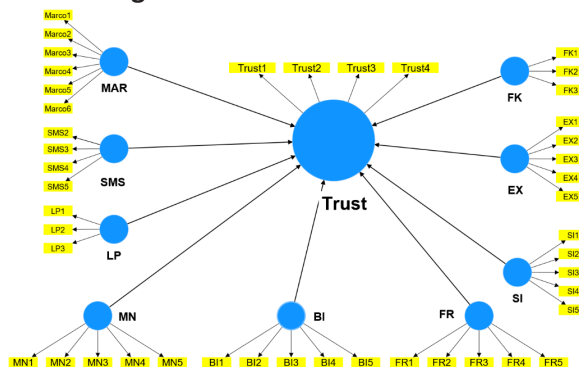
- Investors' feelings about the attractiveness and profitability of stock investment.
- Satisfaction with the benefits gained when investing on Vietnam stock market.
- Intention to continue investment activities on Vietnam stock market
- Trust in the safety of Vietnam stock market.

The question was designed using the index-building methods mentioned in studies by Carin Van der Crujisen (2019), Paola Sapienza and Luigi Zingales (2008). Detailed questions are built in a scale of 5 levels, the answers are numbered from 1 to 5, corresponding to the answers "Very low", "Low", "Neutral", "High", "Very high".

Conducting surveys quarterly or after major market events (based on the FTI measurement plan by Paola Sapienza and Luigi Zingales) is most ideal. Currently, research articles on investor trust in Vietnam and direct measurement of trust are quite limited, therefore finding time data is very difficult. Therefore, the questions will mainly focus on measuring trust at a given point in time, with the research paper framework being March 2023.

4.2. Building a model of factors affecting investor confidence

Figure 1. Recommended model



From hypotheses, the research team proposes a model to study factors affecting investors' trust in Vietnam's stock market in the early 2023 period.

4.3. Research methodology

4.3.1. Data collection

The chosen method for data collection involves the distribution of a questionnaire survey to individual investors. The survey will utilize a 5-level Likert scale to measure the level of trust in the recent stock market and to identify factors affecting this trust. The survey using the Google Forms is designed and distributed to social-network. Survey time: 20/2/2023 - 10/3/2023.

4.3.2. Data analysis methods

Our paper adopted the partial least squares-structural equation modeling (PLS-SEM). It combines principal components analysis (PCA) and multiple regression analysis techniques to create a model that predicts the relationship between observed and unobserved variables. The application of PLS-SEM will be carried out in two steps - according to the study of Hesenler and Chin (2010).

4.4. Investors' characteristics

Table 1. Characteristics and distributions of investors

Variable	Category	N	%	Variable	Category	N	%
Gender	Male	322	76.85%	Trading frequency	1-2 times yearly	124	29.59%
					1-2 times monthly	168	40.10%
	1-2 times weekly	71	16.95%				
	Daily	56	13.37%				
Female	97	23.15%	Total		419	100%	
Age	< 20	14	3.34%	Years invested on the stock market	< 1	91	21.72%
	20-25	92	21.96%		1-3	167	39.86%
	26-35	199	47.49%		4-7	151	36.04%
	36-45	101	24.11%		7-10	7	1.67%
	> 45	13	3.10%		> 10	3	0.72%
Total		419	100%	Total		419	100%
Monthly income (million VND)	< 10	142	33.89%	Assets invested in the stock market (million VND)	< 10	109	26.01%
	10-20	123	29.36%		10 - 100	147	35.08%
	21-30	73	17.42%		100 - 200	78	18.62%
	31-50	59	14.08%		200 - 500	53	12.65%
	> 50	22	5.25%		> 500	32	7.64%
Total		419	100%	Total		419	100%

Source: Compiled by the authors

5. Investor confidence index results

Name	Mean	Scale min	Scale max	Observed min	Observed max	Standard deviation	Excess kurtosis	Skewness
Trust1	3.17	1	5	1	5	1.123	-0.557	-0.215
Trust2	3.127	1	5	1	5	1.114	-0.504	-0.178
Trust3	3.27	1	5	1	5	1.107	-0.445	-0.346
Trust4	3.041	1	5	1	5	1.131	-0.575	-0.139

Participants were asked:

- Trust1 - What is your priority on stock investing compared to other investment channels?
- Trust2 - How satisfied are you with the benefits received when investing in Vietnam stock market today?
- Trust3 - What are your plans to continue investing in Vietnam stock market in the future?
- Trust 4 - Trust in the safety of Vietnam's stock market today?

Source: Compiled by the authors

5.1. Evaluation of the measurement model

In Table 2, we see that all observed variables have Outer Loadings greater than 0.7, therefore, none of the observed variables are eliminated (Hair, 2014)

The results in Table 2 show that Cronbach's alpha and Composite reliability coefficients of 10 variables both exceed 0.7, so the variables are reliable and achieve separation validity. All AVE results for each variable are greater than 0.5, so the structures achieve convergence.

According to our calculations, the maximum value of Heterotrait-Monotrait is 0.889, which is not the most desirable result, but still, less than 0.9, ensuring the discriminant validity of the scale (Hensler, 2015).

Table 2 shows that the VIF values of all variables are less than 3, so there is no multi collinearity among variables (Hair, 2019).

Table 2. Indicators for evaluating measurement models

	Outer Loadings	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)	VIF	F-square	R-square	Adjusted R-square
Macro economy (MAR)									
Marco1	0.742	0.847	0.849	0.887	0.567	2.534	0.02	0.691	
Marco2	0.765								
Marco3	0.796								
Marco4	0.761								
Marco5	0.708								
Marco6	0.743								

	Outer Loadings	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)	VIF	F-square	R-square	Adjusted R-square
Stock market situation (SMS)									
SMS1	0.739	0.805	0.805	0.865	0.561	2.388	0.387		
SMS2	0.754								
SMS3	0.777								
SMS4	0.74								
SMS5	0.735								
Laws (LP)									
LP1	0.779	0.707	0.708	0.836	0.63	1.939	0.023		
LP2	0.808								
LP3	0.794								
Business Informative (BI)									
BI1	0.73	0.82	0.823	0.874	0.583	2.419	0.13		
BI2	0.722								
BI3	0.788								
BI4	0.777								
BI5	0.797								
Financial result of the company (FR)									
FR1	0.768	0.825	0.828	0.877	0.589	2.423	0.024		
FR2	0.773								
FR3	0.708								
FR4	0.778								
FR5	0.806								
News on the market (MN)									
MN1	0.736	0.829	0.831	0.879	0.594	2.543	0.14		
MN2	0.787								
MN3	0.793								
MN4	0.773								
MN5	0.761								
Social interaction (SI)									
SI1	0.776	0.834	0.836	0.883	0.601	2.549	0.026		
SI2	0.754								
SI3	0.802								
SI4	0.784								
SI5	0.759								
Investment experience (EX)									
EX1	0.789	0.851	0.851	0.893	0.626	2.508	0.107		
EX2	0.795								
EX3	0.782								
EX4	0.79								
EX5	0.8								
Financial Knowledge (FK)									
FK1	0.843	0.785	0.786	0.875	0.7	2.084	0.002		
FK2	0.827								
FK3	0.839								
Trust									
Trust1	0.726	0.702	0.704	0.817	0.528				
Trust2	0.736								
Trust3	0.739								
Trust4	0.704								

0.679

Source: Compiled by the authors

## 5.2. Structural Model Evaluation

Table 3. Path coefficient

	Hypotheses	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	P values	Decision
MAR -> Trust	H1	0.155	0.157	0.08	2,257	0.024	Supported
SMS -> Trust	H2	0.168	0.171	0.051	3,321	0.001	Supported
LP -> Trust	H3	0.106	0.104	0.045	2,980	0.003	Supported
BI -> Trust	H4	0.105	0.105	0.05	2,126	0.034	Supported
FR -> Trust	H5	0.158	0.156	0.051	3,110	0.002	Supported
MN -> Trust	H6	0.109	0.109	0.048	2,292	0.022	Supported
SI -> Trust	H7	0.141	0.142	0.054	2,594	0.01	Supported
EX -> Trust	H8	0.183	0.18	0.082	2,234	0.026	Supported
FK -> Trust	H9	0.045	0.044	0.05	0.904	0.366	Rejected

Source: Compiled by the authors

There are 8 out of 9 hypotheses supported with P-values less than 0.05. Hypothesis H9 was rejected because its P-values are 0.366, greater than 0.05.

## 6. Discussion on research findings

### 6.1. Discussion on the trust index

Data from the survey shows that investors' trust in the Vietnam stock market in the first 03 months of 2023 is at a relatively high level. This is understandable when during that time, the market is quite stable. Moreover, the scope of this research is limited to only individual investors who are actively involved in the stock market instead of surveying the entire population. Investors who directly participate in trading on the stock market will have a better understanding of how the market works and will also have more knowledge and experience in investing; therefore, their risk tolerance will be higher because they have the potential to make profits in the future; as a result, their trust will tend to be higher than usual. Moreover, the intention to continue investing tends to become more positive; up to 45% of the total 419 participants rated their intention to continue investing at a high level or higher. Most investors have a more optimistic view of the market; they see the development potential and the ability to earn profits when investing.

The attitude of investors to the safety of the Vietnam stock market is quite low (about 29% of respondents rated it low or very low) although the overall measurement results show that their trust in the stock market is at a high level. This situation occurs because information related to violation cases in 2022 still remains certain effects on investors' attitude. Although investors tend to

be more optimistic, they are still ‘defensive’ due to the concern of a sudden future crash in the market.

### 6.2. Factors affecting investors’ trust

Firstly, the study found that investment experience has the strongest impact on investor trust. Past trading experiences were identified as the most significant factor affecting subsequent investment decisions and trust in the market. As investors gain more experience, their confidence in making sound decisions increases. Those who experienced stock losses in 2022 would be more cautious due to the “history effect” since they are concerned about greater potential damage in future crashes.

Secondly, the research results show that the level of understanding of companies that investors are investing in is the factor that has the weakest impact on their confidence. This can be explained by: Firstly, many investors are primarily concerned about short-term price movements and speculation instead of prioritizing their understanding of the underlying business fundamentals. Secondly, the lack of transparency in information disclosure can result in unreliable information in the Vietnam market, leading to poor investment decisions and ultimately damaging investor trust.

Thirdly, financial knowledge is a factor that has no significant impact on investors’ trust in the market. This finding is consistent with the research results of Nguyen Dinh Toan and colleagues (2022). During the rapid development of the Vietnam stock market in 2021-2022, many investors relied on speculation and external advice rather than practical financial knowledge to make investment decisions. Financial knowledge, as a result, is underestimated and not regarded as an essential factor in determining investors’ trust in the market.

## 7. Conclusion

The study discussed theoretical issues about investor trust and factors affecting trust in the stock market. Questionnaire surveying and PLS - SEM model are used to analyze data and calculate the level of trust of investors on the current Vietnam stock market and measure the impact of 09 factors given on investors’ confidence, including 08 factors consistent with the hypothesis. The results also indicate that Financial knowledge does not affect investors’ confidence.

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# WHY LUXURY CONSUMERS CHOOSE INCONSPICUOUS LUXURY PRODUCTS: THE ROLE OF ETHICAL REASONING ON THE TPB FRAMEWORK

MSc. Nguyen Bao Ngoc\*

**Abstract:** *The role of ethical issues in buying intention toward inconspicuous luxury consumption has been unexamined. This paper proposes a conceptual framework by integrating the TPB model and the general theory of marketing ethics to investigate how luxury consumers select their luxury choices. This paper extends the understanding of inconspicuous luxury consumption in Vietnam and strengthens the TPB model in the context of luxury consumption. This research contributes to the luxury consumption literature and offers important insights for luxury marketers.*

• Keywords: *inconspicuous consumption, luxury consumption, theory of planned behavior, general theory of marketing ethics, ethical judgment.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Vai trò của các yếu tố đạo đức trong ý định mua các sản phẩm xa xỉ kín đáo vẫn chưa được xem xét. Bài báo này cung cấp một khung nghiên cứu bằng việc tích hợp mô hình hành vi hợp lý và lý thuyết đạo đức marketing nhằm tìm hiểu khách hàng xa xỉ lựa chọn các sản phẩm xa xỉ của họ như thế nào. Bài báo này làm gia tăng sự hiểu biết về hành vi tiêu dùng xa xỉ kín đáo ở Việt Nam và khẳng định sự ảnh hưởng của mô hình TPB trong bối cảnh tiêu dùng xa xỉ. Nghiên cứu này đóng góp vào tổng quan nghiên cứu của tiêu dùng xa xỉ và mang lại nhiều ý tưởng quan trọng cho các nhà tiếp thị sản phẩm xa xỉ.

• Từ khóa: *tiêu dùng kín đáo, tiêu dùng xa xỉ, lý thuyết hành vi hợp lý, lý thuyết đạo đức marketing, phán đoán đạo đức.*

2018b). Academically, Berger and Ward (2010) investigated the utility of subtle signals in enhancing communication between social classes. This work begins the research interest in investigating inconspicuous consumption.

Marketing scholars pay much attention to investigating antecedents of inconspicuous consumption, such as constructs of the TPB model in the work of Ting et al. (2018). The existing studies have suggested that the TPB model has been successfully applied to consumer behaviors (Arvola et al., 2008). Otherwise, while studies have examined the impact of TPB on inconspicuous consumption, the role of ethical concerns in inconspicuous consumption remains unknown. Individuals' awareness and perception of moral dilemmas influence their ability to make ethical choices (Street et al., 2001). Hence, it is necessary to explicate a clear underlying psychological mechanism for explaining how ethical concerns affect inconspicuous consumption purchase intention

To fill this research gap, the present study builds a conceptual framework to examine the inconspicuous luxury shopping behavior that reflects consumers' purchase decision-making

## 1. Introduction

In the luxury industry, while many consumers continue engaging with loud products, there has been a growing demand for inconspicuous products (Eckhardt et al., 2015). The sales of luxury brands like Gucci and Tiffany jewelry have been boosted by incorporating more subtle indulgences and downplaying their trademark (Makkar & Yap,

\* National Economics University, Hanoi, Vietnam; email: [nguyenbaongoc.phd3@st.neu.edu.vn](mailto:nguyenbaongoc.phd3@st.neu.edu.vn)

based on the Theory of Planned Behaviors and the general theory of marketing ethics. This research contributes to the literature in several ways. First, the existing studies have been criticized for insufficient consideration of the ethical influences of the TPB model. This research draws on ethical concepts to examine the purchase intention of inconspicuous luxury consumers. Secondly, this conceptual paper enhances the TPB model by proposing the moderating role of ethical judgment in purchase intention. The key concepts and propositions are discussed in the following section.

## 2. Literature review and propositions

### 2.1. *Luxury consumption and inconspicuous consumption*

The exclusivity of luxury drives conspicuous luxury consumption (Dubois & Czellar, 2002; Vigneron & Johnson, 2004), meaning that luxury brands have a signaling influence only when they are scarce. For many years, marketing researchers have argued that luxury consumers engage in conspicuous signals in luxury products as a way to display their wealth (Han et al., 2010), acquire social status (O'cass & McEwen, 2004) and seek uniqueness (Gentina et al., 2016). For example, the loud logos and iconic designs of Louis Vuitton's monogram and Burberry's plaid reflect explicit wealth indicators. During economic difficulty, wealthy customers seeking discreet luxury may be uncomfortable with significant social class distinctions (Eckhardt et al., 2015). They conceal their money with inconspicuous elegance to promote social equality (Jiang et al., 2021). Due to the growing demand for inconspicuous consumption, the comprehensive view of luxury consumption is extended (Gurzki & Woisetschläger, 2017).

Regarding luxury consumption, conspicuous and inconspicuous are included, fostering attention within the research communities, and highlighted as a significant phenomenon (Gurzki & Woisetschläger, 2017). Conspicuous consumption is regarded as the process by which wealthy people from the upper class publicly demonstrate their social power, status, and prestige (O'Cass & McEwen, 2004). The conspicuous consumers consume luxury goods and services to display their

economic power as a means of their social status (Eastman et al., 1999).

The existing literature suggests that inconspicuous consumption has been described as the routine consumption of ordinary products (Khan, 2019). Regarding luxury consumption, inconspicuous consumers consume luxury products without overtly displaying wealth and social status (Wu et al., 2017). Inconspicuous luxury consumption is defined as the use of subtle signals which are unidentifiable by the mainstream but instantly observable to those that possess the needed connoisseurship to decode its meanings (Berger & Ward, 2010). The subtle signals may be brand identification, their design, shape, discreet patterns or detailing, and other aspects (Berger & Ward, 2010). Some examples of inconspicuous luxury products are the Birkin Bag of Hermes, the Hermes tie with an H pattern (Berger & Ward, 2010), and the hidden logo of the Shang Xia pendant (Wu et al., 2017). If conspicuous consumers send receivers loud signals, inconspicuous consumers decode their meanings to high cultural capital receivers by subtle signals (Gurzki & Woisetschläger, 2017). Inconspicuous consumers might enjoy their true personal tastes through the designs of inconspicuous luxury brands instead of loud logos (Han et al., 2010).

Several prior studies have investigated the nature of inconspicuous luxury consumption. Berger and Ward (2010) define inconspicuous consumption as the use of subtle signals that are difficult to be recognized by the mainstream but instantly observable to those who have the requisite cultural capital to decode these meanings. In line with this, Han et al. (2010) suggest that inconspicuous luxury brands have low visual prominence and use quiet and discrete signals in their design. With regard to inconspicuous luxury consumers, Berger and Ward (2010) consider them as "insiders" who have specific-domain cultural capital, prefer unique, sophisticated, and subtle luxury brands, and feel comfortable with quiet logos. Similarly, Han et al. (2010) label 'Patricians' as a group of consumers who possess significant wealth and use inconspicuously branded luxury products to differentiate themselves from the masses. Building on the



work of Han et al. (2010), Makkar and Yap (2018) identify four groups of inconspicuous consumers based on their signal desire and fashion cultural capital: fashion influencers, trendsetters, luxe conservatives, and fashion followers. Previous studies have examined several factors driving inconspicuous luxury consumption, such as personal factors (Jiang et al., 2021; Lee et al., 2020) and psychological factors (Kauppinen-Räsänen et al., 2018; Ting et al., 2018). Past research also suggests the impact of external factors, such as cultural and legal environment, on the shift from conspicuous to inconspicuous consumption (Eckhardt et al., 2015).

In summary, studies on inconspicuous luxury consumption focus on antecedents of inconspicuous consumption, but studies on ethical aspects of inconspicuous consumption are relatively limited.

## ***2.2. Theoretical frameworks and factors influencing on purchase intention of inconspicuous luxury products***

### *Theory of Planned Behavior (TPB)*

The conceptual assumptions of social psychology are applied by utilizing various models to explain the motives for engaging in a behavior. Proposed by Ajzen and Fishbein (1980), TPB is a useful and common model that provides a strong theoretical base for explaining the intention and drivers of an individual's behavior (Ajzen, 1991). The model comprises three variables: attitude, subjective norms, and perceived behavioral control, which predict the behavioral intentions of individuals and predict actual behavior (Ajzen, 1991). The "behavioral intention" construct is the core of the model that predicts the behavior powerfully. Purchase intention refers to the willingness of an individual to buy a certain product or service (Ajzen, 1991). This study examines the consumers' purchase intention rather than their behavior. TPB model has been applied successfully to predict the purchase intention of luxury products (Loureiro & de Araújo, 2014); counterfeit luxury products (Ting et al., 2016). Wealthy consumers with a low need for status are willing to pay more money to buy quite marked luxury products (Han et al., 2010). Hence, this study applies TPB as the theoretical framework to predict inconspicuous products' purchase intention.

### *General theory of marketing ethics*

Among the major comprehensive theoretical models of the ethical decision-making process, the general theory of marketing ethics developed by Hunt and Vitell (1986) is also the only one that can be applied to individual contexts such as consumer behavior (Vitell et al., 2001). This model posits that an individual's ethical judgment is a function of his/her deontological evaluation (DE) and teleological evaluation. Regarding the inconspicuous consumption context, past research suggests that inconspicuous consumption is relatively related to ethical considerations (Nguyen et al., 2023). As such, the Hunt-Vitell model is also adopted as the theoretical framework to investigate inconspicuous consumption behavior.

### *Factors influencing on purchase intention of inconspicuous luxury products*

Attitude is defined as the overall evaluation of an individual's behavior to ascertain whether something is favorable or unfavorable (Ajzen, 1991). A positive attitude toward a certain activity increases the likelihood of adopting the behavior (Ajzen, 1991). In the luxury context, past research has shown a relationship between the attitude on consumers' purchase intention towards luxury goods (Schade et al., 2016). The social-adjustive function of attitude and the hedonic function of an attitude positively influence inconspicuous consumption intention (Ting et al., 2018) (Ting et al., 2018). Hence, this discussion led to the formulation of the following proposition:

*Proposition 1: Attitude positively influence the purchase intention toward inconspicuous luxury products.*

Subjective norms are defined as how people perceive social pressure from family, friends, or others who significantly influence an individual's behavior (Ajzen, 1991). Normative social pressures influence individuals' intention to adopt and implement a particular behavior (Ajzen and Fishbein, 1980). In the field of luxury consumption, subjective norms play an important role in predicting purchase intention (Loureiro & de Araújo, 2014; Shukla, 2011). Ting et al. (2018) investigated that subjective norms positively

impact inconspicuous consumption intention. Therefore, we present the following propositions:

*Proposition 2:* Subjective norms positively influence the purchase intention toward inconspicuous luxury products.

Perceived behavior control (PBC) is defined as an individual's perception of how easy or difficult to execute the planned behavior (Ajzen, 1991). PBC allows an individual to evaluate the opportunities and resources that are available to an individual for performing an activity. As a result, an individual will only adopt a habit if the challenges associated with adopting it are manageable (Singh et al., 2021). Past research indicates that PBC has closely linked to purchase intention toward luxury products (Loureiro & de Araújo, 2014). Ting et al. (2018) suggest that PBC strongly influences purchase intention toward subtle luxury fashion products in the inconspicuous luxury consumption context. Hence, we present the following proposition:

*Proposition 3:* Perceived behavior control positively influences the purchase intention toward inconspicuous luxury products.

Regarding deontological evaluation, an individual tries to assess the wrongness versus rightness in their numerous alternatives or behaviors (Hunt & Vitell, 2006). A set of established deontological norms, such as situation-specific and general beliefs, are used by DE in the H-V model to reflect an individual's personal values of the many available alternatives (Ho et al., 2022). Ajzen (1991) states that belief shapes a consumer's attitude, perceived behavior control, and subjective norm. Previous studies suggest a greater attitude will occur toward ethical products when consumers have a deontological evaluation (Chang & Chou, 2018). Since ethical consumer behavior is viewed as having a stronger positive impact on society, there may be greater societal pressure on customers with a DE orientation to purchase ethical products (Ho et al., 2022). Consumers with a deontological evaluation orientation may also have greater confidence in their capability of buying ethical products. Hence, we propose the following propositions:

*Proposition 4a:* Deontological evaluation positively influences attitude.

*Proposition 4b:* Deontological evaluation positively influences the subjective norm.

*Proposition 4c:* Deontological evaluation positively influences perceived behavioral control

Teleological evaluation is the individual's evaluation from the result perceived how much bad versus good will happen from each subsequent behavior and alternative (Hunt & Vitell, 1986). If consumers perceive that the purchasing decision is ethical, they will purchase (Ho et al., 2022). Past studies indicate that teleological significantly affects attitude, perceived behavior control, and subjective norm (Yoon, 2011). Hence, we propose the following propositions:

*Proposition 5a:* Teleological evaluation positively influences attitude.

*Proposition 5b:* Teleological evaluation positively influences subjective norm.

*Proposition 5c:* Teleological evaluation positively influences perceived behavioral control

Ethical judgment is the core of major theories of ethical decision-making (i.e., Hunt and Vitell, 1986, 1992; Jones, 1991; Rest, 1986). Ethical judgment governs society and ensures that it operates in an orderly and ethical manner (Singh et al., 2021). Nguyen et al. (2023) suggest that inconspicuous consumption closely links to ethical issues. Ethical judgment in the context of inconspicuous consumption is essential as it evaluates individuals' dilemmas in adopting and implementing this behavior.

Kohlberg (1975) defines attitude as an individual's characteristics. And development in morals. Ethical judgment has been found to influence ethical behavior and strengthen the relationship between attitudes and ethical behavior intention (Singh et al., 2021). Hence, we propose the following proposition:

*Proposition 6a:* The relationship between attitude and purchase intention toward inconspicuous products is stronger than having a strong ethical judgment.

Subjective norms are defined as social pressure to adopt and practice actions regarded as acceptable by other influential individuals (Ajzen, 1991).

Ethical judgment is considered the foundation of subjective norms and personal beliefs (Halder et al., 2020). Inconspicuous consumption behavior is considered the implementation of ethical behavior and acceptable practices in society (Nguyen et al., 2023). As such, an individual with strong ethical judgment is more likely to adopt and practice this conduct. Hence, we propose the following proposition:

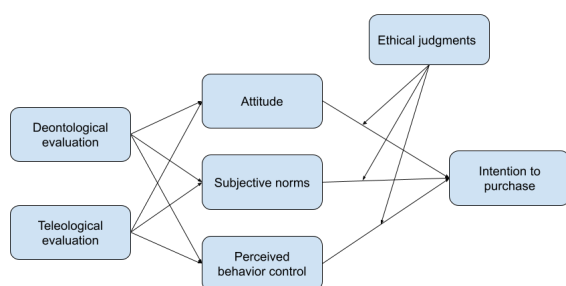
*Proposition 6b:* The relationship between subjective norms and purchase intention toward inconspicuous products is stronger than having a strong ethical judgment.

According to Bandura (2001), individuals are encouraged to acquire and practice behaviors due to the simplicity and convenience of access to information. If individuals have a strong ethical judgment, the ease of access to opportunities and resources leads to the implementation of ethical behavior (Agag & Colmekcioglu, 2020). Hence, luxury consumers might intend to purchase inconspicuous luxury products if the opportunities are easily accessible for them to do so and they have a strong ethical judgment. We present a proposition as follows:

*Proposition 6c:* The relationship between perceived behavior control and purchase intention toward inconspicuous products is stronger than having a strong ethical judgment.

Figure 1 presents the conceptual model to investigate purchase intention toward inconspicuous luxury products.

**Figure 1: The conceptual framework**



### Discussion and Implications of the study

The critical objective of this study is to understand the factors affecting purchase intention toward inconspicuous luxury products. The TPB

(Ajzen, 1991) and the general theory of marketing ethics (Hunt & Vitell, 1986) are considered the foundation theory for the study. This study pays much effort to further expand the work of Nguyen et al. (2023) by providing a deepened view of the determinants of inconspicuous luxury consumption.

This study has both theoretical and managerial implications. From the theoretical perspective, this paper first contributes a different perspective to view inconspicuous luxury purchase intention. It provides a detailed explanation of how luxury consumers decide their ethical decision-making when selecting luxury products. Secondly, this integrated conceptual model depicts the influence of ethical issues on purchasing inconspicuous luxury products. This study attempts to integrate ethical judgment into Ajzen's TPB and presents a behavioral framework to explain better luxury consumers' behaviors regarding inconspicuous luxury consumption. Practically, this study will also enable marketers to understand how ethical issues may strongly influence an individual's purchase intention of inconspicuous luxury consumption.

### Acknowledgement

Nguyen Bao Ngoc was funded by Vingroup JSC and supported by the Master, PhD

Scholarship Programme of Vingroup Innovation Foundation (VINIF), Institute of Big Data, code [VINIF.2021.TS.033]

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# APPLICATION OF ATTACHMENT THEORY TO INFLUENCERS MARKETING: EMPIRICAL STUDY IN VIETNAM

MSc. Tran Hoang Duong\*

**Abstract:** *Social media influencers (SMIs) marketing is an emerging topic in both academic and practice. Vietnam is among one of developing countries in this field with distinguished characteristics. By adapting Attachment theory as conceptual framework, this paper conducted an online survey to investigate the impact of SMIs on users' online engagement in Vietnam. The results show positive effect of SMIs' social presence and homophily to followers' attachment which lead to more loyalty, customer participation, followers' disclosure and follower-generated advertising.*

• Keywords: *social media, online engagement, attachment theory, SMIs, e-marketing.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: *Marketing qua người ảnh hưởng (SMI) là một lĩnh vực mới nổi trong cả nghiên cứu lẫn thực tiễn. Việt Nam nằm trong những quốc gia phát triển trong lĩnh vực này với những đặc tính riêng biệt. Nghiên cứu sử dụng lý thuyết Gắn kết làm khung lý thuyết và thực hiện khảo sát trực tuyến để giải thích những tác động của người ảnh hưởng đến tương tác trực tuyến trong bối cảnh ở Việt Nam. Kết quả chỉ ra rằng, SMI có ảnh hưởng tích cực đến sự gắn bó của người theo dõi đến họ thông qua sự giống nhau và sự hiện diện xã hội, từ đó nâng cao sự trung thành, sự tham gia, chia sẻ thông tin và quảng cáo từ người theo dõi.*

• Từ khóa: *phương tiện truyền thông xã hội, tương tác trực tuyến, lý thuyết gắn kết, người ảnh hưởng, marketing trực tuyến.*

marketing is paying influencers to promote brands on their social media accounts (De Jans et al., 2020). According to Statista's 2022 report, global businesses have spent an estimated total of \$16 billion on 200,000 influencers in Asia Pacific countries alone. In Asia Pacific, 44% of influencers have between 10 and 100,000 followers, and 22.71% have between 100,000 and 1 million followers by 2021. Regarding the most effective platform for influencer marketing, Statista (2022) reports Instagram remains the most popular and effective platform, followed by Tiktok. Also in this report, the 2 fastest growing topics in influencer marketing are dining and business.

In order to have more engagement, it is suggested the SMIs should be tailored on what to post or how the write the post to meet the preference of the audience. In Vietnam, there are a few successful cases with unconventional approach to the audience with posts and content including heavy amount of swear words. These influencers prove to be successful with each post can have hundred thousand of interaction and high level of engagement. Therefore, this paper aims to explore the effect of influencers and online personas using profanity to engage better with online consumers. By explaining to this

## 1. Introduction

As of 2022, the number of social network users in Vietnam is nearly 77 million, ranking sixth among Asia Pacific countries (Statista, 2022). It is a fact that any user can become an influencer in his or her community. Researchers and experts in recent years have introduced the concept of Social Media Influencers (SMIs) as well as influencer marketing. Influencer

\* National Economics University, Hanoi, Vietnam; email: tranhoangduong@st.neu.edu.vn

bizarre phenomenon, this study may shed light in promoting social media contents, how Facebook users react to a certain type of content and how to get more engagement on Facebook. The findings can even contribute greatly to the field of marketing, social listening, textual and visual content analysis by giving a deep understanding of online users' reaction to content, what they mean and their level of engagement to profanity specifically. The researcher asks the question: The influence of profane content used by SMIs on users' engagement? To address this, the research conducted a quantitative research by integrating Attachment Theory.

## 2. Literature review

### 2.1. *Offensive and foul language*

#### 2.1.1. *Definition and effect of foul language*

Swearing has been initially studied a psychological and socio-cultural phenomenon in relation to areas such as health, personality and gender differences dated back to early 20<sup>th</sup> century and yet the literature in this domain is scattered across different scientific fields with only recent attempts to connect the findings into a unified framework (Jay, 2009). The research of Jay (1992) contributed a set of classification for 'bad language', including cursing, profanity, blasphemy, taboo, obscenity, vulgarity, slang, epithets, insults and slurs, scatology and swearing. In terms of communication aspect, Jay (2008) broke swearing into 4 types: expletive, abusive, humorous, and auxiliary swearing. Expletive type means no bad intention and not targeting anyone, it is usually used to express personal emotions. Abusive is in contrast with expletive by nature and it means to be insulting and offensive. Humorous swearing has human targets but it is inherently idiomatic, playful, humorous, and not serious. The last type is non-empathic and has no intention to target other people or situations called auxiliary swearing.

Feldman (et.al, 2019), when research about the relationship of profanity and honesty, found profanity is positively correlated with honesty at individual and society level. Offline, males swear more often and even more if they are with

other male friends or acquaintances compared to interacting with female or in a mixed-gender scenario (Jay, 2009). Males have also been found to use stronger swear words when addressing males, and milder swear words when addressing females. On social network sites, males also use more swear words than females (Wang et al., 2014). The research of Vingerhoets and et.al (2013) summarized the main internal and external influences of swearing. For the person using swearwords, there are certain positive effect such as stress relief, pain reduction, inhibition of aggression and boosting confidence. In social settings, using swearwords is found to have the ability to stop unwanted behaviours, increase credibility, persuade, bind groups and creating humour effect. However, negative effects can be named as fear, hostility, decrease in social support and loss of status.

#### 2.1.2. *Research on online offensive language*

In terms of studies of profanity on social media, the researcher finds the number of research on how online influencers and brands actively use profanity and its effect is limited. Given the newness of the context on social media, the influence of profanity to this new environment, new consumers' behaviour has not been fully tested. Kwon and Gruzd (2017) conducts a research of swearing on Donald Trump's campaign videos on YouTube surrounding his candidacy in 2016. The results provide evidence of swearing contagion in both presence and intensity. The presence and intensity of swearing in parent comments increase the probability and frequency of swearing in their children comments (sub-comment). Another relevant study is Kwon (2015), the author conducted a research on the context of South Korea election campaign. The finding was positive effects of swearing on increasing the public's attention and perception toward the comments of citizen-to-citizen discussions online. Turning to Twitter, Bak et al. (2012) studied self-disclosure behavior in Twitter conversations. As one aspect of self-disclosure, profanity was used more frequently between users with higher relationship strength. Fargensten (2017) studied

the use of swear words by PewDiePie, the author discovered that the use of profanity within this online personality PewDiePie to achieve the overall goals of communicating with his beliefs are his viewers are his friends and his style of unique communication reducing the social border between them. The article concludes that PewDiePie's application of social swearing not only simulates casual conversation between him and his viewers, but actively reduces social distance, creates the feeling of intimacy.

Based on previous literature, the researcher identified a theoretical gap. There has been research about the use of profanity on several social media platforms such as YouTube, Twitter, Myspace. Given the newness of the field, most of these research investigated the effect of swearwords between users and users while some motivations from SMIs for using swearwords. The researcher finds that there is a lack of research regarding social media influencers who proactively use profanity, especially on Facebook platform where it includes functions of other platforms such as video, pictures, blogging, micro-blogging, using profanity or swear words to enhance the engagement of their audience.

### **2.2. Consumer engagement online**

According to (Kim & Kim, 2023), "consumer engagement broadens the concept by including also potential customers as purchasing behaviour is not required for engagement". In other words, online engagement can happen even without purchasing behaviour. Furthermore, the same authors stated "Consumer engagement online should, however, be separated from engagement to online communities: in online communities consumers can be engaged to either the themes (brands, products/services, organizations, and industry) discussed in the community or to the community itself (the online community, community roles, and community members)". However, in the context of this study, consumer engagement and engagement to online communities will be treated the same as the main focus of this study is followers from influencers

because social media influencers can be treated both as a brand or as a community where followers can discuss with other followers and with the influencer within. Other than that, based on the definition of SMIs: "Influencer" can be understood as an individual whose activities influence the community network and the surrounding environment, online communities such as Facebook page and Facebook groups can be understood as SMIs since their attempts in these communities are also influence the community network and act as online personas. Online engagement has been explained by using many theories from different field such as Attachment theory, Social exchange theory, Uses and gratification theory, etc.

### **3. Theoretical framework and hypothesis development**

#### **3.1. Attachment theory**

This research adapts the model of antecedents and consequences of customer engagement on Facebook developed by (Kim & Kim, 2023). The model is based on attachment theory perspective. Initially, attachment theory was developed by Ainsworth (1967), it explained an individual keeps closeness or distance with key people through their lives based on three different factors: social structure-based attachment, bonding-based attachment, and identity-based attachment. Social structure-based attachment are physical structures that tie an individual to a place or an object when Bonding-based attachment relates to long-term connection and Identity-based attachment is about how a person can relate his/herself to the presence of an object. However, the structure-based attachment was not included in social media setting because Facebook features do not automatically bind a user to a particular brand's page. Through attachment, consumers can perceive the brand relationship as a special bond, which can lead to successful marketing outcomes. In the context of the relationship between SMIs and their users, attachment explains how influencer communicate with followers can have impact on the marketing process. Attachment makes

followers internalize the interaction with the influencer into their thoughts and feelings and commit to the relationship. The justification of using Attachment theory for online engagement in the context of profanity is that online users are assumed to make their own decisions when participating in social media groups based on the amount and nature of swearing in the group (Jay, 2018). In other words, no one forced these online users to join and engage with these so-called “obnoxious” online communities or SMIs, they are solely responsible for their own engagement. As a result, there must be a reason for these users to form a bond and attach with these SMIs.

### 3.2. Hypothesis development

By adapting the conceptual model of Hinson (et al., 2019) and Kim & Kim (2023) in the context of using swearwords, this study proposes the antecedents of attachment are following:

*H1: Homophily with the influencer who uses swearwords will lead to higher attachment*

*H2: The social presence of SMIs who using swearwords will lead to a higher attachment*

*H3: Self-image expression satisfied through interacting with SMIs who using swearword will lead to a higher attachment*

Regarding to the outcomes of attachment, attachment can increase brand loyalty, commitment, willingness to pay (Kim & Kim, 2023) and self-disclosure, customer participation and customer generated advertising (Hinson et.al, 2019). However, in this study, we extended the term of SMIs to also online communities since these group can act as online personas and not all the time they promote to sell products; therefore; the outcome of willingness to pay is not included. We propose the following hypotheses:

*H4: Attachment to the SMIs who using swearwords will head to higher loyalty among followers.*

*H5: Attachment to the SMIs who using swearwords will head to higher self-disclosure among followers.*

*H6: Attachment to the SMIs who using swearwords will head to higher customer participation among followers.*

*H7: Attachment to the SMIs who using swearwords will head to higher customer generated advertising among followers.*

## 4. Methodology

### 4.1. Sample

This study conducted an online survey methodology via Google Form. The data were collected from 322 Vietnamese adults over the age of 18 currently following SMIs who uses swearwords. The participants were 58% (n= 198) male and 42% (n=144) with overall 80% of the participants (n=279) follow more than 10 influencers. The instrument items for each construct were measured on a 7-point Likert scale (1= Strongly Disagree, 7= Strongly Agree). All constructs were adopted from the pre-existing measurement items of Hinson (et al., 2019) and Kim & Kim (2023).

### 4.2. Result

The measurement model was tested using AMOS 22.0 and SPSS software. The unidimensionality of each of the multi-item scales was evaluated by Cronbach's  $\alpha$ : homophily ( $\alpha= 0.83$ ), social presence ( $\alpha= 0.71$ ), self-image expression ( $\alpha= 0.77$ ), attachment ( $\alpha= 0.82$ ), loyalty ( $\alpha= 0.85$ ), self-disclosure ( $\alpha= 0.87$ ), customer participation ( $\alpha= 0.84$ ) and customer-generated advertising ( $\alpha= 0.89$ ). One item from self-disclosure (SD4) was dropped due to Corrected Item-Total Correlation lesser than 0.3. The results supported all constructs had an appropriate level of reliability exceeding 0.70. The measurement model was evaluated by confirmatory factor analysis (CFA) using with maximum likelihood estimation and indicated a satisfactory model fit ( $p < 0.000$ ;  $\chi^2/df = 1.131$ , CFI = 0.99, GFI = 0.926, RFI = 0.90, RMSEA = 0.020) (Hair et al., 1998). The average variance extracted (AVE) for establishing convergent validity for each construct was verified since all items exceeded the suggested cut-off point of 0.5 as presented below:

**Figure: Discriminant validity of constructs**

Construct	CP	LO	HO	ATT	SP	CGA	SD	SIE
CP	<b>0.800</b>							
LO	0.399	<b>0.778</b>						
HO	0.483	0.404	<b>0.743</b>					
ATT	0.593	0.686	0.687	<b>0.780</b>				
SP	0.572	0.391	0.615	0.714	<b>0.764</b>			
CGA	0.513	0.379	0.470	0.564	0.526	<b>0.861</b>		
SD	0.477	0.355	0.380	0.554	0.448	0.517	<b>0.793</b>	
SIE	0.573	0.318	0.575	0.546	0.648	0.479	0.418	<b>0.734</b>

The structural model was estimated to test the hypothesized relationships. The fit statistics indicated a satisfactory model fit ( $\chi^2 = 372.98$ ,  $df = 289$ ,  $p < 0.000$ ;  $\chi^2/df = 1.291$ ,  $CFI = 0.98$ ,  $RFI = 0.89$ ,  $RMSEA = 0.03$ ). We found that homophily ( $\beta = 0.36$ ,  $p < 0.001$ ), social presence ( $\beta = 0.45$ ,  $p < 0.001$ ) of influencer affected attachment positively. Therefore, H1 and H2 were supported. However, self-image expression ( $\beta = 0.1$ ,  $p = 0.151$ ) was not affected to attachment, rejecting H3. Attachment positively have influence on loyalty ( $\beta = 0.65$ ,  $p < 0.001$ ), self-disclosure ( $\beta = 0.6$ ,  $p < 0.001$ ), customer participation ( $\beta = 0.66$ ,  $p < 0.001$ ) and customer-generated advertising ( $\beta = 0.63$ ,  $p < 0.001$ ). Therefore, H4, H5, H6 and H7 were supported.

**Figure: Standardised structural path**

	Path		Estimate	S.E.	C.R.	P	Standardized direct effects	
ATT	<---	HO	.423	.083	5.062	***	.358	
ATT	<---	SP	.432	.079	5.444	***	.451	
ATT	<---	SIE	.086	.060	1.436	.151	.103	
SD	<---	ATT	.770	.084	9.168	***	.599	
LO	<---	ATT	.579	.060	9.688	***	.650	
CP	<---	ATT	.858	.083	10.354	***	.661	
CGA	<---	ATT	.870	.082	10.572	***	.632	
			CFI = 0.98, RFI = 0.89, RMSEA = 0.03, *** p < 0.001					

**5. Conclusion**

From the results of the of the proposed model using attachment theory on SMIs who use swearwords, it is shown the using swearwords can have positive influence on the way their followers bonding with these SMIs via social presence and homiphily. It is suggested that through the act of using swearwords, the followers

can feel closely related to their influencers and at the same time SMIs can establish their own appeal and friendliness towards followers. After successfully forming the attachment with followers, the outcomes from this type of relationship are the enhancement in followers' participation, higher degree of self-disclosure, loyalty and customer-generated advertising such as sharing and tagging friends.

The result of this study opens up a new avenue in the way of utilising social media influencer marketing. Although normally profanity is considered as offensive on our social setting, it can be an effective tool for marketers and SMIs in creating a meaningful, engaging conversations with the followers and being standout from the competitive landscape of influencers.

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# MOBILIZING INVESTMENT CAPITAL THROUGH PUBLIC - PRIVATE PARTNERSHIP FOR TOURISM DEVELOPMENT IN NGHE AN PROVINCE

MA. Nguyen Thanh Huyen\*

**Abstract:** *The paper recognizes that public-private partnership (PPP) is an important form of capital mobilization for tourism development in Nghe An province. PPP will contribute to create a new face for the tourism industry in Nghe An. This paper analyzes the mechanism and the current situation of mobilizing capital through public-private partnership for tourism in Nghe An. From there, the author proposes some solutions to enhance mobilizing investment capital through public-private cooperation to develop Nghe An tourism in the next coming time.*

• Keywords: *investment capital mobilization, public-private partnership, tourism development, Nghe An.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: *Bài viết nhận thấy, hợp tác công tư (PPP) là hình thức huy động vốn quan trọng để phát triển du lịch tỉnh Nghệ An. PPP sẽ góp phần tạo diện mạo mới cho ngành du lịch Nghệ An. Bài viết này phân tích cơ chế và thực trạng huy động vốn theo hình thức hợp tác công tư cho du lịch ở Nghệ An. Từ đó, tác giả đề xuất một số giải pháp nhằm tăng cường huy động vốn đầu tư thông qua hình thức hợp tác công tư để phát triển du lịch Nghệ An trong thời gian tới.*

• Từ khóa: *huy động vốn đầu tư, hợp tác công tư, phát triển du lịch, Nghệ An.*

## 1. Introduction

Developing tourism into a spearhead economic sector is a strategic direction for the development of the country. Recently, Nghe An province has advocated tourism development as an important target in economic development and aimed to be the locality with the leading tourism industry in the North Central region. To achieve this target, it is necessary to synchronously implement many solutions, including promoting PPP. However, the mobilization of capital in this form is still very limited in tourism sectors. Therefore, it is necessary to understand the mechanism of capital mobilization and mechanisms policies of

the PPP to “wing” for tourism development. The study was carried out with the desire to propose solutions to mobilize investment capital through the PPP to develop tourism in Nghe An province in the near future.

## 2. Mechanism for mobilizing investment capital through public-private partnership

A public-private partnership is an agreement between the state (public agency) and one or more private partners in which the private partner provides infrastructure assets and public services that are consistent with the investor’s goals and the private partner’s profit goals. PPP is not a completely new idea, although it has been mentioned a lot in recent times and is considered a lifeline, a new solution for infrastructure investment when investment resources from the state budget are increasingly limited. PPP represents a framework that engages the private sector but recognizes as well as establishes the role of government in ensuring that social obligations are met, and reforms are successful in the public sectors and government’s invest. PPP are logically delineated of the duties, obligations, and risks borne by the public and private partners. State partners in PPP relationships are government organizations, including ministries, local governments, or state-owned enterprises.

\* College of Economics, Vinh University; email: huyennt.kt@vinhuni.edu.vn

The private partner can be a domestic partner or a foreign partner and can be companies or investors with financial or technical expertise relevant to the project.

PPP is a funding source combining investment and lending from the state and the private sector. In which, the state is responsible for creating favorable conditions and incentives for the private sector to invest in sustainable tourism development projects. The basic premise of this partnership is to bring benefits to all parties involved, through resource alignment, sharing of risks, responsibilities, and benefits. According to Kim, Kim, and Lee (2005), PPP capital brings many benefits to the tourism industry, besides it also comes with certain risks as follows:

- Reducing the controlling role of the Government: cooperation means sharing risks and jointly making decisions between the parties, so decision-making on project-related issues must also be participatory of private parties.

- Higher service prices: services provided through this form will have a policy of determining prices and fees higher than public projects, to reflect all costs and ensure profits.

- Issues of responsibility: if responsibilities are not clearly divided, it can lead to objections and criticisms of society when environmental, financial, labor disputes arise...

Besides the above risks, PPP capital also brings many benefits to the development of the tourism industry, such as:

- Cost reduction: The government can save not only in project construction but also in operation and maintenance of tourism services.

- Risk sharing: The risk of costs, deadlines or difficulties in environmental compliance and other risks will be shared between the government and the private partners.

- Improve quality and efficiency: by collaborating with the private sector, innovation in organization and operation will be applied such as innovation in design, flexible operation, financial decision-making, etc. support faster, thereby improving service quality and increasing project profitability.

- Other economic benefits: government participation in PPP projects can support and stimulate the private sector to develop more, contributing to job growth and economic growth.

### **3. Situation of mobilizing investment capital in the form of public-private partnership for Nghe An tourism development in the period 2016-2021**

With many advantages for tourism development, Nghe An identifies PPP as an important factor for tourism development and includes it in medium- and long-term plans. The province also developed many policy solutions on transport infrastructure, electricity and water in planned tourist areas and spots; support clearance; land incentives; administrative reform; strengthen investment promotion, combine trade promotion and tourism in various forms. PPP cooperation is essentially the best exploitation of each other's advantages for mutual development. The public sector has policies, the private sector has financial resources, if combined well, this will be an important lever for the tourism industry to break through. Strengthening PPP cooperation is one of the solutions the tourism industry is aiming for. State resources will be devoted to tourism infrastructure and improving the quality of tourism human resources, while the private sector will invest in tourism products and services, accommodation, and transportation facilities.

The mobilization of investment capital for tourism development through the PPP in Nghe An has been initially implemented. Some private tourism entrepreneurs have committed to cooperate within the framework of strategic cooperation for tourism development in Nghe An province since 2010, according to Decision No. 71/2010/QĐ-TTg and Decree No. 71/2010/QĐ-TTg. 15/2015/ND-CP on PPP investment.

In the period 2016-2021, more than 105.5 billion VND was invested by private investors in association tourism development in the form of PPP in the fields of: tourism promotion, tourism product development tourism, human resource training...

In 2017, Nghe An signed a cooperation agreement to promote public-private tourism for the first time. On March 17, 2017, Nghe An Tourism Promotion Information Center and Chau Vinh - Vinh Guru Tours Trading and Services Co., Ltd signed a memorandum of cooperation in tourism development. The general purpose of this cooperation is to promote the development of Nghe An tourism in general and promotional activities in particular. Nghe An Tourism Promotion Information Center supports the promotion of Vinh Guru Tours and vice versa. The center and the company jointly link the website to introduce Nghe An tourist routes, participate in domestic and foreign tourism fairs and events; organizing to welcome Famtrip and Prestrip delegations. Vinh Guru Tours consults, sells tours and tourist routes in Nghe An built by Nghe An Tourism Promotion Information Center. Recently, the Center collaborated with Vinh Guru Tours to research and build a new tourism product, pilot, and put it into operation... In addition, Vinh Guru Tours fosters specialized communication skills in English for Center's staff.

In 2019, Saigontourist and Nghe An provincial authorities signed a contract to strengthen the close cooperation and association relationship to promote the potentials and strengths of both to promote tourism development, improve professionalism and promote tourism competitiveness of Nghe An and Saigontourist tourism through propaganda, promotion and tourism promotion activities, building and developing tourism products, training human resources... Cooperation agreement between Saigontourist and Nghe An in the period of 2019 - 2025 show their depth, comprehensiveness and specificity through the following fields: construction, product development; coordinate to bring tourists to Nghe An and vice versa; opening a travel branch Saigontourist in Nghe An and supporting business activities; marketing promotion - event organization; human resource training; use products and services of both parties...

However, in the past time, the mobilization of investment capital for tourism development through the form of PPP in Nghe An has been

quite conservative, not as expected. For tourism infrastructure, the project has not yet been implemented in the form of PPP. The state budget is still under pressure to spend from the budget on infrastructure projects affecting tourism. Therefore, it is necessary to research, deploy and replicate the PPP model to all fields and projects that private investors can implement.

#### **4. General assessment of mobilizing investment capital in the form of public-private partnership for tourism development in Nghe An province in the period 2016-2021**

In the period 2016-2021, the mobilization of investment capital for tourism development has paid more attention to PPP. Capital of this form has increased compared to previous periods. This is a significant success of the Nghe An provincial government in reducing its reliance on state budget capital and attracting investment from businesses for the province's tourism development.

However, the capital mobilized through PPP for tourism development in Nghe An in recent years is still quite low, not as expected. The province has not yet implemented any PPP project for tourism infrastructure development.

The reason for this limitation is that the policy system is not strong enough and fickle, the business environment is not clear enough to attract private investment. In addition, private enterprises in Vietnam are mainly small and medium-sized, while state-owned enterprises still have the upper hand. In particular, the role of the private sector has not been really appreciated, so public-private cooperation in tourism has not been as expected.

#### **5. Solutions to mobilize investment capital in the form of public-private partnership for tourism development in Nghe An province in the coming time**

Decree 15/2015/ND-CP dated February 14, 2015 of the Government on investment in the form of PPP has opened up great opportunities for attracting private investment resources to invest in all sectors including tourism. Nghe An should prioritize the implementation of the form of PPP for projects and fields that can be implemented

by private investors. The PPP model in tourism development has advantages over other models and is suitable for Nghe An's conditions for the following two reasons: (1) The PPP model is suitable for the country and localities facing challenges in financial difficulties and inability to finance projects without outside support; at the same time do not want to borrow (may be very long term); (2) The PPP model allows the transfer of expertise and experience through cooperation with private investors.

Benefits from PPP projects: (1) Increased efficiency: The private sector has financial benefits to deliver on time and on budget; Optimization of project life cycle costs; Competition among contractors on price. (2) Reasonable risk allocation: Allocate risks to the party with the best ability to manage, reduce risk by redefining the relationship between parties, Maintain service quality. (3) Public sector reform. (4) Mobilizing new financial resources from the private sector; create projects with reasonable costs, limit debt.

Some specific solutions to mobilize capital for tourism development are as follows:

- Review, classify and evaluate the lists of projects in the list of the master plans or invested and managed by the state to call for and transfer to the private sectors operated, managed and exploited in order to reduce cost pressure from the state budget. The list of projects calling for investment needs to focus on areas that are feasible from the investor's point of view, with investment incentives for each specific project.

- Remove bottlenecks in policy and issue specific regulations on public-private cooperation in tourism, such as supporting policies, integrating investment, completing production infrastructure, developing infrastructure for tourism development... It is necessary to create a good environment to encourage private investment, from which public-private cooperation in tourism development can be effective.

- Completing legal procedures: Assign the agency to act as the focal point to implement PPP projects for Nghe An's tourism industry, develop a process for announcing, appraising, and selecting PPP investors in Nghe An; decentralize authority

to decide on the implementation of PPP projects; Select a team of staff with expertise in the fields of finance, investment, and related fields to establish a specialized team to implement PPP projects.

- Develop an promotion and communication plan on forms of investment for the tourism industry under PPP to explain the investor selection process, project impacts, and interests of stakeholders in each project. PPP project to improve the transparency of the project. Stakeholders include: (i) the interests of the state; (ii) employees; (iii) service users; (iv) investors; (v) people affected by the project.

- Organize training for staff on PPP and the process of selection, negotiation, contract signing, monitoring the project implementation process with private partners.

- Encourage enterprises of all economic sectors to participate in providing public services, especially forms of public-private partnership. Ensure equality between non-business units.

## 6. Conclusion

In summary, it can be affirmed that mobilizing capital through PPP is extremely important for tourism development. One of the solutions to mobilize initial capital for tourism to recover after the Covid-19 pandemic and develop in the coming time is to promote capital mobilization in the form of PPP. Therefore, the solution to mobilize investment capital through the form of PPP to develop tourism in Nghe An province should be implemented quickly and synchronously to contribute to creating a new brand for the province's tourism in the near future.

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# CHALLENGES IN DIGITAL TRANSFORMATION IN BUSINESS

Assoc.Prof.PhD. Nguyen Thi Ha\* - Nguyen Thi Hong Hoa\*\* - Nguyen Thai Ha Thuong\*

**Abstract:** Applying information technology and implementing digital transformation in business today is of urgent and universal interest, especially in a wide international integration context and given the skyrocketing development of global digital technology. This is a challenge for all businesses. Nowadays, companies are going to great lengths to respond to the country's digital transformation program. However, the actual numbers and successful applications are few. This can be attributed to a variety of factors, including mentality, prohibitive price, human, and so on.

• Keywords: digital transformation, business, challenges.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Ứng dụng công nghệ thông tin và thực hiện chuyển đổi số trong doanh nghiệp hiện nay là vấn đề cấp bách và được mọi người quan tâm, nhất là trong bối cảnh hội nhập quốc tế sâu rộng và sự phát triển như vũ bão của công nghệ số toàn cầu. Đây là một thách thức đối với tất cả các doanh nghiệp. Ngày nay, các công ty đang nỗ lực hết sức để hưởng ứng chương trình chuyển đổi kỹ thuật số của đất nước. Tuy nhiên, con số thực tế và ứng dụng thành công còn rất ít. Điều này có thể là do nhiều yếu tố, bao gồm tâm lý, giá cao, con người v.v...

• Từ khóa: chuyển đổi số, kinh doanh, thách thức.

## 1. General introduction

“Digital transformation is the key to success. Digital transformation requires businesses to update constantly, change according to new ones, and accept failures easily.” Digital transformation in business, in general, and particularly in the financing and accounting facets, can be defined as the application of digital technology to financial and accounting transactions, allowing these transactions to be implemented more quickly, with optimal efficiency, and saving labor, time, and money for the business. In finance and accounting jobs, digital transformation and data-oriented thinking will help businesses improve finance and accounting’s roles and potential in

determining and deploying long-term schemes successfully. Digital transformation help automate the finance progress, upgrade the role and change the finance and accounting’s jobs characteristics; improve obey efficiency and information security; optimize resources of business; enrich the business management efficiency. There are 3 solutions that can be mentioned as the most methods that businesses prior use in finance and accounting fields: online accounting apps; e-invoice; e-banking connection services. However, 89% of businesses have failed in digital transformation to date. Besides the finance and accounting fields, digital transformation in other fields of business is also indispensable. “Digital transformation is the incorporation of digital technology into all aspects of business, such as finance, accounting, sales, product manufacturing, human resource management, and so on, in order to achieve positive changes and improve activity efficiency.

## 2. Challenges for small and medium size enterprises in digital transformation

### Criteria for classifying enterprises by size

Criterion	Trade and Services		Manufacture and Construction	
	Sales	Employees	Sales	Employees
Microenterprise	10 billion	10 employees	3 billion	10 employees
Small	100 billion	50 employees	50 billion	100 employees
Medium	300 billion	100 employees	200 billion	200 employees
Large	> 300 billion	> 100 employees	> 200 billion	> 200 employees

Sources: MISA Joint Stock Company

\* Academy of Finance; email: nguyenha@hvtc.edu.vn

\*\* MISA Joint Stock Company

*First of all*, barrier in thinking, there are several questions in people's minds, such as:

- Do I have money?
- Is the price too high?
- Do I have an operator?

Small and medium-sized enterprises (SMEs) are businesses with a lean structure, a few operators, and a primary goal of doing business. Without business and cash inflow, companies will always stay in a viable state rather than developing. During the operation of SMEs, every penny is calculated to determine which is a cost and which is an investment.

Some businesses believe that digital transformation is a medium and long-term investment because it takes many years to implement before its efficiency can be measured in operating costs saved or human resources saved. But for some businesses, digital transformation is a short-term expenditure. As a result, business leaders must change their perspectives in order to benefit from digital transformation.

*Secondly*, there is a hindrance to costing: nowadays, the average expenditure for digital transformation all around the world is about 2-3 percent. In some countries like Singapore, this proportion can be as high as 4-5%. The average rate in Vietnam today is 0.3%. However, most SMEs are only now willing to invest less than 3% in software purchases (*according to Misa's statistics*).

Companies must pay a system information technology maintenance fee for software businesses to ensure that their software runs smoothly. This expenditure is almost impossible for SMEs.

*Thirdly*, there is an obstacle in humans: SMEs usually have a few laborers and a few people who have knowledge of the software. In order to apply information technology to finance or other areas, they need a person who can operate that apparatus. To optimize the business process using software, this person must have a logical and deep understanding of technology.

*Fourthly*, there isn't a detailed plan before carrying out digital transformation: When implementing digital transformation, businesses must account for the value of digital transformation, such as labor savings, working hours saved, daily cost savings, and new value that digital transformation brings. They must find ways to quantify the intangible and long-term value. It is efficient when the value created is greater than the transformation cost. Digital transformation is not going to make the increase in cost, it is going to make the extra value. To avoid the accidents experienced before with information technology, companies have to always determine that expenditure for digital transformation is an investment and always allow for cash inflow and cash outflow. As with the appraisal of other investment projects, the decision of whether to execute digital transformation does not depend on the cash flow of investment projects being positive to invest in and execute.

### **3. Information technology application status in corporate finance**

Currently, in Vietnam's market, there are about 20 companies that provide accounting software products, which can meet any business type as well as the main characteristics of each industry.

Nowadays, in order to assess the level of digital transformation of businesses, we have a set of DBI indicators, which can help each company determine what stage are they at in the digital transformation technology process, so that they can set their suitable digital transformation routes, plans, solutions and develop faster, stronger.

In the Vietnamese market today, there are more than 20 companies providing accounting software products that meet the needs of all types of businesses as well as the specific characteristics of each industry.

Currently, to assess the digital transformation level of businesses, we have a set of DBI indicators, which help each business determine what stage they are in the digital transformation process and develop a roadmap, plan, and

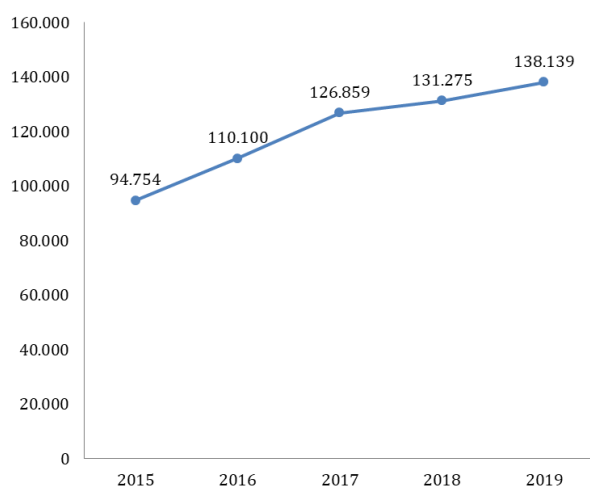
suitable digital transformation solutions to help businesses grow faster and stronger. From there, creating an overall picture of enterprise digital transformation and digital transformation development in each industry, field, and region as well as the whole country in service of development policy and management.

**Number of corporates nowadays**  
(Cumulative data until the end of 2019)

	Based on size					Based on fields	
	Total	Micro	Small	Medium	Large	Trade and Services	Manufacture and Construction
Worldwide	758,500	474,821	236,652	26,548	20,480	508,195	250,305

Sources: MISA Joint Stock Company

**Total number of new businesses established annually**

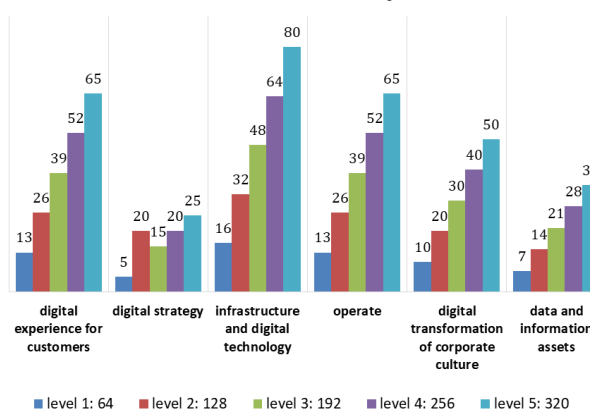


With this set of indicators, the digital transformation will be divided into six stages: Level 0-not yet digitally converted; Level 1-start-up; Level 2-getting started; Level 3-formation; Level 4-advanced; and Level 5-leading. And evaluate based on six main pillars of the business: Digital experience for customers; digital strategy; infrastructure and digital technology; operations; the digital transformation of corporate culture; data and information assets .

For each business size, we have the following scale:

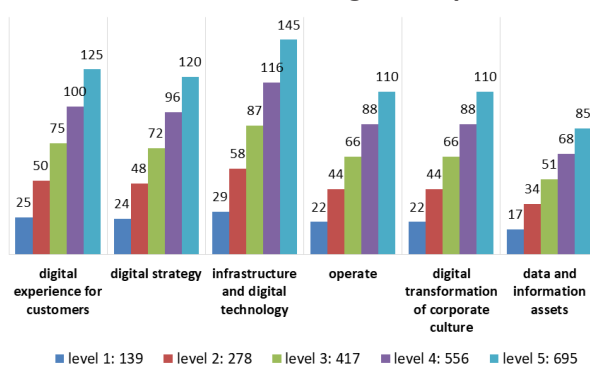
*For SMEs:*

**Scale to assess the maturity level of small and medium enterprises**



*For large companies*

**Scale structure to assess the degree of digital transformation of large enterprises**



Most of the enterprises are now just stopping at 0, while the rest of the large technology enterprises such as MISA, Viettel, etc. are evaluated at the end of level 2 and have just begun to enter step 3. This shows that businesses are just starting to think about applying technology to manage and regulate activities in enterprises. Therefore, in order to encourage businesses to digitally transform, on June 3, 2020, the Prime Minister signed a decision approving the “National Digital Transformation Program to 2025, with an orientation to 2030.” Accordingly, with a vision to 2030, Vietnam becomes a digital, stable, and prosperous country, pioneering in testing new technologies and models, fundamentally and comprehensively renovating the management and administration activities of the government, the production and business activities of enterprises, and people’s ways of living and working, and developing a safe, humane, and

wide digital environment all over. In particular, according to the Resolution of the XIII Congress of the Communist Party of Vietnam passed at the National Congress of Deputies from January 25 to February 1, 2021, “creating a foundation for national digital transformation and gradually developing a digital economy and digital society” is one of the breakthroughs in the country’s development strategy in the coming period. To promote the digital transformation process, the government has introduced levels of technology support for businesses, specifically Clauses 1, 2, and Article 11 of Decree 80/2021.

*Government:* Support up to 50% of the contract value of consulting digital transformation solutions for businesses on business processes, management processes, production processes, technology processes, and business model transformation, but not more than 50 million VND per contract per year for small enterprises and not more than 100 million VND per contract per year for medium enterprises.

Support up to 50% of the cost for businesses to rent or purchase digital transformation solutions to automate and improve the efficiency of business processes, management processes, production processes, and technological processes in the field. enterprise and business model transformation, but not exceeding 20 million VND/year for micro-enterprises; no more than 50 million VND/year for small enterprises; and not more than 100 million VND/year for medium enterprises.

According to the 2022 plan, the Ministry of Planning and Investment will have a budget of 16.7 billion to support technology for localities, specifically: Ha Giang: 500 million, Bac Giang: 1.2 billion, Bac Kan: 1 billion, Ha Nam: 500 million, Thanh Hoa: 1 billion, Nghe An: 1 billion, Ha Tinh: 800 million, Quang Binh: 2 billion, Quang Tri: 500 million, Hue: 1 billion,... Thanh Hoa, Hoa Binh, Bac Giang, Quang Ninh, Ha Tinh, Hanoi, and Yen Bai have resolutions and are allocating capital.

Currently, businesses are also responding to the National Digital Transformation Program, such as Viettel, an industrial telecommunications

corporation in Vietnam. In the first half of 2020, due to the complicated developments of Covid-19, Viettel promoted customer interaction on digital channels instead of traditional channels. New services have a customer interaction rate of over 90% on digital channels. Thanks to the transformation of customer care activities, the customer satisfaction rate for telecommunications services has increased from 87.92% in 2019 to 90.02% in 2020. Viettel actively transferred customer interactions to the Viettel Chatbot system nearly 25,000 times per day (95% conversion rate). Besides, Viettel also focuses on developing online partners to serve customers shopping at home. Viettel’s revenue in the first six months of the year reached VND 120,000 billion, an increase of more than VND 10,000 billion compared to the same period in 2019.

#### 4. Conclusion

It can be seen that digital transformation in all fields in general and the financial sector, in particular, is always a central task for enterprises. If enterprises want to grow, develop, and move to a higher level, the issue of digital transformation in activities needs to be addressed. In recent years, Vietnam has implemented a series of activities to promote the development of digital transformation in various fields. However, the success is not much, and the failure is too great. This requires not only the efforts of enterprises themselves, ministries, departments, and branches, but also the participation of the whole country. Changing from cognitive thinking to perfecting people with specific plans will create success in digital transformation for all areas of business activities.

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# THE APPLICATION OF SERVQUAL MODEL TO ASSESS THE RELATIONSHIP BETWEEN THE QUALITY OF TAX AUTHORITIES E-INVOICE MANAGEMENT AND BUSINESS SATISFACTION WITH THE E-INVOICE MANAGEMENT OF TAX AUTHORITIES

Assoc.Prof.PhD. Truong Thi Thuy\* - MSc. Truong Thi Thu Ha\*\*

**Abstract:** Research and apply SERVQUAL model to measure the relationship between the quality and business satisfaction of tax authorities' e-invoice management. Quantitative research method is used to survey 462 businesses through the SEM model. The findings of the study indicate that, in descending order: (1) Reliability, (2) Assurance, (3) Responsiveness, (4) Empathy, and (5) Tangibility have the greatest influence on the tax authorities' ability to manage e-invoices. The report then suggests policy changes that will enhance the operation of public services to a greater extent and satisfy business needs.

• Keywords: SERVQUAL, e-invoice management, satisfaction, SEM.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Nghiên cứu áp dụng mô hình SERVQUAL đo lường mối quan hệ giữa chất lượng và sự hài lòng của doanh nghiệp đối với công tác quản lý hóa đơn điện tử của cơ quan thuế. Phương pháp nghiên cứu định lượng được sử dụng để khảo sát 462 doanh nghiệp thông qua mô hình SEM. Kết quả nghiên cứu chỉ ra rằng, theo thứ tự giảm dần: (1) Độ tin cậy, (2) Sự đảm bảo, (3) Khả năng đáp ứng, (4) Sự đồng cảm và (5) Tính hữu hình có ảnh hưởng lớn nhất đến khả năng quản lý của cơ quan thuế trong việc quản lý TTĐT - hóa đơn. Sau đó, báo cáo đề xuất những thay đổi chính sách nhằm tăng cường hoạt động của các dịch vụ công ở mức độ lớn hơn và đáp ứng nhu cầu kinh doanh.

• Từ khóa: SERVQUAL, quản lý hóa đơn điện tử, sự hài lòng, SEM.

## 1. Introduction

In recent years, the primary goal of the tax industry has shifted to expediting administrative reform, improving tax administration capability, and assisting in the prevention of tax evasion, tax fraud, and revenue loss. The efforts of the tax business to undergo digital transformation have made this goal attainable. The

level of satisfaction with the tax authorities' handling of e-invoices is regularly used to assess the quality of e-invoice management.

The research model takes the following approach: enterprises are "customers" and tax offices are "public service providers" on electronic invoicing. Enterprise satisfaction is measured by conducting surveys, reviewing, and gathering views from businesses with tax authorities. As a result, tax authorities can better understand the needs and wishes of businesses and take steps to improve service quality and service offering in order to increase corporate satisfaction and benefits. Satisfaction influences enterprise voluntary legal compliance. Thus, it can be understood that the contentment of businesses in implementing e-invoices can be interpreted as an indicator of their perceived level of service quality supplied by the tax authority. In Vietnam, at present, there are two types of e-invoices: e-invoices with tax authority authentication codes and e-invoices without tax authority authentication codes.

## 2. Theoretical overview

### 2.1. The principle of tax authority e-invoice management and satisfaction with the quality of tax authority e-invoice management

Invoice management can be viewed from two perspectives: invoice state management and buyer and seller invoice management.

\* Academy of Finance

\*\* Cau Giay district Tax Department

In the framework of the paper, the author addresses invoice management from the perspective of state management, which is the coordination, supervision, and inspection operations of tax authorities and responsible state agencies in connection to bilateral contacts. originating from connected subjects in the process of producing, making and using invoices. Electronic invoice management is a part of invoice management.

Tax authority e-invoice management for enterprises is the coordination, supervision, and inspection by tax authorities on the receiving and processing of usage registration; receive, handle, and manage risks; and verify and exploit e-invoice information.

Enterprises' satisfaction about the quality of e-invoice management by the Tax authorities is considered to be based on their experience on using e-invoices.

## 2.2. Research model and research hypothesis

Through a theoretical review of the theories SERVPERF of Grönroos (1984) and SERVQUAL of Parasuraman et al. (1985), and related previous studies have been mentioned. Thereby, the authors propose the following research model:

### *Hypothesis 1: Confidence level*

H1: The level of trust in providing e-invoice services has a positive impact on business satisfaction.

The factor of the tax authority's reliability in the management of e-invoices for businesses is reflected in the ability to manage e-invoices, not to make mistakes, to quickly and promptly resolve problems.

### *Hypothesis 2: Responsiveness*

H2: Responsiveness has a positive influence on business satisfaction.

Responsiveness is reflected in the fact that the tax authority is ready to meet the needs of businesses in a timely manner. Timely response will bring satisfaction to businesses

### *Hypothesis 3: Service capacity*

H3: Service capacity of civil servants has a positive influence on business satisfaction.

Service capacity of tax officials is reflected in professional qualifications and skills (professional understanding, proficiency in the process); spirit, attitude (polite, respect for taxpayers). The better the service capacity of civil servants who directly handle work related to e-invoice management, the more satisfied businesses will be.

### *Hypothesis 4: Tangibles*

H4: Tangible means have a positive influence on business satisfaction.

### *Hypothesis 5: Level of empathy*

H5: The level of empathy of civil servants has a positive influence on business satisfaction.

The level of sympathy of the tax authority towards businesses is shown in the concern and resolution of business issues regarding e-invoices.

## 2.3. Research Methodology

The selected research methods are:

*Qualitative research:* The thesis will review the theoretical basis and inherit the results from the SERVQUAL research model to build an evaluation scale. After that, based on the discussion and research process, adjust and supplement the items to build evaluation criteria and adjust questions for the quantitative research process.

*Quantitative analysis methods:* Use Cronbach's Alpha method; descriptive statistical analysis methods; exploratory factor analysis (EFA); confirmatory factor analysis (CFA); structural equation model (SEM).

*Data collection method:* The data are selected according to the sampling method. Data was collected from August 1, 2022 to August 31, 2022 by face-to-face interviews and distribution of questionnaires to enterprises. Using a questionnaire, the author performs a business survey. The questionnaire was created online and distributed to businesses via the Internet using Google applications; additionally, the author combined survey distribution to businesses.

Create a survey form based on the scale frame using the 7 criteria listed above and 29 questions. The questions are designed to explicitly evaluate satisfaction by using a 5-point Likert scale ranging from 1 to 5. In this study, the following options will be considered: (1) completely disagree; (2) disagree; (3) normal; (4) agree; and (5) completely agree.

## 3. Research results

### 3.1. Data collection and preprocessing

The data collection process was divided into two phases:

*Experimental phase:* Based on the problem and research objective, object, and scope of the study, find out the research situation domestically and internationally to discover the "gaps" in previous studies, thereby continuing to research, and select

appropriate theoretical frameworks and scales to build the scale and preliminary survey. Then, the group conducted a pilot survey with 251 businesses to collect feedback and adjust the questionnaire's content and structure.

*Formal phase:* The team conducts an online formal survey through social networking platforms and responds in person.

The survey results yielded 462 legitimate responses from businesses that used e-invoices. The experimental outcomes of the proposed research model will be implemented on the data sample from these 462 questionnaires.

### 3.2. Descriptive statistical analysis on data samples

**Table 1. Statistics of questionnaires grouped by sex**

Sex	Quantity	Percentage
Male	177	38,3
Female	285	61,7
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 2. Statistics of questionnaires grouped by age**

Age	Quantity	Percentage
30 years old and under	176	38,1
Over 30 years old to 40 years old	151	32,7
Over 40 years old to 50 years old	90	19,5
More than 50 years old	45	9,7
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 3. Statistics of questionnaires grouped by position**

Position	Quantity	Percentage
General manager director	77	16,7
Accountant	155	33,5
Chief accountant	230	49,8
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 4. Statistics of grouping questionnaires by working time**

Working time	Quantity	Percentage
Less than 5 years	113	24,5
From 6-10 years	141	30,5
From 11-20 years	131	28,4
Over 20 years	77	16,7
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 5. Statistics of grouped survey questionnaires by operation time**

Operating time	Quantity	Percentage
Less than 3 years	103	22,3
Over 3-5 years	88	19,0
Over 5 to 10 years	161	34,8
Over 10 years	110	23,8
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 6. Statistical surveys grouped by type of business**

Type of business	Quantity	Percentage
State enterprises	53	11,5
CP company	174	37,7
Co., Ltd	134	29,0
Private enterprise	58	12,6
Other type	43	9,3
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 7. Statistics of the survey grouping by business revenue in 2021**

Revenue	Quantity	Percentage
Under 10 billion VND	129	27,9
Over 10-50 billion VND	177	38,3
Over 50-100 billion VND	100	21,6
Over 100 billion VND	56	12,1
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 8. Statistics of questionnaires grouped by business field**

Business areas	Quantity	Percentage
Trade and services	241	38,3
Build	71	24,9
Manufacture	105	23,2
Other	45	13,6
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 9. Statistics of grouped survey questionnaires by business headquarters**

Headquarters	Quantity	Percentage
Northern Vietnam	152	32,9
Middle Vietnam	155	33,5
Southern Vietnam	155	33,5
<b>Total</b>	<b>462</b>	<b>100,0</b>

*Source: Results of the author's team*

**Table 10. Statistics of grouping questionnaires in the form of invoices**

Form	Quantity	Percentage
E-invoices having authentication code	289	62,6
E-invoices having no authentication code	156	33,8
E-invoices initialized from cash register	17	3,7
<b>Total</b>	<b>462</b>	<b>100,0</b>

Source: Results of the author's team

### 3.3. Experimental results of the model on the data sample

#### 3.3.1. Cronbach's alpha analysis results:

Cronbach's alpha reliability coefficient was used by the study team to examine the correlation between the items.

- Variables that do not violate the requirement have a total variable correlation coefficient (item-rest correlations) not less than 0.3.

- Cronbach's Alpha coefficient if the variable type (Cronbach's Alpha If Item Deleted) does not have a value that exceeds the current Cronbach's Alpha, so the variables in the model are not excluded.

*Conclusion:* As a consequence, the scales meet the requirements of reliability.

#### 3.3.2. Exploratory Factor Analysis (EFA) results:

- Extract 6 factors from the original 28 factors; we receive 6 factors at the end of the extraction process. The Rotation Sums of Squared Loadings displays the outcomes of the indicators after the factor rotation is completed. According to the data in the table above, the eigenvalue at the sixth factor is  $1.130 > 1$ , and at the seventh factor is  $0.730 < 1$ . The extraction process will terminate at the sixth element based on the condition of eigenvalue 1, hence six factors are extracted.

- Total extracted variance  $72.30\% > 50\%$ , in the table of results above, the total explained extracted variance is above 50% from the second factor onward. According to Merenda (1997), the number of extracted factors should start at 2. When used with the eigenvalue criteria, the optimal number of factors retrieved should be six at a cumulative variance of  $72.3\% > 50\%$ . Thus, six factors were identified to explain (condensate) 72.3% of the data variation of the 28 items participating in EFA.

- The factor loading coefficients are all higher than 0.5, indicating a correlation between the items and the factor. The greater the absolute value of the items' load coefficient, the stronger the correlation between that item and the factor, and vice versa.

- KMO value = 0.908 ( $KMO \geq 0.5$ )

- Bartlett's test meets the standard ( $Sig < 0.05$ ).

The result of Bartlett's test is 12650.333 with the Sig significance level =  $0.000 < 0.05$ , rejecting hypothesis  $H_0$ : the items are not correlated with each other. As a result, the hypothesis that the correlation matrix between variables is a homogenous matrix is rejected, indicating that the variables are correlated with each other and meet the factor analysis conditions.

Thus, exploratory factor analysis (EFA) is appropriate.

#### 3.3.3. The results of confirmatory factor analysis CFA

##### Unstandardized CFA analysis results

**Table1: Indicators to measure the goodness of fit of the CFA model**

Measurement index	Values calculated from the model	Required value
Chi-square/df	3.712	$\leq 3$
CFI	0.930	$\geq 0.9$
RMSEA	0.077	$< 0.05$
GFI	0.849	$\geq 0.8$
P-value	0.000	$< 0.05$
TLI	0.919	$\geq 0.9$

Source: Results of the author's team

Table 11 shows that the CFA model is compatible with the data based on the results of the CFA analysis of the evaluation model of factors influencing business satisfaction to tax authorities' e-invoice management. Specifically, all the CFA model fit indicators satisfy the following conditions: The critical scale model has 326 df, the squared statistical value is 1210,131;  $CFI = 0.930 (\geq 0.9)$ ;  $P\text{-value} = 0.000 (< 0.05)$ ,  $TLI = 0.919 (\geq 0.9)$ , according to Hair et al. (2010) and Hu & Bentler (1999). Only  $Chi\text{-square}/df = 3.712 (> 3)$  and  $RMSEA = 0.077 (> 0.05)$  is not acceptable, but according to Baumgartner et al. (1995) and Doll et al. (1994) the maximum value of  $Chi\text{-square}/df = 5$  is still accepted. According to Hair et al. (1998), the  $Chi\text{-square}/df$  value should be between (1,3). However, Segar et al. (Segar, Grover, 1993) believe that the ratio should be less than 3 (Chin et al., 1995). Furthermore, when using this ratio, some actual studies have distinguished two cases, namely, with a sample size of more than 200, the  $Chi\text{-square}/df$  is smaller than 5, or it may be smaller than 3 if the sample size is smaller than 200, so it can be concluded that this pattern fits well with the collected data (Kettinger

et al., 1995). And RMSEA =0.08 is still acceptable because RMSEA is the difference between the actual data portion and the anticipated model part calculated by the square root of the mean square residual. This is a critical criterion since it contributes to estimating the model fit. According to MacCallum et al. (1996), the RMSEA index must be less than 0.05 in order for the new model to be regarded as acceptable. In certain circumstances, however, this value just needs to be smaller than 0.08 in order for the model to be approved (Taylor, Sharland, Cronin, and Bullard, 1993-In the IS Research Journal). The data are considered acceptable when the RMSEA is less than 0.08 (Hair et al., 1998).

All items have a P-value of  $0.000 < 0.05$ , indicating that all items are significant in the model. The estimated regression coefficients after standardization are all greater than 0.7, indicating that the items are highly significant.

The P-values for the unstandardized regression coefficients are all less than 0.05, but the P-values for the standardized regression coefficients are all larger than 0.5 or even 0.7. As a result, the scales used to quantify the model's factors and components reach convergent validity.

**Table 12: Standardized CFA analysis results**

Measurement index	Values calculated from the model	Required value
Chi-square/df	3.712	<=3
CFI	0.930	>=0.9
RMSEA	0.077	<0.05
GFI	0.849	>=0.8
P-value	0.000	<0.05
TLI	0.919	>=0.9

Source: Results of the author's team

**CR synthesis reliability analysis.**

Perform a Composite Reliability analysis (CR) for each unidirectional factor in the CFA analysis results using the standardized regression coefficient to confirm the scale's reliability. The scale is regarded as good if the CR is larger than 0.6, ideally greater than 0.7.

The results of reliability analysis of all scales are greater than 0.7 (Satisfaction level = 0.918; Empathy level = 0.897; Reliability level = 0.764; assurance = 0.827; Response level = 0.834; Tangibility = 0.766). As a result, the reliability of the scale is guaranteed. All AVE values are greater than 0.5 of the assured scale's convergence value. CFA results also reveal

that the values of MSV are all less than AVE, and that the square root of AVE is higher than the correlation coefficient between the scale's components, implying that the discriminant value of the scale is guaranteed.

**Table 13: Model validity measures**

	CR	AVE	MSV	MaxR(H)	HL	DC	TC	NL	DU	HH
HL	0.970	0.843	0.514	0.971	<b>0.918</b>					
DC	0.954	0.805	0.514	0.958	0.717***	<b>0.897</b>				
TC	0.874	0.584	0.346	0.892	0.378***	0.202***	<b>0.764</b>			
NL	0.897	0.685	0.346	0.903	0.576***	0.329***	0.589***	<b>0.827</b>		
DU	0.901	0.695	0.442	0.907	0.665***	0.646***	0.207***	0.439***	<b>0.834</b>	
HH	0.849	0.586	0.057	0.858	0.096*	0.021	0.239***	0.124*	-0.025	<b>0.766</b>

**Validity Concerns**

No validity concerns here.

**References**

Significance of Correlations:  
 † p < 0.100  
 \* p < 0.050  
 \*\* p < 0.010  
 \*\*\* p < 0.001

**3.3.4. The results of testing the research hypothesis using the SEM model**

The theoretical model includes 326 degrees of freedom, and the P-value for the Chi-squared value is 0.000, which is less than 0.05 (indicating that the impact between variables in the model is statistically significant. Because the sample size is small and the criteria for determining model fit all meet the table's acceptable level (CFI = 0.929, TLI = 0.917, GFI = 0.848), it can be concluded that the scale is good. Thus, we can conclude that the model is suitable for the collected data. RMSEA = 0.077, as defined by MacCallum et al. (1996), the RMSEA index must be less than 0.05 for the model to be regarded as appropriate. In some other circumstances, however, this value just needs to be smaller than 0.08 in order for the model to be approved (Taylor, Sharland, Cronin, and Bullard, 1993 - IS Research Journal).

**Figure 14: Unstandardized SEM model**

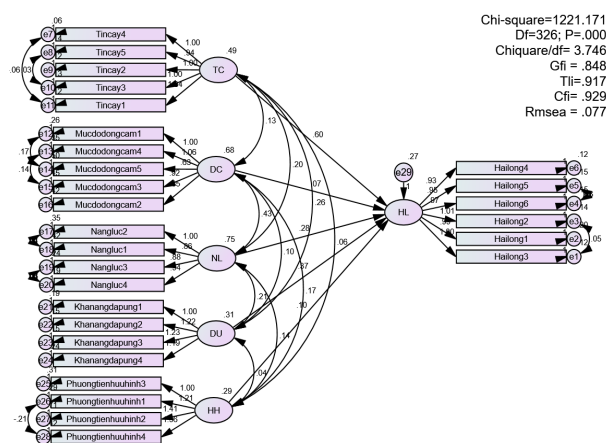


Figure 15: Standardized SEM model

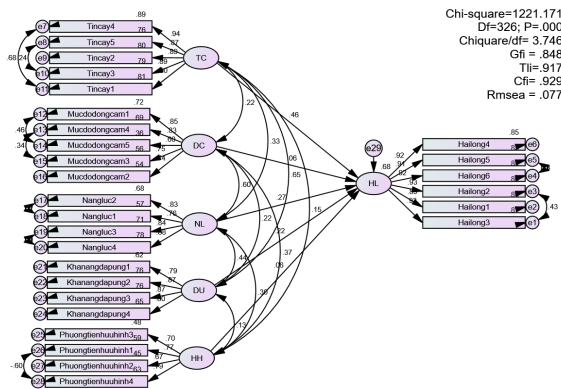


Table 16. Indicators to measure the relevance of model after SEM analysis after calibration

Measurement index	Values calculated from the model
Chi-square/df	3.746
CFI	0.929
RMSEA	0.077
GFI	0.848
P – value	0.000
TLI	0.917

Source: Results of the author's team

Table 17 Unstandardized SEM model results

The scale	Estimated value (estimate)	Standard error (SE)	Probability value mean (P)	Research hypothesis test results
Reliability (TC) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.595	.054	***	Support the research hypothesis
Level of empathy (DC) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.068	.048	.153	Support the research hypothesis
Capacity (NL) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.282	.049	***	Support the research hypothesis
Responsiveness (DU) -> Satisfaction with the management of e-invoices of tax authorities for businesses (HL)	.366	.075	***	Support the research hypothesis
Tangibles (HH) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.104	.057	.067	Support the research hypothesis

Source: Results of the author's team

Among the 5 groups of factors affecting the satisfaction of the tax authorities regarding the management of e-invoices for businesses, reliability, empathy, capacity, responsiveness, and tangibility all

have a positive effect on business satisfaction. As a result, all the factors in the model are consistent with the original hypothesis.

Table 18. Standardized SEM analysis results

The scale	Estimated value
Reliability (TC) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.461
Level of empathy (DC) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.062
Capacity (NL) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.269
Responsiveness (DU) -> Satisfaction with the management of e-invoices of tax authorities for businesses (HL)	.224
Tangibles (HH) -> Satisfied with the management of electronic invoices by tax authorities for businesses (HL)	.061

Source: Results of the author's team

According to the SEM model results, the tax authorities' e-invoice management efforts for businesses will have an impact on satisfaction. Factors influencing business satisfaction will have an indirect impact on e-invoice management. The magnitude of the standardized estimated regression coefficients expresses the degree of influence of the factors on the dependent variable. If the absolute value of any factor's predicted coefficient is large, that factor has a greater influence on the dependent variable.

The estimated regression coefficients corresponding to the factors TC, NL, DU, DC, and HH are 0.461; 0.269; 0.224; 0.062; 0.061, respectively. It can be seen that all five factors affect business satisfaction with the tax authorities' management of electronic invoicing, ranked in order of importance: (1) Reliability, (2) Assurance, (3) Responsiveness, (4) Empathy, and (5) Tangibility. The impact of each factor is analyzed in detail as follows:

*Reliability* is the factor that most positively and substantially affects business satisfaction with tax authorities' management of e-invoices with the standardized coefficient of 0.416. E-invoice management must be more secure and private than traditional management.

*Assurance* is the second most important factor affecting business satisfaction with a standardized coefficient of 0.269. Most tax officers' professional credentials have a substantial impact on business satisfaction. Employee credentials are required for e-invoice management in order to apply technology, latest expertise and strategies to satisfy the job's demands.

*Responsiveness* is the next most important factor affecting business satisfaction with a regression coefficient of 0.224. Expressing the desire and

willingness of the tax authorities to provide prompt “e-invoice management services” for businesses.

The level of *empathy* affects the satisfaction of the business with the regression coefficient of 0.062, showing the care and concern for each business.

*Tangible means* affect the satisfaction of businesses with a regression coefficient of 0.061, which is reflected in the appearance of tax officers and equipment used to manage electronic invoices.

#### 4. Proposal Solutions

Based on the results, the study proposes the following recommendations to improve the quality of electronic invoice management by tax authorities:

**First:** Improve the responsiveness of e-invoice management for businesses by enhancing the infrastructure system’s quality, responding swiftly to invoicing needs, and creating and utilizing company invoices. Invest in cutting-edge technology and make the steps involved in using e-invoices transparent (through SMS, email, password, fingerprint, electronic signature, etc.). Improve the usability of e-invoice interfaces and physical perception features.

**Second:** Tax authorities require a more professional business management division. Learn more about the company’s needs and desires by visiting this department. When dealing with businesses, it is vital to develop proper information transmission channels and limit the use of confusing information.

**Thirdly:** For businesses to be satisfied, the tax authority must ensure that the highest security strategy is developed, ensuring the business’s dependability and reputation. In addition, the tax authority must reduce the risks associated with processing systems, software suppliers for e-invoices, and data transmission service providers.

**Fourth:** Tax authorities need to show interest in resolving business problems about e-invoices. Therefore, it is necessary to improve personnel management policy and processes in order to improve staff professionalism and advanced management level; focus on developing a contingent of highly qualified and capable staff; organize and rationalize human resources in accordance with functions, tasks, organizational model, and new management mechanism of e-invoice management units.

**Fifth:** Invest in new technologies, and use several verification methods when using e-invoices (by SMS, email, password, fingerprint, e-signature, etc.). Manage e-invoice transactions well and operate safely and securely using modern world-standard

technologies to build user trust. It is necessary to develop a strict risk management process, fully and effectively implement risk management regulations in accordance with national and international standards, and to build and foster a team of highly qualified personnel, personnel with professional knowledge and skills in information technology to meet the needs of modern technology system management and operation. It is also necessary to create and implement a process and regulations to protect customers’ interests when they use company services.

#### 5. Conclusion

Based on the theoretical foundations of SERVQUAL’s service quality model, a research model has been developed to examine the elements influencing business satisfaction with e-invoice management. The research team has taken steps to properly develop and launch the survey to clients. To conduct the poll, the group collaborated closely with firms that used e-invoices.

The SEM linear structure model provided clear and extensive analytical results on the links in the company satisfaction assessment model to the tax authorities’ management of electronic invoices.

The results found that reliability, assurance, empathy, responsiveness, and tangible factors have a positive influence on businesses satisfaction with the tax authority’s administration of e-invoices. From the experimental model results, the research results proposed solutions to help tax authorities execute policies to promote business satisfaction, consequently enhancing management quality and developing appropriate development strategies in the future.

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# TWO YEARS OF IMPLEMENTING TRADE REMEDIES AGAINST IMPORTED SUGARCANE - IDENTIFYING VIETNAM'S SUGARCANE PRODUCTION

PhD. Hoang Thi Phuong Lan\* - PhD. Le Thi Mai Anh\*

**Abstract:** *The trend of regionalization and globalization is increasingly having profound impacts on all open economies globally. The increasingly unified legal corridor, the increasingly open preferential ground, and the reduction of tariff barriers have made many economies, regardless of their size, large or small, reaping great benefits when global integration. On the other hand, the negative side of integration has also been revealed in many forms, and the levels of influence are also increasingly diverse. Typically, trade remedies play a great role in creating a truly fair and healthy international trade environment; at the same time, high defensive tax rates have negative effects on consumers, as well as uncertainty about improving the competitiveness of the domestic manufacturing industry. After two years of implementing trade remedies for imported sugar cane, a comprehensive and multi-dimensional review of the impact of this measure will contribute to assessing the extent of the impact on all aspects of the economy.*

• Keywords: trade remedies, sugar cane, defensive tax, domestic production.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Xu thế khu vực hóa và toàn cầu hóa ngày càng tác động sâu rộng đến tất cả các nền kinh tế mở trên toàn cầu. Hành lang pháp lý ngày càng thống nhất, mặt bằng ưu đãi ngày càng rộng mở, hàng rào thuế quan cắt giảm đã khiến nhiều nền kinh tế, không phân biệt quy mô lớn hay nhỏ, gặt hái những lợi ích to lớn khi hội nhập toàn cầu. Mặt khác, mặt tiêu cực của hội nhập cũng bộc lộ dưới nhiều hình thức, mức độ ảnh hưởng cũng ngày càng đa dạng. Điển hình, các biện pháp phòng vệ thương mại có vai trò to lớn trong việc tạo lập môi trường thương mại quốc tế thực sự bình đẳng và lành mạnh; đồng thời, mức thuế phòng vệ cao có tác động tiêu cực đến người tiêu dùng, cũng như sự không chắc chắn về việc nâng cao năng lực cạnh tranh của ngành sản xuất trong nước. Sau hai năm thực hiện biện pháp phòng vệ thương mại đối với mặt hàng mía đường nhập khẩu, việc xem xét toàn diện, đa chiều tác động của biện pháp này sẽ góp phần đánh giá mức độ tác động đến mọi mặt của nền kinh tế.

• Từ khóa: phòng vệ thương mại, mía đường, thuế phòng vệ, sản xuất trong nước.

## 1. Introduction

Trade remedies are measures to ensure fair trade that are used as an effective tool to maintain fair competition under the conditions of free trade. These measures are the legal instruments agreed upon by the member states of the free trade agreements (FTAs) on the basis of the WTO Agreements. In addition, trade remedies are developed and implemented to protect domestic industries of member countries against unfair trade practices (dumping, subsidies). At the same time, these measures are also to cope with the sudden increase in the number of imported goods. Trade remedy includes four measures namely anti-dumping, anti-subsidy, trade safeguard and anti-tax evasion. Each trade remedy measure has a different enforcement method, applied in different conditions, however, the common point is that they are all expressed under a specific safeguard tax rate. Accordingly, the defensive tax rate on imports will bring the selling price of imported goods and similar domestic goods to a price that domestic producers can compete with in the domestic market. Specifically, trade

\* Academy of Finance; email: hoangphuonglan@hvtc.edu.vn



remedies have the following important roles in international trade:

**Firstly**, *ensuring a healthy competitive environment*

Anti-dumping and anti-subsidy measures are applied to deal with unfair competition practices. Anti-dumping and countervailing duties are also additional taxes, in addition to the usual import duties levied on a subsidized foreign product entering the country of importation.

The application of trade remedies through anti-dumping and anti-subsidy taxes has created fairness between domestic products and imported goods with dumping and subsidizing acts, thereby, create fair and healthy competition in international trade. From equality in price competition will lead to other acts of fair competition and equality.

**Secondly**, *creating conditions for stable international trade development*

Taking advantage of incentives in bilateral and multilateral commitments will make national, regional and international markets more vibrant, rich and diverse. However, when the participants are all pursuing the goal of profit maximization, it can lead to unfair competitive behavior. Meanwhile, the factor promoting international trade mainly comes from the difference in production resources between countries. Governments have always supported free trade while stabilizing the domestic economy. The enforcement of trade remedies can achieve this dual goal.

**Thirdly**, *temporarily protecting domestic industries while reducing dependence on imported goods*

In reality today, market opening and trade liberalization are an objective necessity. According to WTO commitments in general and FTAs in particular, countries' markets can be massively penetrated by imported goods. In that context, trade remedies are seen as a form of "safety valve" that most countries put into practice. With this valve, the importing country can temporarily block the flow of imports to help its domestic industry avoid disruptions in some particularly difficult cases. Although these measures have only a temporary effect in protecting the domestic industry, they still have special significance for businesses. Businesses

need a period of time to quickly adapt and have a strategy to compete with imported goods in the medium and long term.

**Fourthly**, *creating jobs, increasing state budget revenue*

The use of trade remedies also contributes to protecting jobs for hundreds of thousands of workers in many fields of industrial production, encouraging domestic production to develop and supporting the balance of international payments.

In addition, trade remedy tax also contributes to increase revenue for the state budget. Trade remedies are meant to both protect domestic production and jobs and reduce dependence on imported goods.

In practice, trade remedies (both anti-dumping and safeguard) apply only to certain countries and territories. Therefore, goods originating from the remaining countries and territories can still be imported with preferential tax rates and equal competition with domestically produced goods. Overall, trade remedies have contributed to preventing the negative effects of massive imports and unfair competition with domestic goods. At the same time, these measures also ensure to maintain domestic production as well as competitiveness.

**Fifthly**, *implementing the protection of domestic production*

Increased cooperation, international economic integration is accompanied by the reduction and elimination of tariff and non-tariff barriers. Especially in new-generation free trade agreements, preferential commitments on tariffs are given very intensively and comprehensively. That means that tariff protection will be difficult, even impossible. In that context, increasing the enforcement of non-tariff barriers, such as trade remedies, is seen as superior options. The implementation of trade remedies does not conflict with commitments on free trade and protects the domestic market.

While developing and underdeveloped countries still have many difficulties in applying trade remedies, countries with developed economies such as the US, EU, and even India - a developing country has also been taking the lead in using trade remedies to protect domestic production.

Thus, the application of trade remedies in general has a positive role for domestic production activities. However, the downside of enforcement is the interests of consumers as well as the profiteering behavior of inefficient manufacturers. In June 2021, Vietnam officially applied trade remedies to cane sugar imported from Thailand. In August 2022, Vietnam continued to apply anti-tax avoidance to cane sugar imported from 5 other ASEAN member countries. How has the implementation of trade remedy measures affected domestic cane sugar production? After the overview of Vietnam's sugar industry, the author will have specific analysis and assessment of these impacts.

## 2. Overview of Vietnam's sugar industry

### 2.1. Overview of sugarcane production in the world

Sugarcane is one of the oldest agricultural crops in the world. According to archaeological evidence, sugarcane was first grown in New Guinea (Africa) and then grown in Southeast Asia, China, and India since 8,000 BC. Until 800 BC, the Chinese were able to process sweet nectar from sugar cane. Experiencing historical upheavals, sugar was produced in the 11th - 13th centuries in Europe. By the 18th century, sugar was still a scarce and luxurious commodity in Europe and America; at the same time, the sugar industry, sugar factories entered the industrialization stage, and sugar was used in food and feed processing. Since the 20th century, the world sugar industry has experienced fluctuations in sugar output and prices.

Global sugar consumption depends on many factors including: population growth rate, growth rate of food and beverage industry, average consumption level, consumption culture, price fluctuations, etc. Therefore, each country or region will have a different division in the speed of sugar consumption.

Sugarcane production also depends on many factors as followed:

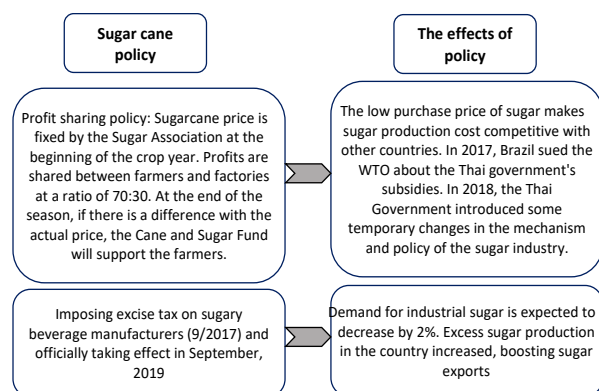
Firstly, the cost of sugarcane usually accounts for 60-70% of the cost of sugar production. According to the OECD report, countries that produce sugar from sugarcane cost about 20% less than producing sugar from beets. The main reason is due to the difference in purchasing

price of sugar cane and radish. Among the sugar producing countries, Australia and Brazil have the advantage in terms of production costs. In Australia, the application of mechanization in production has helped this country have the lowest sugar production costs in the world, as well as a high sugar recovery rate of 14%. Meanwhile, Brazil has the advantage because natural conditions are favorable for developing raw materials and optimizing the productivity of sugarcane and sugar production.

The second factor is climate change. As an agricultural industry, the sugar industry cannot avoid the effects of weather on the raw material area. El Nino and La Nina events are fundamental weather phenomena that affect temperature and precipitation in regions of the world. When these phenomena occur with high intensity, it will cause the yield of sugarcane and radish to decrease, or reduce the sugar content in the raw materials, resulting in a poor recovery rate.

Thirdly, the policy of the sugar industry in key areas. As the leading countries in the world's sugar production, the production and consumption policies of the sugar industry and related by-products of Brazil, India, EU, Thailand and China have had a significant impact on the world. sugar supply, as well as the global flow of sugar trade. In Vietnam's sugarcane market, Thailand is the main competitor, in which, policy is one of Thailand's competitive advantages.

Figure 1: Thailand's sugar policy and its impacts



Source: FPTS (2019)

### 2.2. Overview of Vietnam's sugar industry

Vietnam's sugar industry has a long history, but only really developed in 1995, when the program of industrialization and modernization of

the sugar industry was started. The development process of Vietnam's sugar industry can be divided into four main stages:

i). Period before 1975: the sugar industry was very small and undeveloped due to war

ii). Period 1975 - 1994: The foundation of the sugar industry was built. After the unification of the country, the sugar industry was expanded and managed by the state. Funding to build the factory comes from aid from the Government and other countries. Large-scale sugar factories were built in each region, creating the foundation for the rapid development phase of Vietnam's sugar industry in the next period. By 1995, the whole country had produced about 450 thousand tons of sugar, achieving a compound growth rate of 14% in the period 1975 - 1995.

iii). Period 1995 - 2000: There was a rapid growth with the program "01 million tons of sugar". Before 1995, the whole country could only produce less than 500 thousand tons of sugar per year, and had to import 200,000 - 300,000 tons/year to serve the domestic demand. To meet domestic demand, the sugar industry carried out a program of "01 million tons of sugar" starting in 1995 and ending in 2000.

The program "01 million tons of sugar" not only made economic sense but also solved social problems, such as providing jobs for more than 700,000 workers, putting hilly land into effective use. However, due to the construction of too many sugar factories in a short time, the program was inevitably limited: the raw material area developed slower than the factory's construction speed; unreasonable factory planning in areas where it was not possible to develop raw material areas or material areas with low production efficiency; factories borrow foreign currency to import equipment, as well as use loans for construction, leading to high production costs. Many sugar mills suffered losses and farmers suffered losses when the world sugar price fell deeply in the 1999 - 2000 period.

iv). Since 2001, this industry has integrated and competed with imported sugar in the region. Enterprises not only focus on developing production inputs, but also develop a variety of sugar products; restructuring to form large companies; integrating with countries regionally

and globally. Up to the 2017 and 2018 crop, the whole sugar industry pressed more than 14 million tons of sugarcane, produced more than 1.4 million tons of sugar, imported nearly 500,000 tons of sugar, including smuggled sugar.

Thus, in the development process of more than 70 years since 1945, Vietnam's sugar industry has made certain progress and achievements. However, the domestic sugar industry is still facing difficulties after integration, especially the pressure of competition with sugar imported from Thailand - a country with many incentives in terms of natural conditions as well as government policies. government.

### 3. Competitive relationship between Vietnam and Thailand sugar in the context of trade defense implementation

#### 3.1. Vietnam's sugarcane production in the context of integration

Vietnam and Thailand as well as ASEAN countries have many similarities in terms of natural conditions in sugarcane production. However, the biggest reason leading to the difference in competitiveness of these countries is production technology.

**Table 1: Comparison of sugar production capacity between Vietnam and Thailand and some major producing countries in the world**

Countries	Sugarcane area (thousand hectare)	Sugarcane yield (million tons)	Cane productivity (tons/hectare)	Sugarcane yield (million tons)	Sugar productivity (tons/hectare)	Cane/sugar ratio
Brazil	10.184,3	758,5	74,5	39,2	3,8	9,0 <sup>1</sup>
India	4.389,0	306,1	69,7	22,2	5,1	13,8
China	1.377,1	104,8	76,1	8,3	6,0	12,7
<b>Thailand</b>	<b>1.368,3</b>	<b>102,9</b>	<b>75,2</b>	<b>10,0</b>	<b>7,3</b>	<b>10<sup>2</sup></b>
Pakistan	1.216,9	73,4	60,3	6,8	5,6	10,8
Mexico	772,0	57,0	73,8	6,3	8,2	9,0
Australia	453,5	36,6	80,6	5,1	11,2	7,2
...	...	...	...	...	...	...
<b>Vietnam</b>	<b>281,1</b>	<b>18,4</b>	<b>65,3</b>	<b>1,5</b>	<b>5,4</b>	<b>12,1</b>
<b>World</b>	<b>27.354,0</b>	<b>1.946,3</b>	<b>71,2</b>	<b>134,0</b>	<b>4,9</b>	<b>14,5</b>

Source: Sugar Industry Report, FPTS (2019)

\* Cane/sugar ratio adjusted for ethanol production in Brazil and Thailand

It can be seen that most of the criteria for assessing the production capacity of Vietnam's sugar industry are lower than the world average. Particularly, Vietnam's sugar yield is higher than

the world average, but the ratio of cane to sugar is lower. In the ASEAN region, Vietnam ranks 4th in cane sugar production (after Thailand, Philippines and Indonesia) but ranks 2nd in production efficiency. In Thailand, with each hectare of sugarcane material area, this country can get 7.3 tons of sugar, while in Vietnam it only reaches 5.4 tons of sugar per hectare. In terms of production scale, Vietnam's sugar industry is only about 15% of the size of Thailand's sugar industry. Australia is also a typical case, while the land fund is limited, the country's sugar output is always high thanks to the application of deep technological achievements into farming and production activities. This is a very valuable lesson for countries with favorable natural conditions, large land funds for sugarcane cultivation, but limited productivity.

### 3.2. Trade remedies protect the domestic sugar industry

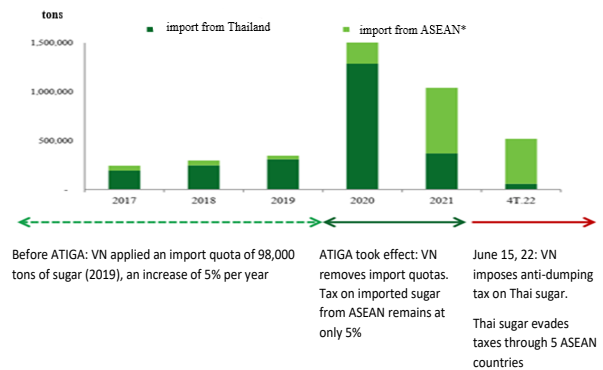
Currently, Vietnam has implemented 17 FTAs, in which ATIGA has the greatest impact on the whole sugar industry in both positive and negative aspects. The proportion of sugar imports from ASEAN into Vietnam accounts for more than 60% of the total import quota each year. The ATIGA Agreement was signed in February 2009 and came into effect in 2010, allowing ASEAN countries to freely exchange goods, including sugar, without being hindered by taxes and barriers. import quotas. Accordingly, countries in the region will reduce the sugar import tax rate to 0%, except for Vietnam (5%), the Philippines (5%), Indonesia (5-10%), Myanmar (0-5%) and Cambodia (5%).

Before the ATIGA came into effect for sugar, the import quota was calculated by the WTO quota, but the import tax was only 5% (instead of 25% of the WTO); Out-of-quota imported sugar output will still be subject to import tax at 85%. Within the framework of the WTO, the quota of sugar imported into Vietnam in 2018 is 94,000 tons of sugar, an increase of 5% per year and the agreement between Vietnam and Laos, the quota of sugar imported from Laos is 50,000 tons, tax is 2.5%.

On January 1, 2020, ATIGA took effect for sugar products consumed on the Vietnamese market. Specifically, all sugar import quotas from

ASEAN countries will be eliminated, import tax will be at 5% when importing sugar from ASEAN countries into Vietnam.

**Figure 2: Sugar imported into Vietnam in the period of 2017 - 2022**



Source: OCSB, VSSA, VCBS

It can be seen that, after ATIGA took effect in Vietnam, the amount of sugar imported from ASEAN countries, especially Thailand, has increased sharply. With the characteristics of being the 4th largest sugar producing country and the second largest sugar exporter in the world, the absence of quotas has paved the way for Thai cane sugar to penetrate deeply and strongly into the Vietnamese market.

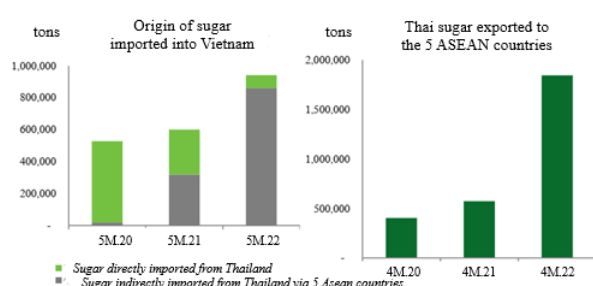
According to the Sugarcane Association (VSSA), in the production year 2021-2022, Vietnam's cane sugar output is only 700,000 tons, the lowest level in the past 19 years. Only 25/41 sugar factories are operating, 16 factories have had to close. As a result, among the 25 factories in operation, 17 are suffering losses (accounting for nearly 70%). Over 3,300 people have lost their jobs, and more than 100,000 households had to cultivate other crops

The price of smuggled white sugar is only 16,400-16,800 VND/kg, lower than the domestic yellow sugar price of about 2,000 - 2,500 VND/kg. Smuggled sugar makes it difficult to consume domestically produced sugar, inventory levels and financial costs increase to the point that businesses have to sell below cost. Although the sugarcane crop has ended, many factories have sugar inventory that cannot be sold and owes cane farmers.

In addition to the weather factor, the low price of sugar in the previous seasons due to the

fierce competition of cheap sugar from Thailand and smuggled sugar, many sugar mills could not survive. Therefore, after a period of investigation, in June 2021, the Ministry of Industry and Trade officially imposed an anti-dumping tax of 42.99% and an anti-subsidy tax of 4.65%, a total of 47 taxes, 64% for sugar from Thailand. This decision takes effect immediately after and the application period is 5 years.

**Figure 3: Origin of sugar imported into Vietnam and Thai sugar exported to the 5 ASEAN countries**



Source: OCSB, VSSA, VCBS

However, after imposing the above tax, Thai sugar evaded tax by transferring sugar originating from Thailand to ASEAN countries such as Laos, Cambodia, Indonesia, Malaysia, and Myanmar. In August 2022, the Ministry of Industry and Trade announced the decision that sugar imported from these 5 countries using Thai sugar materials will be subject to the same anti-dumping and anti-subsidy tax rates applied to Thai sugar. Thailand with a total tax rate of 47.64%, of which anti-dumping tax is 42.99% and anti-subsidy tax is 4.65%. However, the imported products will not be subject to the anti-evasion measures if proven to be made from sugarcane harvested in these countries.

### 3.3. Actual situation of sugarcane production in Vietnam after nearly 2 years of implementing trade remedies

The application of trade remedies tax has created fairness for domestic sugar producers compared to tax evasion and smuggled sugar. In the short term, this measure will help sugar businesses sell their products and make a profit. In the long term, it will help restore Vietnam's sugarcane material area, which is severely reduced.

According to the association, in the 2021-22 crop, the total of raw materials for processing reached about 7.5 million tons of sugarcane, an increase of 11.6 per cent compared to the 2020-21 crop (Phuong Thao, 2022). Meanwhile, it is estimated that the total demand for sugar materials across the country is estimated at 2.1-2.3 million tons of sugar per year, which means that the current sugar output only meets about 35% of the market demand. Sugar mills have many conditions to continue to increase prices from 2% to 5% over the previous year, following the increase of basic commodities.

After the official import of Thai sugar was taxed and had a high selling price, the domestic sugar price increased by 15-20% in the second half of 2022 to 19,000 - 20,000 VND/kg, then adjusted 5-10%. In 2023 will be around 18,000 VND/kg (VCBS, 2022). However, the cost of 02 input materials for sugar production, namely cane and raw sugar (accounting for 75 - 80% of the production cost of finished sugar) both increased from the 2021- 2022 crop. The price of raw sugar cane increased due to the increase in farming costs (fertilizers, pesticides, machinery, etc.) and the factory increased the price of sugarcane to encourage farmers to return to sugarcane cultivation. Meanwhile, the price of raw sugar materials increased due to the imposition of trade remedies tax on raw Thai sugar. This fact makes sugarcane production activities prosper, but profits only increase slightly (at 13.8% (VCBS, 2022)).

In the 2022-2023 crop, only 24 sugar factories are expected to operate, equal to the number of factories operating in the 2021-2022 crop, with a total designed capacity of 122,200 tons of sugarcane per day. Although there are only 24 factories, the total area of sugarcane harvested in the 2022-2023 crop remains high with 151,305 hectares, the output of sugarcane put into processing is over 8.76 million tons, the average yield is 66.2 tons per hectare. It is expected that sugar output from sugarcane is 870,930 tons, an increase of more than 124,000 tons.

According to VSSA, in February 2023, all factories of Vietnam's sugar industry entered the 2022/2023 production season but a few

factories stopped production because of a lack of sugarcane materials. The accumulated output from the beginning of the season has produced 4.1 million tons of sugarcane and 387,000 tons of sugar of all kinds. However, after the Tet holiday, the demand for sugar products is very low, the sugar industry is in the main season, so most of the sugar produced from sugarcane cannot be consumed, many factories have no room to store sugar in their warehouses (Hai Dang, 2023).

In the short term, sugar prices will be under pressure due to temporary excess supply in 2022, approximately 6 million tons, and a potential increase in import quota by the Government to supplement domestic sugar in 2023. Officially imported sugar and fraudulent sugar trading across the Southwest border will cause the oversupply situation to continue in March because it is the 2022-2023 sugar production season.

Thus, despite the application of trade remedies, domestic sugarcane production still faces new difficulties. The negative side of the defensive tax has made the situation of commercial fraud and sugar smuggling increase seriously. This imported sugar volume has completely dominated the local market and forced the price of local sugar to drop to a low level. The low price has forced farmers to reduce sugarcane cultivation and to switch to other crops, leading to a reduction in sugarcane growing area. Meanwhile, a high sugar inventory due to the lower sugar price has put factories at risk of stopping operation. This leads to the destruction of the sugar cane chain between farmers and factories.

#### 4. Conclusion

After the trade remedy tax was applied to sugar imported from Thailand, the reality shows that the effective role of trade remedies in protecting domestic production needs efforts from many agencies. Trade remedy tax is only a prerequisite. Customs and market authorities need to work together to combat the increase in trade fraud. Smuggling across the Southwest border is not a new phenomenon, however, the extent and manifestations are increasingly complex. In terms of free trade

and equal preferential tariffs between Vietnam and ASEAN countries, smuggling will tend to decrease because the economic benefits are not too great. However, in the context of applying trade remedy tariffs, the economic benefits from smuggling and trade fraud are huge, so the role of customs authorities and market management becomes even more important.

The application of trade remedy measures is only temporary to avoid the development of international trade restrictions. Applying trade remedies, if true to the original goal, is not at odds with trade liberalization. However, when these tools are misused and used as a form of increased protection for the domestic industry, these measures run counter to the goals of trade liberalization. Therefore, in addition to acknowledging the application of trade remedies, in order to prevent the abuse of these tools, the WTO as well as the FTAs have set forth regulations, principles and conditions. Strict conditions force members to ensure compliance if they want to apply trade remedies. Accordingly, the participants involved in the sugarcane production chain need to be aware of the “timing” of defensive measures. Thereby, they can take advantage to improve production capacity, increase the value of sugar cane, especially increase market shares in the domestic market. Thus, the application of new trade remedies will be effective, and moreover, the positive effects of trade remedies can spread sustainably to domestic sugarcane production.

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# BRAND COMMUNICATION FOR AGRICULTURAL PRODUCTS EXCHANGE CENTERS OF VIETNAM

Khuc Dai Long\*

**Abstract:** *Trading agricultural products through the Agricultural products exchange centers of Vietnam (also called Vietnam's agro-product exchange centers or Agro-market places or agro-products trading center or agro-products trading place) is taking the first steps in its development. In the early stages, businesses and their members have faced many difficulties in operating in this field. If one wants to survive and develop sustainably, one of the important tasks that any Agricultural products exchange center must do is to attract more people involved in making transactions through them. However, not so easy to do that, businesses can not ignore the communication activities for their brand to achieve success in the future.*

*Based on current research on brand communication at some of Vietnam's agro-product exchange centers such as Buon Ma Thuot Coffee Exchange Center, Agricultural product trading floor developed by Viettel Group (voso.vn), Saigon Thuong Tin trading center (Sacom Ste), Agriculture And Foodstuff Demand Exchange (AFDEX), etc... The paper has analyzed the limitations of the brand communication process recently. In addition, the author offers suggestions to improve the effectiveness of brand communications for these exchanges.*

• *Keywords: brand, brand communication, agricultural products exchange centers, the brand of agricultural product exchange centers.*

*Date of receipt: 02<sup>nd</sup> May, 2023*

*Date of receipt revision: 15<sup>th</sup> May, 2023*

*Date of delivery revision: 08<sup>th</sup> May, 2023*

*Date of approval: 01<sup>st</sup> June, 2023*

*Tóm tắt: Giao dịch nông sản qua các Trung tâm giao dịch nông sản Việt Nam (còn gọi là Trung tâm giao dịch nông sản Việt Nam hoặc Chợ nông sản hoặc Trung tâm giao dịch nông sản hoặc Điểm giao dịch nông sản) đang có những bước phát triển đầu tiên. Trong giai đoạn đầu, các doanh nghiệp và các thành viên của họ gặp rất nhiều khó khăn khi hoạt động trong lĩnh vực này. Nếu muốn tồn tại và phát triển bền vững, một trong những nhiệm vụ quan trọng mà bất kỳ trung tâm giao dịch nông sản nào cũng phải làm là thu hút nhiều người tham gia giao dịch thông qua mình. Tuy nhiên, không dễ để làm được điều đó, doanh nghiệp không thể bỏ qua các hoạt động truyền thông cho thương hiệu của mình để đạt được thành công trong tương lai.*

*Dựa trên nghiên cứu hiện nay về truyền thông thương hiệu tại một số trung tâm giao dịch nông sản của Việt Nam như: Trung tâm giao dịch cà phê Buôn Ma Thuột, Sàn giao dịch nông sản do Tập đoàn Viettel phát triển (voso.vn), Sàn giao dịch Sài Gòn Thương Tín (Sacom Ste), Sàn giao dịch nông nghiệp và Sàn giao dịch nhu cầu thực phẩm (AFDEX), v.v... Bài viết đã phân tích những hạn chế trong quá trình truyền thông thương hiệu thời gian qua. Ngoài ra, tác giả đưa ra các đề xuất nhằm nâng cao hiệu quả truyền thông thương hiệu cho các sàn giao dịch này.*

• *Từ khóa: thương hiệu, truyền thông thương hiệu, trung tâm giao dịch nông sản, thương hiệu trung tâm giao dịch nông sản.*

## 1. Introduction

In the past years, agricultural economic growth has always maintained stable stability for the whole economy. In particular, at the most difficult times of the economy, agriculture and agricultural exports have clearly shown the role

of creating a competitive advantage for Vietnam in the international arena. With the strong development of information technology and e-commerce in Vietnam plus favorable conditions such as: experience in agricultural production, industrialization, modernization, and international

\* *Thuongmai University; email: long.kd@tmu.edu.vn*

economic integration diversified forms of agricultural product transactions have been formed, in which transaction through centers is a modern trend. Currently, agricultural products exchange centers in Vietnam are one of the most effective tools to support businesses and farmer households in the field of product introduction, sourcing, target markets, and cooperation opportunity... but it has not been exploited effectively.

There are many reasons why Vietnam's agro-product exchange centers are still far away from farmers and businesses. One of the important reasons is that it does not really focus on developing its image. Enterprises in this area do not have communication activities enough strong so that the public is aware of their benefits and benefits when participating in trading, especially farmers and traders of agricultural products. Looking at the stock exchanges, gold trading floor, or real estate trading floor can see how successful they are in connecting with businesses and the public to understand the transaction floor of agricultural products in Vietnam really did not do good communication brand. This paper analyzes the current status of the media in Vietnam's agro-product exchange centers and proposes some suggestions for promoting brand communication for these exchanges in the new business trend.

## 2. Literature review

In ancient times, a brand was simply understood as a sign of recognition and distinction to affirm the value of goods and their ownership between those who made goods of the same type. From the middle of the 20th century, the term "brand" began to be popularly used. In the past, people assumed that the task of the brand was to distinguish the products and services of the manufacturers together. *A brand is the name, term, symbol, design, or a combination of them, intended to identify the goods and services of one seller or group of the seller and differentiate them from those of the competition* [Kotler, 1991]. Nowadays, the brand refers not only to the signs to identify or distinguish the product, to distinguish the business but more importantly, one would like to refer to the image deposited in the minds of consumers and the public. Branding is not just about giving the product a good name, easy to remember, or offering attractive slogans

that are important for consumers to be impressed with their product and use of its products. *Brand is a synthesis of all the physical, aesthetic, rational, and emotional elements of a product, or a line of products, including the product itself, its name, logo, "look" and all expressions of the look, that collectively over time builds clearly enough in the mental framework of the customer's mind to establish a niche there* [Murphy, 1998].

Thus, branding is a term with broad meaning. First of all, it is an image of goods or business. It is not only the name, logo, slogan... The important factor that makes the names and logos that come into the mind of the customer is the quality of goods and services, the behavior of the business with customers and with the community, and the real benefits to consumers of those goods and services.

With such a brand approach, it is possible to understand *"the brand of agricultural product exchange centers is a kind of service brand, associated with agricultural products and services of transaction of these products"*. It can be understood at both levels of branding as the brand of the business and the brand of each service. For example, futures trading, deposit, product quality control services, etc. The brand of agricultural product exchange centers is likely to interact with a wide variety of audiences. For example, a product brand only interacts with customers, consumers, and the general public, while the company's brand interacts with partners, service providers, B2B customers, sectoral management, and local government.

In essence, branding in general and branding for agricultural product exchange centers, in particular, include a wide variety of individual activities such as branding strategy planning, brand design, department registration intellectual, and exploiting the brand value... in which brand communication plays an important role.

*Brand communication is the process of interacting and sharing brand information between the business and the customer and the community.* The strengthening of brand communication activities includes both internal and external communication such as advertising, public relations, trade fairs, and other promotional activities. Increasing communication activities



for Vietnam's agro-product exchange centers will bring the public a higher level of awareness and increased brand awareness in the community, thereby boosting the use of the product or services of consumers, creating the advantage of business growth and development. In addition to creating and consolidating the brand image more sustainably in the target group, customers will have a better sense of the brand

### **3. Characteristics and operation mechanism of Vietnam's agro-product exchange centers**

#### **3.1. Characteristics of Vietnam's agro-product exchange centers**

As with other exchange centers, agricultural products exchange centers also carry the characteristics of a common trading place such as:

- A place for buyers and sellers around the world to meet. Through the trading place, sellers can introduce their merchandise to many buyers; And buyers will find it easy to find the right one.

- A place to focus the relationships between individuals, organizations, and governments. Apart from individuals and organizations wishing to trade and exchange goods through the exchange trading center are also subject to very specific government regulations and regulations.

- As the basis for commercial activities, participants may perform transactions at here.

- Having at least one of the commercial functions, from receiving goods to brokerage, advising clients, and conducting transactions on the market.

*In addition, the trading platform also has its own characteristics such as:*

- The agricultural product trading center creates a new circulation channel for businesses and stakeholders, especially farmers, to access a form of e-commerce transaction at the auction center, order matching.

- The benefits of establishing such exchanges are transparency, openness, and price competition in the market.

- For State management agencies, it will create a concentrated place for the concerned parties to discuss and exchange experiences in production and business.

- The agricultural product trading center is a place where large volumes of commodities are concentrated and liquidity is high. Specifically, the business will focus on the volume of goods purchased at the center. As for farmers, they will have the advantage that if the conditions for bringing goods to the center of the exchange, the goods will be guaranteed, not the status of "debt" as today through agents.

- The agricultural exchange platform is a new form of transaction for farmers but will bring them many benefits. With farmers, they will first be provided with information free of charge, objective to capture the situation of domestic and foreign prices. Then farmers will have access to a completely new way of trading compared to the previous method.

#### **3.2. Operation mechanism of Vietnam's agro-product exchange centers**

Depending on the nature of the transaction type and the nature and size of each of the trading centers of agricultural products have their own operating mechanism. However, in general, the mechanism of operation in the exchanges has some basic features as follows:

The agro-products trading center operates on the principle of membership. Members of the agricultural trading place usually have two types: First is the business members, which are businesses that buy goods; The second is the registered member, which is the production and sales.

The mode of operation will follow the order matching method, the seller will be the dealer of the center to enter orders to sell, and businesses will through the transaction representatives of enterprises enter the purchase order. Thus, between the buyer and seller when the parameters meet, the order matching, then will execute the contract on the basis of the notice of the center.

Each exchange will have standards for membership registration. With members registered to buy goods need to apply for registration as a member of the transaction place and prove the situation of the operation of the business. For a farmer, also apply to be a sales associate and prove that you have farm products. If the farmer has sufficient quantities of agricultural produce required, a member card will be issued.

On some exchanges, members purchase collateral and members sell agricultural products at the center of the trading floor (for example coffee transactions at Buon Ma Thuot Coffee Exchange Centre).

#### 4. Limitations in brand communication activities of Vietnam's agro-product exchange centers

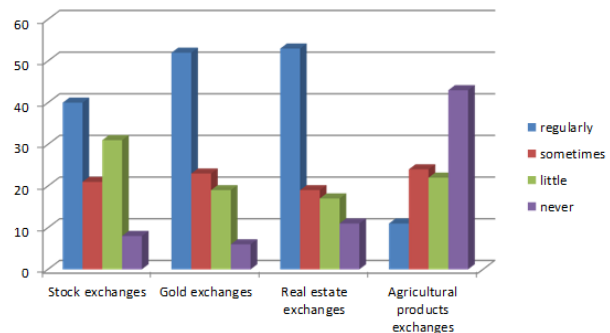
The policy of agricultural trade development of the Government of Vietnam along with the establishment of many goods transaction centers has been over fifteen years, but so far, many exchanges registered but the operation is only a few. Many Vietnamese agricultural products are being planned to build a trading center. However, it may take at least another few years for this form to emerge in Vietnam.

The establishment of agricultural exchanges is the right policy, however, it can be said that until now these businesses have not been effective. At the national level, there are very few trading centers specializing in agricultural products such as Buon Ma Thuot Coffee Exchange Center or Vietnam agricultural trade floor - chonhanong.com. The majority of trading centers are commodities, including agricultural products for example, the Saigon Thuong Tin Commodity Exchange, with 3 items being steel, rubber and sugar; the floor system connecting supply and demand of agriculture - food with two kinds of agricultural products and food... There are exchanges, agricultural products can play the role of the director, but also the floor, agricultural products also have only a modest position in the transaction floor of that.

There are many reasons for the ineffectiveness of Vietnam's agricultural exchanges, including the fact that enterprises have not really paid much attention to the development of their trade names to promote the brand image of its trading platform to the public.

Through the distribution and collection of 100 questionnaires for traders in the four sectors of securities, gold, real estate, and agricultural products on the level of access to trading properties, the author has synthesized the results and shown below:

**Table 1: Assessment of access to commodities exchange centers**



Source: Survey data of the author

According to the results obtained from analyzing the survey, up to 43% of respondents had never known the name and address of the website of the agricultural products exchanges of Vietnam (the highest in the types of transactions surveyed). At the same time, the rate for other types of commodity transactions is relatively low (only 6% - 11%). The percentage of people regularly accessing the website of Vietnam's agro-product exchange centers is at the lowest level among these types of transactions (11%). From this it can be seen that the level of awareness of Vietnam's agro-products trading floors is very limited, proving that the brand communication activities of Vietnam's agro-product exchange centers to customers and the public are not good.

As most of Vietnam's agricultural trading places are in the early stages of establishment and operation, it is possible to evaluate the brand communication activities of the Vietnamese agricultural trading places over the past time as follows:

#### *Advertising activities*

There are very few Agricultural products exchange centers in Vietnam that carry out advertising activities on the mass media. Especially, in the age of the internet boom, Vietnam's agro-product exchange centers have not exploited many advantages of this communication tool.

We rarely find an advert for a certain agricultural trading center on television, paper, or radio. In addition, the use of online advertising media is not very interesting in the exchange of agricultural products in Vietnam (*eg banner exchange and*

link to other websites or advertising via email is very limited). The names of these exchanges just stopped appearing on search engines like Google or Yahoo, sometimes appearing on social networks and blogs but the advertising effectiveness is not high.

### Public relations activities (PR)

Tools for conducting PR activities have not been adequately invested by agricultural trading centers, including such events as event and event sponsorship, community activities (activities charitable donations), business publications, films, brochures, brochures, etc. PR activities of new agricultural trading floors are limited to the implementation of articles and articles on operations of the exchanges but the level is also very limited. In fact, the articles on trading activities of agricultural products through the exchanges usually focus on the centers has a large or have been active for many years in this field such as Buon Ma Thuot Coffee Exchange Center or Saigon Thuong Tin trading center. This is also a cause for the promotion, and image development for the transaction centers of agricultural products, in general, is not effective.

With the exchange of agricultural products in Vietnam, the application of a variety of promotional tools such as promotion or direct marketing is almost none. Providing services, introducing activities, and introducing products mainly take place on the website interface of the exchanges.

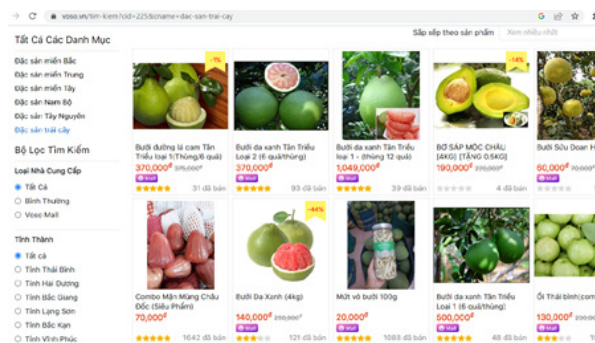
### Mechanism of brand communication

At present, the transaction centers of agricultural products in Vietnam have not had a unified operation mechanism. Each trading place, depending on the nature of the agricultural products and characteristics as well as the size of the place set out its own operating mechanism. This will make it difficult for farmers to access and establish trading habits through the exchanges, and it is from these difficulties that farmers can easily return to traditional trading practices.

Some exchanges only function to introduce agricultural products, and provide information about buyers and sellers without transaction functions, if you want to make transactions, buyers and sellers have to contact themselves (eg activities on the Website interface of the Vietnam

Agricultural Exchange\_chonhanong.com). For example, See Fig. 1.

Figure 1: Website interface of one of Vietnam's agricultural product exchanges



Source: voso.vn

On some exchanges, members can not conduct transactions themselves but must go through a broker's exchange. This will take time, effort, and even money for those who want to make transactions. Some exchanges still consider their members to be buyers, sellers, and brokers who forgot that there is another important part of the visitors, looking here for the purpose of finding information, reference price, and comment. However, due to not paying much attention to these visitors, most of the exchanges have no specific regulations for this object. This is very risky because without specific regulations and strict control, it is possible that these visitors will give false information, affecting the reputation and brand image of the company.

In fact, among those who visit agricultural commodity exchanges for the purpose of seeking information about agricultural products and referring to prices, they do not intend to carry out agricultural transactions here.

### Development of brand contact points for Agricultural products exchange centers in Vietnam

The contact points of the agricultural products trading centers of Vietnam are mainly: Public relations activities, Services provided, Employees, Advertising activities, Offices, and websites. The website is an important point of contact and the main contact point for customers on the exchanges. The design of an impressive website interface, showing the style of the transaction floor is a very necessary contribution to the process of brand development

for the transaction place. However, the website interface of the agricultural products trading center is quite simple, although it has its own color, and characteristics for its floor but mainly to provide information on agricultural products without instructions. In particular, for farmers who are less likely to be exposed to information technology, it is difficult for customers to make transactions on the farm floor. Besides, the interaction between these websites with customers is very poor. Nearly only one-way information from the company.

With the point of contact being the service provider, this is an important factor that agricultural trading places need to invest in. In fact, most of the transaction floor of agricultural products in Vietnam just stops at brokerage services, bridging between buyers and sellers. However, their customers need more than that. A number of other value-added services such as consultancy, product improvement assistance, trade promotion, transportation warehousing, currency credit, training consultancy, technical guidance, and agricultural product development investment... At present, there are only a few trading centers offering these services but the quality of service is still modest. This is one of the important reasons why agricultural trading centers do not attract participants.

Other branding touchpoints like advertising, office, staff, etc., as analyzed above do not show the difference, highlight and impress the general public.

### **5. Some suggestions to promote the brand communication of Vietnam's agro-product exchange centers**

Improving the effectiveness of brand communication for Vietnam's agro-product exchange centers is not only the use of online communication tools but also the need for a coordinated effort between the owners of the exchanges and other objects.

According to the author, in the coming time, Vietnam's agricultural trading centers need to do some things:

#### **5.1. Solutions from the side of Vietnam's agro-product exchange centers**

This is a group of urgent solutions, that need to focus on the soonest.

- Agro-market places need to increase advertising activities on the mass media, advertising more on television, newspapers, and radio and especially advertising on the internet by placing banners, and links on other websites; Continue to improve the website interface, improve transaction functions for more convenient, open the comment function, exchange ideas.

- Further, strengthen public relations activities and introduce these activities in various media, especially newspapers, and television. In addition, increased publication of the trading floor to increase the ability to recognize the public.

- Strengthening propaganda and counseling to assist farmers in carrying out transactions.

- Invest in, do well, and ensure the quality of services provided to members of the exchanges; Enhance other value-added services such as consultancy, product improvement, trade promotion, transportation, credit currency, training consultancy, and technical guidance...

- Changing the leadership perception of brand management through training, knowledge management, and branding skills; Investing in building corporate culture, and forming the identity of the trading center. Starting from paying more attention to the lives of the staff; creating a comfortable, friendly working environment.

- The trading centers need to clearly classify each participant to have specific regulations for each object as well as have flexible and reasonable communication with each object, aiming to make all objects satisfy their own interests. It is possible to classify objects of agricultural product trading centers consisting of two subjects brokers and buyers and sellers are businesses and individuals with real needs. In fact, brokers can both act as buyers and act as sellers for the difference.

In addition, the exchanges should actively seek opportunities for cooperation, and link with the domestic and foreign units to help each other develop.

- Develop specific regulations and criteria for each member participating in the transaction center. In particular, the content of the commitment to accuracy of the information, handling violations, or giving recommendations, and reminders for the members.

### **5.2. The solution team combines synchronously between the owners of trading centers and other objects**

- Vietnam's agro-product exchange centers should have a close linkage and cooperation with the Ministry of Agriculture and Rural Development, the Vietnam Farmers' Association, and the government in agricultural areas to carry out communication activities. Trademark for agricultural products. The above subjects can support the agricultural trading center on policies, providing information on agricultural products like buying and selling needs in agricultural product areas for these exchanges. Collecting information from these organizations will help agricultural trading places to save considerable time and costs, and more accurate information is also guaranteed. In addition, they are all organizations representing the interests of farmers, so the propaganda, dissemination, and promotion of the operation of the trading floor will be very persuasive. Agro-trading places need to make good use of this factor, develop programs or organize agricultural training courses and have them help them implement the program. This will be an activity that contributes to attract farmers to participate in agricultural transactions through the exchanges.

- In addition, the trading centers need to connect the objects on the floor together. Connect brokers to organizations and individuals who are interested in buying and selling real agricultural products through this place. It is necessary to build a trusting and cooperative relationship among these subjects.

- Agricultural trading centers need close cooperation with quality assessment organizations to conduct a quality inspection of agricultural products when trading. On the other hand, conduct consultancy, assist farmers in the quality assurance of agricultural products, and assist them in creating good quality products. This is an important activity, which helps to create a close relationship between farmers and trading centers, showing them the benefits of trading in the center and thus contributing to the active participation in here.

- Agricultural trading centers also need to strengthen the cooperative relationship, helping each other to develop together and create more

favorable conditions for the trading activities of the members.

### **6. In summary**

Admittedly, the exchange is a relatively new concept for many agricultural businesses and new to farmers. Therefore, the promotion of brand communication for the Agricultural products exchange centers of Vietnam is the most necessary now. Instead of waiting for the push from the government, the transaction centers of agricultural products first need to actively communicate the image, and develop their brand. From this, other support measures from the government will be much more effective. With suggestions on how to brand communications such as advertising, promotion, and synchronization between the owners of exchanges with other stakeholders,... as described in this article I strongly believe that the brand of Vietnam's agro-product exchange centers will soon create a mark in the minds of customers and the public.

Recently, especially during the complicated development of the Covid-19 epidemic, many local agricultural products have been put on e-commerce exchanges, attracting a large number of consumers in both countries. domestically and internationally. This activity not only brings great revenue and economic benefits to farmers but also proves the right and inevitable direction of agricultural product trading on e-commerce platforms in the digital era.

The time when Vietnam's agricultural product trading centers were put into operation effectively was the time when the country's agriculture sector had a considerable change, benefiting from more economic benefits for the country and for the people themselves farmers.

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# THE INFLUENCE OF CUSTOMER ENGAGEMENT ON VALUE CO-CREATION: AN EMPIRICAL STUDY IN THE FIELD OF DIGITAL FINANCE

MA. Trinh Xuan Truong\*

**Abstract:** *This study aims to test the relationship between customer engagement and customer value co-creation behavior. A sample of 208 individual customers was surveyed about their financial service co-creation behavior on Vietcombank's VCB Digibank application in Hanoi. The results show that all three components of customer engagement positively affect information search behavior about VCB Digibank. The study also proposes some governance implications for Vietcombank's managers to promote customer value co-creation behavior.*

• Keywords: VCB digibank, value co-creation (VCC), customer engagement.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Nghiên cứu này nhằm kiểm tra mối quan hệ giữa sự gắn kết của khách hàng và hành vi đồng tạo giá trị của họ. Một mẫu khảo sát gồm 208 khách hàng cá nhân về hành vi đồng tạo giá trị của họ với ứng dụng VCB Digibank của ngân hàng Vietcombank tại Hà Nội. Kết quả nghiên cứu chỉ ra rằng cả ba thành phần của sự gắn kết của khách hàng đều ảnh hưởng tích cực tới hành vi tìm kiếm thông tin về ứng dụng VCB Digibank của khách hàng. Nghiên cứu cũng đề xuất một số hàm ý quản trị cho các nhà quản lý của ngân hàng Vietcombank nhằm thúc đẩy hành vi đồng tạo giá trị của khách hàng.

• Từ khóa: VCB digibank; đồng tạo giá trị, sự gắn kết của khách hàng.

## 1. Introduction

Digital transformation is creating new trends in consumption, thereby affecting almost all areas of activity in the economy. This influence requires businesses to keep up with market trends by finding new directions. Especially for the banking industry, which tends to rapidly transform digitally compared to other industries. In recent years, the trend of non-cash consumption has become increasingly popular in Vietnam. To

meet that demand of customers, banks are now developing and considering mobile banking as a solution. Singh and Srivastava (2018) defined mobile banking as a service provided by banks or financial institutions, allowing customers to perform banking transactions via mobile devices with the support of technological information. In Vietnam, mobile banking in recent years has made breakthrough developments. Especially during a time when the Covid-19 epidemic poses challenges for direct banking operations. Compared to the same period in the first 4 months of 2020, financial transactions between customers and banks in the first 4 months of 2021 via Internet channels increased by 65.9% respectively in volume; 31.2% in value; transactions via mobile phone channels increased by 86.3% respectively in volume; 123.1% in value (Vietcombank, 2021). This situation shows that the demand for mobile banking and non-cash payment in Vietnam is increasing. In addition, the strong development of information technology helps to increase the interaction between banks and customers, creating conditions for consumers to transact through mobile banking more and more easily. Customers can use financial services easily with little restriction of time and place with

\* Joint Stock Commercial Bank For Foreign Trade Of Viet Nam; email: [truongtx119@gmail.com](mailto:truongtx119@gmail.com)

just a mobile device such as a phone or tablet connected to the Internet.

It can be said that digital technology has promoted the development of value co-creation activities between banks and customers. And the process of customer value co-creation with banks is becoming easier and easier. This process has brought great benefits to both parties, especially to the bank. While customers can use better services, banks can improve revenue, and increase customer loyalty, thereby competing more sustainably with competitors. This has attracted researchers to study the value co-creation process between banks and their customers in the digital context.

From a practical perspective, Vietnamese commercial banks have been focusing on investing in developing mobile banking services. However, from an academic perspective, in Vietnam, there is still no research to evaluate the impact of customer engagement with banks on value co-creation. Stemming from the importance of value co-creation in increasing competitive advantage, and building the image and reputation of the bank, the assessment of the influence of customer engagement with the bank on value co-creation is needed. To provide scientific evidence on this topic, the author conducts empirical analysis with survey data collected from customers using mobile banking services of Vietcombank (VCB digibank), one of Vietnam's largest and oldest banks, in Hanoi. This can be considered the first study to analyze the impact of customer engagement on value co-creation in the banking sector in Vietnam. This paper provides empirical evidence on the influence of customer engagement on value co-creation. Thereby affirming the importance of customer engagement for the long-term success of commercial banks through customer value co-creation. The study also provides some important governance implications for banks in enhancing value co-creation between customers and banks based on customer engagement.

This paper is divided into 5 parts. The first part introduces the research. The second part is literature review with key concepts, hypotheses,

and research models. The next part is methodology with the sample, sample characteristics, and questionnaire. Part four is the results of the study. And the final discusses the research results, some limitations, and directions for future research.

## 2. Literature review

### 2.1. Value co-creation

It can be said that value co-creation brings many benefits to banks such as satisfaction, customer loyalty, higher company profitability, and product/service quality. Therefore, VCC is becoming more and more popular among businesses in many different fields. Thus, the academic interest in VCC has grown stronger, leading to a large amount of research being done to conceptualize VCC to provide a solid theoretical basis for the business of banks (Saha et al., 2022).

The process of providing products to customers is a process of creating value together (Kotler et al., 2016). However, the value co-creation process for goods is different from the value co-creation process for services (Saha et al., 2022). According to the goods-dominant logic, value is created when goods are exchanged (Saha et al., 2022). Meanwhile, according to the service-dominant logic, a bank can only offer a value proposition to the customer, and value is only created when the customer uses the service (Saha et al., 2022). Thus, there are two perspectives on value co-creation: value created in exchange (goods) and value created when used (services). Within the scope of this study, with the product being a financial service of a bank, the author uses the concept of co-creation of value when used.

Over the past twenty years, there has been a gradual shift from the view of value created in the enterprise to the point of view of co-creation (Hein et al., 2019). According to Hein et al. (2019), value co-creation is the process of value creation between actors within a service ecosystem on a service platform. Therefore, value co-creation in the digital financial field is the joint creation of value by the bank and the customer through a digital platform (Delpechitre et al., 2018), with customer participation and their operant resources such as knowledge, skills, and effort (Sugathan et al., 2018). According to Yi and Gong (2013),

the value co-creation behavior of customers is a multidimensional structure, including eight basic behaviors: Information seeking, Information sharing, Personal interaction, Responsible behavior, Feedback, Advocacy, Helping, and Tolerance. These factors are divided into two groups by Yi and Gong (2013): citizenship behavior and participation behavior. In this study, to suit the situation and research object, we focus on the customer's Information seeking.

### 2.2. Customer engagement

Customer engagement plays an important role for most organizations. Establishing close engagement with consumers and other stakeholders - thereby fostering their loyalty and involvement in value creation - has become an element of competitive advantage (Matos and Fernandes, 2021).

From the perspective of engagement theory, customer engagement encompasses different levels of psychological, cognitive, and emotional states that customers exhibit when interacting with service providers (Nangpiire et al., 2021). Therefore, it can be said that consumer engagement is a multidimensional concept that includes cognitive, emotional, and/or behavioral aspects and plays a central role in the exchange process (Brodie et al., 2013).

### 2.3. Customer engagement and value co-creation

Vargo and Lusch (2004) have shown that the VCC process alone is not possible without customer engagement. Specifically, the lack of customer engagement also leads to negative emotions and reduces the interdependence between customers and businesses (Yang and Diefendorff, 2009). There have been many previous studies showing the influence of customer engagement with VCC in many different areas, such as repurchase intention in the digital environment (Jebarajakirthy et al., 2021); learning in the digital environment (Wang et al., 2022); hotel industry (Nangpiire et al., 2021); providing health training guidance services in the digital environment (Brodie et al., 2013); smart robot service (Gao et al., 2022); nonprofit (Matos and Fernandes, 2021); brand on social networking

platform (Nadeem et al., 2021); video games (El Afi and Smail, 2021); brand (Yang et al., 2021); training yoga service (My Quyen and Le, 2021); digital communication (Sashi, 2021).

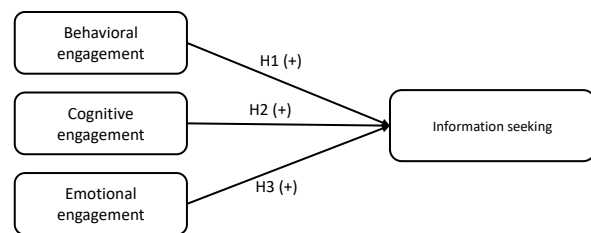
Based on the above analysis, we propose the following hypotheses:

*H1: Behavioral engagement has positive effect on seeking information for VCB Digibank of customers.*

*H2: Cognitive engagement has positive effect on seeking information for VCB Digibank of customers.*

*H3: Emotional engagement has positive effect on seeking information for VCB Digibank of customers.*

**Figure 1: Research model**



## 3. Methodology

### 3.1. Sample

The convenience sampling method was conducted between 15 March and 15 April 2023. The hard copy of the questionnaire was sent to customers who are in Vietcombank waiting rooms in Hanoi. Two hundred and sixteen questionnaires were returned, and two hundred and eight surveys were filled out. These 208 questionnaires were used for further analysis. The 208-response sample comprised 102 males (49% of respondents) and 106 females (51%); two age groups were represented, less and more than 45 years old, which accounted for 46.6% and 53.4% respectively.

### 3.2. Measures and questionnaire development

To test the effects of customer engagement on the value co-creation in this study, author have used a survey approach to collect data. The scales used in the questionnaires have been adapted from previous studies. The scale of customer



engagement has been adapted from study of Wang et al. (2022) and included ten items. The scale of Information seeking (3 items) has been adjusted from Yi and Gong (2013). All items were scored on a 5-Point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

#### 4. Results

##### 4.1. Test for reliability, discriminant, and convergence

To test reliability, discriminant validity, and convergence, EFA and Cronbach's Alpha were used. The test results are shown in the table below:

**Table 1: EFA and Cronbach's Alpha**

Items	Code	Factor loadings	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
<b>Behavioral Engagement Cronbach's Alpha = .882</b>				
I will try hard to do well when I use VCB Digibank comparing other bank's application.	BE1	.756	.738	.865
I will pay more attention when I use VCB Digibank comparing other bank's application.	BE2	.898	.788	.829
I will focus better when I use VCB Digibank comparing other bank's application.	BE3	.891	.809	.802
<b>Cognitive Engagement Cronbach's Alpha = .818</b>				
I feel important to understand the knowledge from VCB Digibank	CE1	.681	.608	.812
I am sure I can do an excellent job when I use VCB Digibank	CE2	.763	.663	.764
I keep using VCB Digibank even when sometimes it is not that interesting.	CE3	.891	.756	.672
<b>Emotional Engagement Cronbach's Alpha = .853</b>				
I believe that I will feel good when I use VCB Digibank.	EE1	.723	.687	.818
I believe that I will feel interested when I use VCB Digibank.	EE2	.744	.651	.832
I believe that I will feel that VCB Digibank is fun.	EE3	.834	.739	.795
I believe that I will feel satisfied when using VCB Digibank.	EE4	.786	.708	.810
<b>Information Seeking Cronbach's Alpha = .824</b>				
I have asked others for information about VCB Digibank.	ISE1	.604	.616	.818

Items	Code	Factor loadings	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I have searched for information on where VCB Digibank is downloaded.	ISE2	.970	.739	.698
I have paid attention to how others behave to using VCB Digibank well.	ISE3	.693	.690	.748

Source: Author's data analysis results

The results of data analysis showed that KMO = .817, Sig of Bartlett's Test = 0.000, Eigenvalues = 1.182 with 4 factors extracted. Factor loadings of all items are greater than 0.3. Cronbach's Alpha of all scales is greater than 0.8. The Corrected Item-Total Correlation indexes are all greater than 0.3, Cronbach's Alpha if Item Deleted are all smaller than Cronbach's Alpha. Therefore, the scales are eligible to perform the analysis in the next step (Hair et al., 2014).

##### 4.2. Hypothesis test

Multiple regression method was used to test the research hypotheses with the support of SPSS24 software. The results are shown in the following table:

**Table 2: Regression**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.924	.269		14.611	.000	
	Gender	.099	.127	.054	.778	.437	.993
	Age	-.103	.127	-.057	-.813	.417	.993
2	(Constant)	.482	.411		1.173	.242	
	Gender	-.001	.105	-.001	-.011	.991	.984
	Age	-.061	.105	-.034	-.585	.559	.982
	AVE_BE	.231	.069	.207	3.330	.001	.847
	AVE_CE	.179	.055	.200	3.272	.001	.872
	AVE_EE	.467	.074	.383	6.311	.000	.887

*a. Dependent Variable: AVE\_ISE*

Source: Author's data analysis results

The Adjusted R Square value is equal to .323, which means that up to 32.3% of the variation of the dependent variable is information seeking which is explained by the variables in the model. The results of hypothesis testing show that

behavioral engagement, cognitive engagement, and emotional engagement all positively affect customer value co-creation, specifically affecting the behavior of seeking information about VCB Digibank. Among them, the strongest influence is emotional engagement ( $\beta_{EE \rightarrow ISE} = .383$ , t-value = 6.311), second is behavioral engagement ( $\beta_{BE \rightarrow ISE} = .207$ , t-value = 3.330), and final is cognitive engagement ( $\beta_{CE \rightarrow ISE} = .200$ , t-value = 3.272). The VIF indices are all less than 2, so there is no multicollinearity.

### 5. Discussion, implications and future research direction

The results of hypothesis testing show that engagements of bank customers (including behavior, cognitive, and emotion) positively affect value co-creation. This result implies that when customers believe that they will have positive feelings when using VCB Digibank, using VCB Digibank will bring many benefits to them, and they believe that they will make efforts in using VCB Digibank, they will be more active in finding information about VCB Digibank.

Among them, the influence of emotional engagement is the strongest, which implies that Vietcombank needs to pay attention to customers' emotions when experiencing VCB Digibank. VCB Digibank needs to be designed towards bringing excitement, fun, and satisfaction to customers. In addition, Vietcombank's communication process about VCB Digibank must also aim to make customers believe that using VCB Digibank will be very interesting and satisfying. In addition, Vietcombank also needs to communicate the benefits and convenience of using VCB Digibank. Although some customers are willing to put in the effort in using VCB. However, reducing customer efforts by designing VCB Digibank with high convenience in use will still be appreciated by customers and influence other Value co-creation behaviors in the future.

Despite the important contributions, the study still has some limitations such as convenience sampling or the influence of customer engagement on other components of value co-creation has not been clarified. Therefore, future studies should use a different sampling method (such as

probability samples) to make the research results more accurate. In addition, future studies may also explore the influence of customer engagement on other components of value co-creation behavior.

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# ROLE OF INTERNAL AUDIT FOR CORPORATE GOVERNANCE

PhD. Phi Thi Kieu Anh\*

**Abstract:** *Currently, enterprises have more and more a full, correct, and clearer awareness of the importance of corporate governance for the development of their units. Good corporate governance is the foundation to help enterprises do business effectively, create the faith of the investors and the public, and improve access to capital, thereby bringing the highest benefits to investors and stakeholders. From a macro perspective, good corporate governance will reduce the cost of capital, strengthen and stabilize the financial market for economic development. Internal audit is a function established within an organization to evaluate and improve the effectiveness of risk management, internal control, and governance processes. Thus, there is a close relationship between internal audit and corporate governance, in which internal audit has a supporting effect that enhances the strength and effectiveness of corporate governance. Within the scope of this article, the author will analyze in depth the role of internal audit in enhancing the strength and effectiveness of corporate governance.*

• Keywords: *internal audit, corporate governance, internal control, OECD principles of corporate governance, internal auditor.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: *Hiện nay, các doanh nghiệp ngày càng có nhận thức đầy đủ, đúng đắn và rõ ràng hơn về tầm quan trọng của quản trị công ty đối với sự phát triển của đơn vị mình. Quản trị công ty tốt là nền tảng giúp doanh nghiệp kinh doanh hiệu quả, tạo niềm tin của nhà đầu tư và công chúng, nâng cao khả năng tiếp cận vốn, từ đó mang lại lợi ích cao nhất cho nhà đầu tư và các bên liên quan. Ở góc độ vĩ mô, quản trị công ty tốt sẽ giảm chi phí vốn, củng cố và ổn định thị trường tài chính để phát triển kinh tế. Kiểm toán nội bộ là một chức năng được thiết lập trong một tổ chức để đánh giá và nâng cao hiệu quả của các quy trình quản lý rủi ro, kiểm soát nội bộ và quản trị. Như vậy, giữa kiểm toán nội bộ và quản trị công ty có mối quan hệ chặt chẽ với nhau, trong đó kiểm toán nội bộ có tác dụng hỗ trợ nâng cao sức mạnh và hiệu quả của quản trị công ty. Trong phạm vi bài viết này, tác giả sẽ đi sâu phân tích vai trò của kiểm toán nội bộ trong việc nâng cao sức mạnh và hiệu quả của quản trị doanh nghiệp.*

• Từ khóa: *Kiểm toán nội bộ, quản trị công ty, kiểm soát nội bộ, nguyên tắc quản trị công ty của OECD, kiểm toán viên nội bộ.*

## 1. Corporate governance, main contents and principles of corporate governance

### *What is corporate governance?*

Corporate governance reflects the relationship between the parties involved in the governance system and originates from the separation between ownership and management rights. Enterprises belong to owners, investors, and shareholders, but in order for the business to exist and develop, it must be led by Board of Directors, managed by the management, and contributed by employees and stakeholders. However, these people do not

always share the same volition and interests with each other. Therefore, it is necessary to have a mechanism so that investors and shareholders can control the management of the business in order to bring the best results for all stakeholders. Corporate governance focuses on dealing with issues arising in the authorization relationship at the enterprise; preventing and limiting the situation that management abuses their power to use assets and business opportunities for personal benefits, or lose resources of the enterprise. Thus, corporate governance is the sustainable balance and control model of the enterprise.

\* *Academy of Finance*

According to Maw, N., Horsell et al., Corporate Governance is a topic that, although not clearly defined, can be seen as a set of objects, objectives, and mechanisms to ensure good things for shareholders, employees, customers, creditors and promote the reputation and position of the economy.<sup>1</sup>

According to the Institute of Internal Auditors IIA, "Governance is the system by which organizations are directed and controlled. It includes rules and procedures for making decisions on business matters to ensure success while maintaining the right balance with stakeholder interests."<sup>2</sup>

Recent studies by world economic experts and the World Bank show that there is a strong correlation between corporate governance and stock prices and corporate performance generally. Accordingly, good corporate governance will bring higher efficiency to investors and more benefits to other members of the business. In contrast, bad corporate governance often leads to bad consequences, even bankruptcy. The collapse of a number of large enterprises in the world such as Enron, Tyco International, Daewoo, and Worldcom, or the scandals in large Vietnamese enterprises such as Vinashine, Vinaline, and Petro Vietnam... all have deep causes from not good corporate governance.

Good corporate governance must create incentives for the Board of Directors and the management to perform the objectives for the benefit of the enterprise and shareholders as well as stakeholders, and at the same time must create effective monitoring conditions. An effective corporate governance system within an enterprise and the economy, in general, contributes to the faith of the public and is the foundation for the operation of the market economy.

#### ***The main contents of corporate governance***

With the above analysis of corporate governance, corporate governance includes relevant content to solve the following issues:

- Resolving conflicts of interest among Board of Directors, management, and shareholders; between major shareholders and minority shareholders; having reasonable remuneration policies to encourage Board of Directors and the management to perform their duties for the benefit of the enterprise, shareholders, stakeholders, and facilitate effective supervision;

- Requirements for the quality of financial information and other information, as well as requirements for disclosure and transparency of these information;

- Enhancing the role and empowering the independent non-executive board members so that they have the ability to make independent and objective judgments as well as carry out the task of controlling and restraining the power of Board of Directors, management;

- Increasing the independence and responsibility of the Audit Committee to the enterprise; increasing the role of independent auditing organizations in the appraisal of financial statements.

#### ***The principles of corporate governance***

To ensure good corporate governance practices, enterprises need to establish and perform regulations and principles of corporate governance such as: Charter of the enterprise; Internal regulations and corporate governance; Codes of Conduct. These documents need to be made publicly available for relevant parties to understand and comply with.

There are also many documents on corporate governance principles in the world, such as Cadbury's Report (UK, 1992), OECD Principles of Corporate Governance (OECD, 1999, 2004, 2015), Sarbanes - Oxley Act 2002 (USA, 2002), in which the OECD Principles of Corporate Governance are considered the foundation and are applied in many countries around the world. The corporate governance principles outlined in the OECD Code of Corporate Governance include:

- Promoting transparency and market efficiency, in accordance with the provisions of the law;

<sup>1</sup> Maw, N., Horsell, Lord Lane of, M. Craig-Cooper (1994), *Maw on Corporate Governance*, Dartmouth Press, Aldershot, GB.

<sup>2</sup> 1 – IIA, *The Audit committee – purpose – process – professionalism*

- Protecting and facilitating the exercise of shareholders' rights and ensuring equal treatment for all shareholders;
- Recognizing the rights of stakeholders in the enterprise;
- Creating good motivations in corporate governance to help the stock market operate in a healthy and efficient manner.
- Ensuring transparent and accurate disclosure of information on all important issues of enterprises;
- Ensuring the strategy of the business is properly implemented, monitoring the performance of Board of Directors and the management as well as their responsibilities to the business and shareholders.

In order to practice well corporate governance, enterprises need to develop and comply fully and properly with corporate governance principles and at the same time have a good internal control system. Internal control, in which internal audit will be a useful tool to enhance the efficiency of corporate governance.

## 2. Internal audit in the enterprise

Internal audit was born around the beginning of the twentieth century. When it was newly formed, the function and role of the internal audit were quite limited, mainly assisting independent auditors in reviewing financial statements or performing related accounting functions such as bank reconciliation. However, over time, the role, functions, and scope of the Internal Audit have been greatly expanded. This is reflected in the IIA's definitions of internal audit. The definition of Internal Audit was first given by the IIA in 1978. Through the revisions in 1988, 1990, and 1999, the definition of Internal Audit in 1999 is used until today, "Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes"<sup>3</sup>

<sup>3</sup> <https://www.theiaa.org/en/about-us/about-internal-audit/>

According to Decree No. 05/2019/ND-CP of the Government on Internal Audit, the objective of internal audit is through inspection, evaluation, and consulting activities, internal audit provides independent, objective assurance and recommendations on the following:

- The entity's internal control system has been properly established and operated to prevent, detect and handle risks of the entity.
- Effectiveness and efficiency of governance and risk management processes of the entity
- Operation and strategic objectives, plans, and work tasks achieved by the entity.

Thus, the primary objective of an internal audit is to add value and improve the organization's operations. To achieve this goal, the scope of internal audit activities is very broad, including: checking and evaluating the adequacy and effectiveness of internal control systems; Reviewing the reliability and truthfulness of financial information, operating information, and the tools used to identify, measure, classify and report such information; Reviewing established systems to ensure that the entity complies with policies, plans, and legal requirements; Reviewing assets protection measures, where appropriate, verifying the existence of such assets; Assess the economics and efficiency of the resources used; Reviewing activities or programs to determine whether results are consistent with established goals and whether activities or programs are being carried out as planned.

With its functions, tasks, and scope of activities, Internal Audit assists in enhancing the strength and effectiveness of corporate governance.

## 3. The role of internal audit in corporate governance

*Internal audit supports and strengthens to resolve the conflict among parties which participate in the corporate governance system and facilitates effective monitoring:*

To work well, enterprises must have a strong and effective internal control system. Board of Directors, the management, and other members of the enterprise must design, implement and

maintain internal control processes, policies and procedures to help the enterprise reasonably achieve its objectives: reliability of financial reporting, effectiveness, and efficiency of operations, and compliance with applicable laws and regulations. The adequacy and effectiveness of the internal control system depend greatly on the awareness and actions of Board of Directors and the management, who are responsible for leading and managing the enterprise. Therefore, with the function of checking and evaluating the adequacy and effectiveness of the internal control systems in the enterprise, the internal audit assesses the internal control processes, policies, and procedures that have been issued and operated whether it is reasonable and ensures the rights and interests of all parties involved in the enterprise (major shareholders, minority shareholders, the management, Board of Directors, suppliers, customers, banks, customers, employees), whether policies are reasonable to encourage Board of Directors, the management to perform their duties for the benefit of all parties involved in the enterprise? whether Board of Directors has exercised adequate oversight over its management, and whether applicable control policies and procedures help prevent Board of Directors, the management from exercising acts of abuse of power to appropriate the common property of the enterprise or not... In case of detecting inadequate, unreasonable processes, policies, and control procedures or the compliance with the above things does not well, the Internal Audit will report to the competent authority (the Supervisory Board, the Audit Committee) to promptly correct and amend.

With this aspect, an internal audit helps enterprises comply with corporate governance principles of protecting and facilitating the exercise of shareholders' rights and ensuring equal treatment for all shareholders; Recognizing the rights of stakeholders in the enterprises.

***Internal audit helps enterprises ensure the quality requirements of financial and other information as well as the requirements of disclosure and transparency that information:***

With the function of checking and evaluating the adequacy and effectiveness of internal control systems, internal audit has the effect of improving the effectiveness and efficiency of these systems. When the internal control system is strong, it has the ability to prevent, detect and handle misstatements due to fraud or error, thereby ensuring the quality of financial information as well as other information of the enterprise. In addition, within the scope of its activities, the internal audit itself also has the function of reviewing the reliability and truthfulness of financial information, operating information, and the tools used to measure, classify, present, or disclose such information. Thus, an internal audit helps enterprises ensure the quality requirements of financial and other information as well as requirements of disclosure and transparency of that information.

With the function of testing and evaluating the adequacy and effectiveness of internal control systems, internal audit has the effect of improving the effectiveness and efficiency of these systems. When the internal control system is strong, it has the ability to prevent, detect and handle errors due to fraud or error, thereby ensuring the quality of financial information as well as operating information of the company. enterprise. In addition, within the scope of its activities, the internal audit itself also has the function of reviewing the reliability and truthfulness of financial information, operating information, and the tools used to measure, categorize and report such information. Thus, an internal audit helps enterprises in ensuring the quality requirements of financial and corporate information as well as information disclosure and transparency requirements.

With this aspect, internal audit also helps enterprises comply with corporate governance principles related to transparent and accurate disclosure of information on all important issues of the enterprise, as well as promotes the transparency and efficiency of the financial market in general and the stock market in particular.

*Internal audit supports enterprises to ensure their strategic direction, effectively supervises the management of Board of Directors and the responsibilities of Board of Directors to the enterprise and shareholders:*

Internal audit with the function of reviewing activities or programs to determine whether activities or programs and their results are consistent with the plans and objectives established by the enterprise. In case the Internal Audit detects that the activities and programs are implemented not in accordance with the operational orientation of the enterprise, the Internal Audit through the Audit Committee or the Supervisory Board may report directly to the Board of Directors and shareholders of the enterprise for timely handling. This will help the enterprise's activities always ensure the orientation and strategy set by the enterprise and prevent the Board of Directors and the Board of Management from having the opportunity to perform abuses of power and self-interest, not for the interests of the enterprise and its shareholders.

In the structure of internal control, one of the elements of the control environment is the supervision of the Board of Directors over the Board of Management. One of the tasks of the internal audit is to evaluate the adequacy and effectiveness of internal control in general and to assess the supervisory role of the board of directors over management's performance in order to prevent the management abuses control or engaging in self-seeking practices. Thus, internal audit supports the Board of Directors in monitoring the activities of the Board of management as well as the Board of Directors' responsibilities to the enterprise and shareholders.

#### **4. Current status of the role of internal audit in corporate governance in Vietnam today**

In Vietnam, internal audit was mentioned more than twenty years ago, reflected in the Decision No. 832/TC-QD-CDKT dated October 28, 1997 of the Minister of Finance on promulgating the Regulation on internal audit applicable to state-owned enterprises. However, the activities of the internal audit did not really promote its effectiveness.

In recent years, internal audit has received more attention. Internal audit has been mentioned in documents such as the Law on Independent Audit 2011 (stipulating the responsibilities of

entities with the public interest in organizing internal audit); Enterprise Law 2014 (stipulates that the organizational structure and management of a joint stock company must have a Supervisory Board or an Internal Audit Committee under the Board of Directors); The 2015 Accounting Law took effect from January 1, 2017 (providing the definition of Internal Audit and its duties); Decree No. 71/2017/ND-CP providing guidance on corporate governance applicable to public companies with a view to international practices on corporate governance (referring to the operation of the Internal Audit Committee). In 2019, the Government issued Decree No. 05/2019/ND-CP on internal audit.

However, up to now, internal audit activities in Vietnam, in general, are still quite young and lackluster; The number of enterprises with an internal audit department is not much, mainly concentrated in financial institutions, corporations, state-owned economic groups, and a number of large-scale private corporations and companies. The internal audit models that Vietnam applies today include: Internal audit is a department directly under the Board of Directors or directly under the Board of Management. The form of the organizational structure of internal audit is often applied, including: Centralized form (internal audit department is held at the office of the corporation/parent company of the group, is not organized in member companies/subsidiary); Distributed form (internal audit is held at both the Corporation's/parent's office and all member companies); and Semi-centralized, semi-distributed form (Internal audit department is organized at the Corporation/parent company and some member companies). Each form of internal audit organization has its own advantages and disadvantages, but the semi-centralized, semi-distributed form is chosen by many enterprises because it is flexible and ensures economic efficiency.

Besides, the big challenge in promoting the effectiveness of internal audit activities in corporate governance also depends on the human factor to perform the tasks of internal audit. The number of internal auditors in Vietnam is still very small, especially the number of internal auditors meeting international standards. Currently, in Vietnam, there is no professional organization of internal auditors to carry out activities to support,

update knowledge, and exchange professional experience on internal audits like other countries in the world. The above are also major barriers to the development of the internal audit field according to integration requirements.

In general, internal audit activities in Vietnamese enterprises have not really fully performed their functions and duties, so they have not fully promoted their roles and properly represented their position in the enterprise. This situation is caused by many reasons such as:

- Many large enterprises in Vietnam are not really aware of the importance of internal audit and do not understand properly the nature, function, position, and role of internal audit so the establishment of an internal audit department is just a formality in order to comply with the regulations of the State. Enterprises have not really valued and invested resources to develop this department. In addition, with the mentality of not liking being checked and evaluated, many managers do not consider the internal audit department as a tool to support themselves in corporate governance. They consider internal audit as a supervisory department, causing obstacles to management.

- The majority of Vietnamese corporate managers are representatives of the owners, not the real owners of the enterprises, so they have not really attached much importance to the issue of inspecting, evaluating, and monitoring the internal control system as well as the activities in the enterprises.

- Human resources for internal audits in Vietnam are really lacking in both quantity and quality. Currently, the majority of internal auditors are mainly recruited from other professions such as independent audit, accounting, and control or are appointed and mobilized from other parts of the enterprise. This also hinders the development of internal audit activities in Vietnam.

- The independence of the internal auditor is not really guaranteed, reducing the objectivity of the internal audit in the process of checking, evaluating, and giving advice to enterprises.

All of the above reasons lead to the fact that internal audit in Vietnam is still very weak, undeveloped, and has not fully performed its functions and duties. This makes the internal audit not properly represent its position and role

in corporate governance and has not been highly appreciated by society.

### Conclusion

From the above analysis, it can be seen that there is a relationship between internal audit and corporate governance, in which internal audit is one of the effective support tools to help businesses practice corporate governance well, especially in resolving conflicts between stakeholders as well as requirements on information quality and information disclosure related to the enterprise. Therefore, enterprises, especially large enterprises, enterprises listed on the stock market, enterprises doing business in particularly complicated and high-risk fields, etc., need to be properly and fully aware of the position and role of internal audit in the enterprise, thereby investing reasonable resources to perform the internal audit function in the enterprise; promulgate internal audit policies and regulations in the enterprise so that the internal audit can really promote its roles, functions, and tasks in order to strengthen and improve the operation of the enterprise in general, and improve the capacity of the corporate governance in particular.

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# DEVELOPING EFFECTIVE COASTAL AND ISLAND TOURISM IN SOME COUNTRIES AROUND THE WORLD AND LESSONS FOR VIETNAM

Assoc.Prof.PhD. Nguyen Văn Đan\* - PhD. Nguyen Thanh Thao\*

**Abstract:** *The effective exploitation of the three factors that make up coastal and island tourism, including tourism resources, tourism services, and the environment, will promote economic development associated with coastal and marine tourism. Through the study of the development experiences of some islands such as Jeju and Nami of South Korea, Phuket Island of Thailand, Boracay Island of the Philippines, coastal tourism of the Netherlands and Spain, the article draws 6 lessons for sustainable development of Vietnam's coastal and island tourism, including the need for appropriate policies for sustainable environment development, a proper understanding of the importance of coastal and island tourism development, raising awareness of the protection of the marine and island environment throughout the political system, investing in high-quality human resources for sustainable development of coastal and island tourism, maximizing financial resources for coastal and island tourism development, and strengthening international cooperation and links for sustainable development of the marine and island environment.*

• Keywords: *marine tourism development; Jeju island tourism, Nami island; sea and island tourism.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Khai thác có hiệu quả ba yếu tố cấu thành du lịch biển, đảo đó là: tài nguyên du lịch, dịch vụ du lịch và môi trường sẽ thúc đẩy phát triển kinh tế gắn với du lịch biển và ven biển. Thông qua khảo cứu kinh nghiệm phát triển của một số đảo như: Jeju và Nami của Hàn Quốc; đảo Phuket - Thái Lan; đảo Boracay của Philippines; du lịch biển của Hà Lan, Tây Ban Nha. Bài viết rút ra được 6 bài học cho phát triển bền vững du lịch biển, đảo Việt Nam đó là: Phải có chính sách phù hợp cho phát triển bền vững môi trường biển, đảo; Nhận thức đúng đắn về tầm quan trọng của phát triển du lịch biển, đảo; Phải nêu cao tinh thần bảo vệ môi trường biển, đảo của toàn hệ thống chính trị; Tập trung đầu tư nguồn nhân lực chất lượng cao cho phát triển bền vững du lịch biển, đảo; Tăng cường tối đa nguồn lực tài chính cho phát triển du lịch biển, đảo; Tăng cường hợp tác và liên kết quốc tế trong phát triển bền vững môi trường biển, đảo.

• Từ khóa: *phát triển du lịch biển; du lịch đảo Jeju, đảo Nami; du lịch biển, đảo.*

## 1. Problem statement

The importance of the tourism industry in developing coastal economies has been firmly established. In the era of the fourth industrial revolution, the demand for tourism, especially coastal and island tourism, is increasingly essential. Therefore, this smokeless industry is always highly valued and prioritized for development by countries. This is an industry that creates favorable conditions for promoting economic development associated with coastal and island tourism.

In recent times, the coastal and island tourism industry, in particular, and the overall coastal industry, have been developing slowly, with level of expertise not keeping up with the process of international economic integration and low competitiveness compared to the national average. Local advantages have not yet been fully utilized.

Vietnam is a developing country with a low to medium GDP per capita of around 4,100 USD.

\* Academy of Finance; email: thanhthaonguyenntt@hvtc.edu.vn

Learning from the successful experience as well as the failures in developing coastal and island tourism of some countries around the world has tremendous significance in helping Vietnam see challenges, find opportunities, catch up with developed countries in this field, and at the same time, propose solutions to build and develop coastal and island tourism products that are unique, worthy of the nation's and international stature under conditions of limited resources, which is an urgent task.

## 2. Approaches and research methods

Regarding approaches: each country has its own step for sustainable economic development in general and a specific industry in particular. However, the development experience of a country or a region plays an important role in the planning of Vietnam's sustainable tourism development strategy. Therefore, the approach of this article is carried out in a systematic and ecosystem-based manner: analyzing the sustainable tourism development experience of famous islands in the world and the maritime economy of some countries to draw lessons for Vietnam, thus adjusting its appropriate strategy and policies for developing its own coastal and island tourism.

Regarding research methods, this article uses a combination of research methods: interdisciplinary research, qualitative research through statistical methods, comparison, and synthesis of historical references based on reliable secondary data from research agencies in Vietnam and internationally.

## 3. Research content

### 3.1. Experience in developing coastal and island tourism in some countries

#### 3.1.1. Experience in developing coastal tourism of the Netherlands

The Netherlands has a long coastline facing the North Sea, with a population of 17.5 million people, this country has the highest population density among Northern European countries. The Netherlands has a well-developed maritime industry with global competitive capacity, which makes the country an important center for trade,

transit and gateway to Europe and provides opportunities for tourism development.

*Multi-industry development policies and strategies.* With an open economy, the Dutch maritime policy has strongly promoted the development of various marine economy sectors (maritime economy, shipbuilding industry, renewable energy, coastal tourism). Marine entertainment services such as tourism, production of tourist ships, and motor sports on the sea, etc account for a large proportion of the marine economy structure with a growth rate always over 10%/year and generating annual revenue of about 3 billion Euros.

*Promoting the image of famous tourist attractions.* The Netherlands is always among the top most visited tourist destinations in Europe, especially the coastal city of Amsterdam with modern and high-tech maritime services, combined with flower fields, windmill systems and waterway drainage systems and the world's largest museum system creates an attractive tourist system that brings satisfaction to visitors when they come here.

*Focusing on high quality human resource training.* The Netherlands has a competitive and dynamic business environment, high-quality human resources with entrepreneurial spirit, free and creative institutions that have created a system of developing marine economic sectors. The Netherlands has the world's leading universities and research institutes to train and provide high-quality human resources to meet the needs of developing marine economic sectors including coastal tourism.

*Focus on investing in technical infrastructure.* The Netherlands is a country with a top-tier infrastructure system in the world. A network of highways, modern seaports, and airports provides the Netherlands with a convenient infrastructure system for developing marine economy sectors in general and coastal tourism in particular.

#### 3.1.2. Experience in developing Spanish sea and island tourism

Spain is located in the southwest of Europe, part of the Iberian Peninsula, an area of 504,782 km<sup>2</sup>

(of which the land is 499,542 km<sup>2</sup> and the water is 5,240 km<sup>2</sup>); with the two main archipelagos are: Balearic in the Mediterranean and Canary in the Atlantic Ocean; The land here is blessed with many of the most charming beaches in the world: Barcelone, Saint Sebastián, Valence, Marbella, etc. With nearly 5,000 km of coastline, Spain has developed the marine tourism industry into a leading strength in attracting world tourists.

In 2018 according to the UNWTO (World Tourism Organization of the United Nations) there were 89.4 million international visitors, ranking second worldwide in terms of the number of visitors, bringing Spain 178 billion Euros. With 300 days of sunshine every year and temperatures in the range of 18°C-30°C, the beaches are sandy (The Costa Daurada for yellow sand, The Costa del Azahar for orange sand, Costa Blanca for white sand and Costa Calida for black sand), the scenery is beautiful, the Spanish coast is ideal for domestic and foreign tourists. To attract visitors to the country, Spain take many measures, in particular:

*Pay attention to the environment to ensure the sustainability of the marine ecosystem.* Spain divides marine protected areas according to different localities. Currently, the main marine protected areas are: La Palma, La Restinga, Isla Graciosa, Isla de Alboran, Cobo de Gata, Isla de Tabarca, Masia Blanca... Spain's marine protected areas play an important role in preserving and maintaining the sustainability of marine ecosystems and marine species. According to the rating standard "Green Flag eco-label" with environmental criteria of the World Environmental Education Organization on: water quality, beach sanitation, waste disposal, information, education and commitment to preserving coastal ecosystems... with the highest level of 50 flags; Although Spain has a number of beaches achieved, for example: Costa Blanca beach reached 48 blue flags, Costa Dorada and Mallorca reached 37 and 33 flags respectively. Moreover, most swimming, diving, watching corals, watching fish, and marginal sports activities at the reserves must be approved by the competent authorities.

*Deploying and supervising island tourism development plans.* In 2009, the Spanish Ministry of Tourism issued a plan to develop tourism until 2020 with the name: "Tourism Plan Horizon 2020". The goals of the plan are: to improve the quality of tourism products, develop sustainable tourism; support tourism destinations; mitigate climate change; reduce seasonality in tourism activities; support to attract tourists to less attractive destinations... with a total investment of \$1.9 billion.

*Organize events to create conditions for organizations and individuals to have the opportunity to contribute to the development of marine ecotourism activities.* Participating in the event: European Maritime Day (EMD) with many activities such as seminars, exhibitions of new technologies in the exploitation of marine resources, exchange of management experience...

*Strictly implement the approved regulations and plans.* Handling of construction works that have an adverse impact on tourism and indigenous culture. Demolition of illegally constructed buildings on the coast. Strict implementation of the Coastal Law 1988: completely control the distance from the edge of the sea to the depth of the mainland within 500m, prohibiting the construction of houses, hotels, bars, restaurants and any other works.

*There are measures to protect tourists.* There are measures to prevent the abuse of beach visitors, many beaches are closed after the invasion of jellyfish. Detection and notification of the appearance of floating jellyfish flocks. Recommend to visitors about inappropriate forms of folk healing...

### 3.1.3. Experience in tourism development of Jeju Island - Korea

Jeju Island has an area of 1,849.3 km<sup>2</sup>, a population of 604,670 people (2017), about 434 km south of Seoul, with the Hallasan volcano 1,950m above sea level. It takes about 1 hour to fly from Seoul's Gimpo Airport, which is the country's top tourist destination; the island occupies 4 international titles: Biosphere Reserve in 2002, World Natural Heritage Site in 2007, Global Geopark in 2010 and World Natural

Wonders in 2011. With an area of the smallest province of Korea, with a width of 41km in the South and North, and 73km in the East and West; The province has two cities, Jeju and Seogwipo; with GRDP reaching 12 billion USD, GRDP per capita/year reaching 21,000 USD; of which tourism income accounts for 25% of total product value.

Tourism activities of the island ranked first in the country of Kimchi in terms of GRDP increase rate, job creation and increase in revenue for the local and central budget. For example, in 2018, the total number of tourists reached 15.5 million, international visitors accounted for nearly 20%; the length of stay of each visitor from 3-5 days, the average spending per visitor is about 600 USD, the total income from tourism of the island reached nearly 8 billion USD. Tourism development has made an important contribution to promoting local economic activities, solving many jobs, reinvesting, improving residential life, ensuring sustainable development of the island's resources.

The achievements of Jeju tourism industry are probably due to the crystallization of Korea's creative, flexible and professional activities in general and those working in Jeju tourism in particular; shown in some of the following criteria:

*Changing the law, applying specific mechanisms.* In 2002, with the implementation of the "Special Law of the International Free City", Jeju Island was transformed into a special region/province. Through the regulation, 182 countries and territories come here without visa/no tax, always carry out tourism promotion and promotion activities with the goal of becoming "the international free city, the peace island of the world", open and friendly.

*Investing in the development of synchronous and modern infrastructure,* building and expanding international airport seaports; Therefore, connecting with many major cities at home and abroad (Seoul, Tokyo, Beijing, Shanghai...).

*Effectively exploiting tourism potentials and resources, developing the advantages of UNESCO-recognized titles;* The tourism

workforce on the island has implemented many of its island tourism development policies. Complete the tourism policy system; link natural wonders with heritages; attract tourism, nurture MICE industry development, promote tourism investment projects.

State management of tourism is oriented to closely coordinate with tourism business enterprises of the island in order to strengthen marketing and promotion activities at home and abroad, develop tourism resources and products in accordance with market demand; coordinate with financial agencies in distributing domestic goods and tax exemption and reduction for international tourists quickly; improve the operation of advanced tourism systems; adopt policies to train and retrain high-quality human resources for the island tourism industry.

*Improve the operational capacity of Jeju Tourism Association,* through projects to support the promotion of tourism activities of members, improve the image of tourism business units, and subsidize local residents in tourism development.

- *Strengthen tourism links with countries and territories* with the following contents: exchange, promotion, marketing, exchange of human resources; develop infrastructure to connect domestic and foreign tourist destinations.

#### *3.1.4. Experience in tourism development of Nami Island - Korea*

Nami Island (named after a Nami general) in the city of Chuncheon, South Korea, is 5km in circumference with an area of 46ha, more than 60km north of Seoul. In 2010, the island was recognized as a child-friendly park and was voted by the Korean Association of Disabled People as the resort with the best facilities for people with disabilities. This island is famous for the success of the movie "Winter Sonata"; there're 4 roads that each grow a separate type of tree: Metasequoia glyptostroboides, Ginkgo biloba, Cherry and Fir-tree create a unique beauty that is not found anywhere else in the world.

The tourism of this island has experienced many ups and downs since 1966, so far it has become a typical tourist destination of the country of Kimchi, in 2019 the number of visitors

has reached 3 million people, of which nearly 1 million international visitors. Tourism on the island is always interested in many different activities, specifically:

*Pay attention to building cultural space for visitors*

With the motto “culture and art are immersed in nature”; green parks, entertainment, rest are redesigned; many buildings on the island have been renovated to become complex display areas for different types of art, culture, architecture, and art. In order to increase the experience of traditional music culture, the island also has its own display of traditional props, performance stage with large and small scale; experience traditional village products; Maximum support for music performers to serve visitors; Organize many large events on the island to attract tourists through programs such as “summer night dream”, “world book festival”, etc.

*Expanding cooperation and links at home and abroad, implementing tourism experience activities*

On the basis of regulations, cooperation and association, the Island Management Board has created conditions for cultural associations and environmental education centers of Korea to organize activities to experience culture and environment; Therefore, these activities have a significant influence on attracting domestic and foreign tourists. For example, in 2006, the Island Management Board held a “Ceremony of planting 400 *Metasequoia glyptostroboides* trees - *Metasequoia glyptostroboides* forest”, in 2007 planted “Nami trees forest”, in 2008 planted “maple trees forest” with a sign of the donor’s name; The participant of the ceremony of planting trees was granted a certificate of being a citizen of the Island and was issued a lifetime passport, so it attracted many visitors to participate in the festival; This is an important activity in raising people’s awareness in environmental protection and contributing to improving competitiveness, promotion and promotion of tourism to attract visitors back many times.

In order to promote its image to the world, Nami Island has implemented international

and regional links, through the representative agencies of the countries to organize events related to the island’s national day; through a strategy of declaring the “Republic of Nami” with the “National Opening” ceremony in March 2006 with the national flag, anthem, currency, stamps and private writing; entrance tickets are replaced by passports with entrance and exit ticket check areas called “immigration offices”; Such a way has turned the beautiful and romantic island into a fresh international resort, harmonious between the natural ecological environment and humanity.

*Improving the ecological environment, building a waste recycling culture*

Since 2002, Nami Island has replaced technical infrastructure: replacing power lines, removing fences, replacing waste containers, not renting land for tourism when the expiry date has expired. Applying the model of greenery planning, prohibiting the use of toxic substances to the ecological environment; implementing the natural survival model of some types of animals in the island’s planning area.

The island management board has cooperated with the city’s Environmental Protection Association to build recycling centers; waste is collected and classified for use in improving the tourism environment, producing tourism products and souvenirs for tourists with the goal of turning the island into a recycling paradise.

*Promote image through tourism development with cinema*

Nami Island’s tourism has been redeveloped in association with the success of the movie “Winter Sonata”. Through film promotion, the image of Nami Island has been brought to the whole world Many Asian tourists visit this island just to see with their own eyes the filming location of their favorite movie. The island is also understood through the film “Winter Visitors” “Male and Female”. The way of doing tourism and promotion has made the core value of the island in the harmony between the environment and nature with bold features of tourist attractions in the Korean cultural wave Hallyu attracts a large number of tourists from Asian countries including Vietnam.

### *3.1.5. Experience in tourism development of Phuket Island - Thailand*

Located in the Andaman Sea in the southwest of Thailand, Phuket is the largest island with an area of 543 km<sup>2</sup>, a population of about 300,000 people. Phuket welcomes about 8 million international tourists each year with a tourism revenue of about 5 billion USD.

#### *Clearly define functional subdivisions*

Implementing the sustainable tourism development strategy, the local government has planned two quite clear subdivisions: (1) conservation areas and (2) new development areas. Develop standards and regulations on environmental quality of tourist areas and accommodation establishments. In general, Phuket's tourism is under pressure from the private sector, so tourism activities here are heavy on commercial engines. The Phuket government specifies suitable land funds for each investment project in the field of tourism; regulations on inspection of environmental protection in the form and business activities.

#### *Evaluation of tourism activities and environment*

The National Tourism Agency of Thailand cooperates with the authorities to organize the evaluation and ranking for beaches and hotels according to the criteria of protecting the natural environment and social culture. Businesses are responsible for environmental protection within the scope of their business activities and are assessed daily by the authorities.

#### *Propagating and educating to raise public awareness of island and sea tourism*

The Phuket government always promotes advocacy and education to raise awareness of environmental protection to collect waste and keep general hygiene in public places. At the same time, residents at tourist destinations also have a sense of environmental protection because they are aware of this activity affecting their economic, cultural and social life.

#### *Implement policies to sustainably develop island tourism*

The Government is interested in developing investment in all three aspects: Economic, socio-

cultural and environmental in order to make the most effective use of tourism resources. Investment in the construction of tourism infrastructure, expansion of airports and ports; green economic development policy; investment in developing garbage processing plants with large capacity; implementation of architecture, design and construction according to planning; pollution control, conservation and protection of ecosystems; restoration of living environment of animal species to ensure biodiversity to avoid disrupting marine ecosystems.

### *3.1.6. Experience in tourism development of Boracay Island - Philippines*

The Philippines has up to 7,000 islands, large and small, the country has a disadvantageous geographical position such as being located in the center of storms, tsunamis, earthquakes, volcanoes. Despite this, the country has made the most of the natural resources of the sea and islands to turn into its strengths in the marine tourism industry, the most obvious proof is that Boracay Island has recently become a resort tourism destination of Southeast Asia. The tourism industry of the Philippines currently contributes about 10% to the GDP; therefore, the Philippines has adopted many policies to sustainably develop island tourism:

*Efficient use of marine resources.* With marine resources, the island is rich in local authorities have taken advantage of its natural conditions to exploit services such as scuba diving with sharks, whales... Therefore, Boracay has quickly become a friendly and famous tourist destination in the world.

*Develop night service activities with diverse and diverse forms.* Filipinos are open-minded and enjoy activities outside of stressful working hours. On the island, tourists always find restaurants serving a full range of cuisines around the world; along with the participation of live bands bearing national identity dedicated to late night. However, security and order are also strengthened to the maximum to show visitors peace when traveling on the island.

*Implement many tourism promotion programs.* In order to attract more tourists to the island, the

Philippine government has launched programs such as: “It’s more fun in the Philippines” in 2012, “Bring Home a Friend” in 2017; In fact, they have honored the role of people who consider themselves as a tourism ambassador; As a result, Boracay Island has become an ideal tourist destination and annually welcomes about 2 million international tourists.

*Implement strict control of operations.* Sustainable tourism development must be accompanied by control of tourism resources. There was a period of weakness by local authorities in the enforcement of regulations on marine, island and environmental conservation due to the uncontrolled operation of tourism infrastructure development, in April 2018, the Philippine Government announced to stop welcoming visitors to Boracay Island for planning and rehabilitation; although the closure of the island was estimated to have caused economic losses of about \$1 billion for Boracay Island. In October 2018, Boracay Island reopened but also introduced tougher regulations such as: no more than 19,200 tourists at any time; banned massage business, street vendors, campfire in the beach area; all restaurants and hotels moved 30m away from the coast; closed businesses violating regulations on environmental protection; banned drinking, smoking, organizing parties on the beach, etc.

### 3.2. Lessons learned for Vietnam

From the experience of developing sea and island tourism of some countries and islands in the world, we can draw some useful lessons for island and sea tourism development in the coming time as follows:

*Firstly*, there must be an appropriate policy for sustainable development of the marine and island environment that is: policies on market opening, policies on sustainable tourism development, policies and mechanisms to approach investment in tourism development, etc.

*Secondly*, it is necessary to have a proper awareness of the importance of the development of marine and island tourism of all levels of government from the central to local levels; departments, branches and tourism business

enterprises to promote the full potential of marine and island tourism resources.

*Third*, it is necessary to uphold the spirit of protecting the marine and island environment of the entire political system. The participation of the government, the participation of the community, enterprises in tourism business in the planning, environmental improvement, control of coastal space, marine and island ecosystems.

*Fourth*, focus on investing in high-quality human resources for sustainable development of marine and island tourism. Having a policy of training and retraining staff of the marine and island tourism sector to meet the development requirements in accordance with the 4.0 industrial revolution. In addition, it is necessary to train a team of officials to take care of the accompanying services in the development of sea and island tourism in a professional and effective manner so that visitors feel that the use of services at tourist destinations is safe, civilized, modern, etc.

*Fifth*, maximize financial resources for the development of sea and island tourism. Invest in advanced and modern tourism infrastructures to meet the high demand of tourists around the world; invest in high-quality infrastructure in ensuring security and order; facilities in timely remediation of disaster incidents and risks in sea and island tourism.

*Sixth*, strengthen international cooperation and linkages in sustainable development of the marine and island environment. Having a plan to cooperate on risk prevention, troubleshooting the marine and island environment that impacts and affects the marine and island tourism industry such as earthquakes, tsunamis; climate change, sea level rise; sea storms; epidemics, etc. Through international cooperation, attracting tourists in the world to Vietnam, thereby exchanging, promoting, marketing and exchanging human resources; developing infrastructure to connect domestic and foreign tourist destinations.

### 4. Conclusion

Studying the experience of developing marine and island tourism of some countries, we see the richness and flexibility in the policy making of each country.

The Netherlands is interested in a multidisciplinary development strategy, promoting the images of famous tourist destinations, focusing on the development of human resources and infrastructure; Spain is interested in the environment and the protection of marine ecosystems, closely monitoring plans for the development of marine and island tourism, mobilizing economic agents to participate in ecotourism activities, adhering to planning and conservation. tourist protection: Meanwhile, the islands of Korea pay attention to specific development regulations, invest in synchronously connected infrastructure in order to effectively exploit tourism potentials and resources, promote the role of associations, build cultural spaces, link at home and abroad to carry out experiential tourism activities, promote tourism development associated with film technology; For Thailand, island tourism development is interested in evaluating the ranking of tourism activities, raising public awareness about the role of tourism, establishing sustainable development policies for island tourism; The experience of the Philippines has developed a variety and abundance of night service and promotion activities, coupled with strict control over tourism activities.

The article has distilled the experience of countries and given 6 lessons for sustainable development of marine and island tourism in Vietnam that can be considered and implemented in accordance with the specific conditions of each region.

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# IMPACTS OF DIGITAL TRANSFORMATION ON ECONOMIC GROWTH IN ASIA COUNTRIES

PhD. Dao Thi Huong\* - PhD. Nguyen The Anh\*\* - MSc. Vu Thi Diem Phuc\*\*\*

**Abstract:** Over the past decade, the rapid development of digital technology is changing the way governments, businesses, and people in countries around the world interact with each other. Evidence shows that Digital Transformation positively affects growth and development. Aiming at studying the impact of digital transformation on economic growth in Asian countries, the authors have built an empirical research model and used the fixed effects regression model, random effects model, and the adjusted system generalized method of moments (GMM) estimators proposed by Windmeijer (2005). From the research results, the authors propose some policy implications for Asian countries in taking full advantage of the benefits of digital transformation. These countries need to promote the trend of digitization in many fields of the economy, transportation, education, and health. In addition, Asian countries also need to control the development of the credit market towards sustainable economic development and avoid overheating as well as unfair competition in this market.

• Keywords: digital transformation, economic growth.

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Trong thập kỷ qua, sự phát triển nhanh chóng của công nghệ kỹ thuật số đang thay đổi cách tương tác của chính phủ, doanh nghiệp và người dân ở các quốc gia trên thế giới. Bằng chứng cho thấy Chuyển đổi số tác động tích cực đến tăng trưởng và phát triển. Với mục tiêu nghiên cứu tác động của chuyển đổi số đến tăng trưởng kinh tế ở các nước châu Á, nhóm tác giả đã xây dựng mô hình nghiên cứu thực nghiệm và sử dụng mô hình hồi quy tác động cố định, mô hình tác động ngẫu nhiên và bộ ước lượng mômen tổng quát hệ thống điều chỉnh (GMM) do Windmeijer đề xuất (2005). Từ kết quả nghiên cứu, nhóm tác giả đề xuất một số hàm ý chính sách đối với các quốc gia châu Á trong việc tận dụng tối đa lợi ích của chuyển đổi số. Các quốc gia này cần đẩy mạnh xu hướng số hóa trong nhiều lĩnh vực kinh tế, giao thông, giáo dục, y tế. Ngoài ra, các nước châu Á cũng cần kiểm soát sự phát triển của thị trường tín dụng hướng tới phát triển kinh tế bền vững, tránh tình trạng phát triển quá nóng cũng như cạnh tranh không lành mạnh trên thị trường này.

• Từ khóa: chuyển đổi số, tăng trưởng kinh tế.

## 1. Introduction

Over the past decade, the fields of Artificial Intelligence (AI), Cloud Computing, Internet of Things (IoT), Blockchain, and 5th Generation Wireless technology (5G) have created many digital technology breakthroughs. The rapid development of digital technologies is changing the way governments, businesses, and people in countries around the world interact with each other. The volume of data generated is increasing, many automation and data processing technologies are getting smarter and profoundly transforming societies. Digital transformation is not only a global technology trend but also has a profound impact on all socio-political and economic dimensions of social development. This impact forces countries, businesses, and individuals to adapt to the new environment in which digital technologies will be embedded in daily operations. Although there is no unified definition, it can be briefly understood that “Digital transformation” is the process by which we change our production methods, and the way we live and work with digital technologies.

\* *Thuy Loi University; email: huongdao@tlu.edu.vn*

\*\* *Academy of Finance; email: nguyentheanh@hvtc.edu.vn*

\*\*\* *Foreign Trade University; email: diemphuc@ftu.edu.vn*

A major concern of economists and policymakers in this period is the impact of major changes in digital technologies on the way the economy operates. In particular, these changes are expected to affect the growth rate of the economy, employment rates, and productivity. In particular, Asia is embracing the digital revolution. Companies like Alibaba, Tencent, and Baidu are providing a range of services from e-commerce to fintech and cloud computing to customers in China and elsewhere. In Indonesia, Gojek provides services including ride-hailing, logistics, and digital payments.

Asian companies are leading in almost every aspect of the digital economy, especially in E-commerce and fintech. For example, a decade ago China accounted for less than 1% of global e-commerce retail transaction value, but today that share has grown to more than 40% (McKinsey Global Institute, 2020). E-commerce, as a percentage of total retail sales, is currently 15% in China, compared with 10% in the United States. The size of E-commerce is smaller in the rest of Asia but growing rapidly, especially in India, Indonesia, and Vietnam. In Indonesia, e-commerce platforms such as Bukalapak, Lazada, and Tokopedia are competing for the largest e-commerce market in Southeast Asia. In the fintech sector, too, Asian economies have made significant progress. In 2020, the total online payments of individuals for goods and services increased to \$790 billion in China, 11 times more than that in the United States (McKinsey Global Institute, 2020).

The digital economy is becoming a larger component of GDP in many Asian economies. Among the world's top 10 economies with the largest ICT-to-GDP ratio, seven are in Asia; including Malaysia, Thailand, and Singapore in Southeast Asia. Digitization can also boost productivity in other areas. More importantly, innovation in Asia is leaning towards the digital sector. If countries were ranked according to the share of ICT in total patents, Asian economies would occupy the top 5 positions. This highlights the potential of digital transformation to drive future growth.

## 2. Literature review

Theoretically, many studies have shown evidence of the positive impact of digital transformation on

economic growth and development. To explain this result, most studies suggest that greater access to knowledge and technical cooperation will create more jobs, transfer skills, improve productivity, and improve accountability in politics and business (Finger, 2007). In fact, the World Economic Forum has identified the information and communication technology sector as one of the main contributors to output growth. Digital transformation is expected to have an effect on GDP growth ranging from 1.4% in emerging markets and 2.5% in the Chinese market (Kvochko, 2013). Furthermore, in the economy as a whole, Katz (2017) estimates that a 1% increase in the digital ecosystem development index has the potential for a 0.13% increase in GDP per capita. Also, this coefficient is larger for OECD countries than for emerging economies.

Although studies have shown that there is a positive impact of digital transformation on economic growth, this relationship still has some untapped issues. Specifically, this positive impact on growth is not necessarily immediate, and Park and Choi (2019) have shown that advances in technological innovation take time to show their impact on the growth of different economies and to have their impact spread to the global economy. Thus, according to Park and Choi (2019), the impact of digital transformation on economic growth will be different in different countries.

Asia is considered as the leading region in most aspects of the digital economy compared to other continents in the world, especially e-commerce, and fintech. According to Sedik (2018), in most Asian countries, the share of ICT in GDP has grown significantly faster than in economic growth. Asia is also a dynamic financial development region in the world. Therefore, conducting research on the impact of digital transformation on economic growth in this region will show more clear results than done in other regions.

## 3. Methodology and proposed model

The study uses quantitative methods to answer the research questions and to meet the research objectives. Specifically, panel data regression models were used. Among the panel data regression methods, the fixed effects method (FE) and the random effects method (RE) are the

commonly used regression methods. However, when the model has lagged variables, endogenous phenomena will occur, and fixed effects models and random effects models can exhibit autocorrelation, and heteroskedasticity in panel models. Therefore, Arellano and Bond (1991) propose to use the generalized method of moments (GMM) to overcome the above phenomena. This method includes differential GMM (DGMM) and system GMM (SGMM). Besides, Blundell and Bond (1998) suggest that when the dependent variable has a high correlation between the current values and the values in the previous period, and the time periods are not too long, the DGMM estimation method is ineffective, the instrument variables used are not strong enough. Blundell and Bond (1998) have extended the DGMM estimation method to the simultaneous consideration of the system of two estimation methods (the basic GMM model and the DGMM model) collectively known as the systematic GMM estimator.

In this study, because the time period 2004 - 2021 is not too long and the data of countries show that the current values often have a high correlation with the values of the previous period, we use systematic GMM estimation method.

In addition, methodologically, previous studies using this technique have not taken into account an issue discussed by Windmeijer (2005). According to Windmeijer (2005), the SGMM method has problems when calculating smaller standard errors. With smaller standard errors, the levels of statistical significance corresponding to the estimated regression coefficients will be higher and conclusions of the statistical significance of these coefficients can be affected. Therefore, in this study, we use an additional SGMM estimation adjusted according to Windmeijer (2005) to overcome the mentioned drawback.

#### 4. Findings

The authors use STATA software with balanced panel data of 30 Asian countries for the period from 2004 to 2021 to estimate the impact models of digital transformation on economic growth.

Table 4.1 shows the estimation of the impact of digital transformation on the economic growth of Asian countries. As shown in the table, digital

transformation is measured by variables such as the number of mobile cellular subscriptions (per 100 people) (MCS), the proportion of individuals using the Internet (percentage of population) (iui), fixed broadband subscriptions (per 100 people) (fbs). Hausman test results show that the p-values of all 3 models have values less than 10% significance level. Therefore, the fixed effects (FE) estimation method is more suitable than the random effects (RE) method.

**Table 4.1. Model estimations (3)**

Growth	(1)		(2)		(3)	
	FE	RE	FE	RE	FE	RE
Gdpp	-.6844824	-.949266***	-1.241657	-1.1532***	-1.124689	-.730965**
K	.0777755***	.082408***	.0534085**	.064323***	.0593181**	.0626642***
L	.1008793	.0342653	.143193	.0449508	.1379763	.0468744
G	-.0433708	-.0400615*	-.0287855	-.0343795	-.0354389	-.0322842
Open	.0397556***	.0129274**	.040979***	.0127363**	.0377564***	.0132206**
Mcs	-.0209177***	-.023101***				
Fbs			-.188996***	-.092810**		
Iui					-.044486***	-.048005***
Constant	-.9629793	8.42892***	.4117	8.30520***	.4262488	5.735087*
Modified Wald p-value	0.0000		0.0000		0.0000	
Wooldridge p-value	0.0000		0.0000		0.0000	
Hausman p-value	0.0629		0.0000		0.0413	

The models are estimated with digital conversion measures of mobile cellular subscriptions (per 100 people) (mcs), the proportion of individuals using the Internet (percentage of population) (iui), and fixed broadband subscriptions (per 100 people) (fbs) respectively. Modified Wald, Wooldridge, and Hausman p-value are the p-values of the Modified Wald, Wooldridge, Hausman tests.

\*\*\* is statistically significant at the 1% level

\*\* is statistically significant at the 5% level

\* is statistically significant at the 10% level.

However, the estimated results in Table 4.1 also show that all 3 models estimated by the fixed effects method (FE) have heteroscedasticity (p-value of Modified Wald test is smaller than 5%) and autocorrelation (p-value of Wooldridge test is less than 5%).

Besides, a problem for the fixed effects (FE) method is the endogenous phenomenon occurring in the models. Therefore, we continue to perform testing of the endogenous variables in the model. Specifically, we use the delay variable of the independent variables to test whether those independent variables are endogenous or not. In terms of the timing of the macro variables, a delay would be an appropriate instrumental variable

because it is highly correlated with the original variable. The test results are as below.

**Table 4.2. Endogenous variable test**

Endogenous variable	Model estimation		
	Mcs	Fbs	iui
Gdpp	418.068*** (0.0000)	418.148*** (0.000)	418.091*** (0.000)
K	0.187 (0.6656)	0.000 (0.9832)	0.063 (0.8021)
L	0.360 (0.5483)	0.133 (0.7157)	0.087 (0.7678)
G	4.796** (0.0285)	5.712** (0.0168)	5.263** (0.0218)
Open	0.706 (0.4007)	0.656 (0.4180)	1.222 (0.2690)
Mcs	0.264 (0.6073)		
Fbs		0.734 (0.3916)	
Iui			0.016 (0.8982)

The values in the sign ( ) are the p-values of the Chi-sq(1) statistic  
 \*\*\* is statistically significant at the 1% level  
 \*\* is statistically significant at the 5% level  
 \* is statistically significant at the 10% level.

Table 4.2 shows that in all 3 models with three variables reflecting digital transformation: mobile cellular subscriptions (mcs), individuals using the Internet (iui), and fixed broadband subscriptions (fbs), the Endogenous variable test results show that the independent variables of the natural logarithm of GDP per capita at the beginning of the period (gdpp) and public expenditure over GDP (g) are endogenous.

To overcome the Heteroscedasticity phenomena, autocorrelation, and endogeneity in the models, we use the systematic GMM method (SGMM) to estimate the impact of digital transformation on economic growth in Asian countries. The model estimation results are presented in Table 4.3.

Table 4.3 shows the estimation results assessing the impact of digital transformation on economic growth by applying the SGMM method and the adjusted SGMM method proposed by Windmeijer (2005).

The results show that all the estimated models have the p-value of the AR (1) test less than 5% significance level and the p-value of the AR (2) test larger than 5% significance level. Therefore, the models have first-order autocorrelation but no second-order residual autocorrelation. Also, all the Hansen tests of the models have p-values greater than the significance level of 5%, that is, the instrumental variables used in the model are appropriate. However, according to Roodman (2009), the p-value needs to be greater than 0.25 to ensure that the instrumental variables are valid.

The results in Table 4.3 show that the estimates by the SGMM method satisfy the requirements of the appropriateness of the instrumental variables.

On the other hand, all models have p-value of F-test less than 5% significance level, which shows that the model is suitable. Table 4.3 also shows that another constraint when using the SGMM method is also satisfied that the number of instrumental variables must not exceed the number of observation groups. Thus, the model ensures reliability to conduct the analysis.

**Table 4.3. Model estimation results (3)**

Growth	(4)		(5)		(6)	
	Adjusted Windmeijer	Not Adjusted Windmeijer	Adjusted Windmeijer	Not Adjusted Windmeijer	Adjusted Windmeijer	Not Adjusted Windmeijer
Gdpp	-8.3223***	-8.45951***	-10.7963***	-10.8994***	-8.03441***	-8.34708***
K	.0182898	.0097918	.0261958*	.0299657*	.0297586**	.0300453*
L	1.019177***	1.001913***	1.256044***	1.290241***	1.223481***	1.224273***
G	-.339579***	-.334625***	-.427583***	-.437962***	-.427415***	-.429014***
Open	.258769***	.264998***	.285835***	.286712***	.261838***	.266287***
Mcs	.040516***	.042529***				
Fbs					.422682***	.447005***
Iui			.104659***	.104996***		
Constant	-19.95866	-18.12952	-16.85048	-18.15908	-35.3047*	-32.93349*
AR (1) p-value	0.020	0.020	0.043	0.045	0.039	0.041
AR (2) p-value	0.259	0.261	0.461	0.480	0.368	0.383
Hansen p-value	0.409	0.397	0.395	0.388	0.480	0.479
Number of groups	30	30	30	30	30	30
Number of instruments	29	29	29	29	29	29
Second stage F-test p-value	0.000	0.000	0.000	0.000	0.000	0.000

The models are estimated with digital conversion measures of mobile cellular subscriptions (per 100 people) (mcs), the proportion of individuals using the Internet (percentage of population) (iui), and fixed broadband subscriptions (per 100 people) (fbs) respectively. P-values of AR (1) and AR (2) are p-values of the first and second-order correlation test of the residuals. Hansen's p-value is the p-value of Hansen's test of the appropriateness of the instrumental variables in the model. The second stage F-test p-value is the p-value of the F-test of the appropriateness of the model. In all models, the natural logarithmic independent variables of GDP per capita at the beginning of the period (gdpp) and public expenditure to GDP (g) are considered endogenous variables.

\*\*\* is statistically significant at the 1% level  
 \*\* is statistically significant at the 5% level  
 \* is statistically significant at the 10% level.

As shown in Table 4.3, the model estimation with the mobile cellular subscriptions (mcs) representing digital conversion has a positive regression coefficient of 0.0425297 and a high statistical significance at 1%. The Windmeijer adjusted SGMM estimation also gives a positive regression coefficient of 0.0405162 and a high statistical significance at 1%. Thus, it can be concluded that digital transformation when

measured through mobile cellular subscriptions (mcs) has a positive impact on economic growth in Asian countries.

The model estimation with the individuals using the Internet (iui), another variable representing digital conversion, has a positive regression coefficient of 0.1049962 and a high statistical significance at 1%. The Windmeijer adjusted SGMM estimation also gives a positive regression coefficient of 0.1046592 and a high statistical significance at 1%. Like the estimation results with the mcs variable, the estimation results with the iui variable also indicate that digital transformation has a positive impact on economic growth in Asian countries.

The model estimation with the fixed broadband subscription variable (fbs), the third variable representing digital conversion, shows a positive regression coefficient of 0.4470056 and a high statistical significance at 1%. The Windmeijer adjusted SGMM estimation also gives a positive regression coefficient of 0.4226824 and a high statistical significance at 1%. That estimation results with the fbs variable also lead to the conclusion that digital transformation has a positive impact on economic growth in Asian countries.

From the above-mentioned estimations, it can be concluded that digital transformation has a positive impact on economic growth in Asian countries. This result is consistent with related studies of Sabbagh et al (2013), Micic (2017) and N (2018).

Besides the main impact of digital transformation on economic growth in Asian countries, Table 4.3 also shows that the estimated results are reliable through other independent variables. Specifically:

The regression coefficients corresponding to the natural logarithm of GDP per capita at the beginning of the period are negative and have a high significance of 1% in all models. This, on one hand, shows the convergence of the estimates, on the other hand, shows the agreement with the Solow-Swan theory of the convergence of the growth rate. Specifically, countries with low per capita income will have a fast growth rate to gradually catch up with countries with high per capita income. This phenomenon is consistent with the general trend and implies that the growth rate slows down over time. This result is consistent

with recent studies by Solomon and Klyton (2020), and Myovella et al (2020).

The regression coefficient of the variable total investment over GDP (k) in the models is positive and most of them have statistical significance at the 10% level. This shows that an increase in investment capital over GDP will have a stimulating effect on economic growth. This result is consistent with the endogenous growth theory. Besides, this result is also consistent with recent studies by Bahrini et al (2019), Solomon and Klyton (2020), and Myovella et al (2020).

The regression coefficients corresponding to the labor rate variable (l) in the models have positive values and high statistical significance at 1%. Thus, in Asian countries, the increase in the labor rate will stimulate economic growth. This result is consistent with endogenous growth theory and reality in Asian countries, where most of them are still developing countries with the advantage of cheap labor.

In contrast, the regression coefficient of public expenditure to GDP variable (g) in the models has a negative value and a high statistical significance at 1%. This coefficient shows that in Asian countries an increase in public spending will have a negative impact on economic growth. Developing countries account for the majority of the sample, consequently, the results partly reflect the low efficiency of using public expenditure in developing countries. This can be explained by a larger portion of public investments over private investments, combined with inefficiencies in public expenditure management in some countries that have led to this negative impact. Therefore, in order to achieve the goal of economic growth, developing countries need to control the scale of public spending in order to minimize this negative impact on economic growth. Although this result is undesirably negative, it is consistent with pioneering studies on the impact of public spending on economic growth by Scully (1989), Barro and Sala-i-Martin (1999) and a recent study by Myovella et al (2020).

Finally, the regression coefficients corresponding to the trade openness variable (open) in the models are all positive and have high statistical significance at 1%. This means that in Asian countries increasing trade openness will stimulate economic growth.

Limiting trade barriers and encouraging trade liberalization will help promote the competitive advantages of countries, thereby limiting price distortion, which leads to market distortion, because investment and production activities take place in countries without competitive advantages and without trade liberalization. Enhancing the competitive advantages of each country will help increase scientific and technological advances, improve production, reallocate income more efficiently, and promote economic growth. This result is also consistent with recent studies by Niebel (2018), Bahrini et al (2019), and Myovella et al (2020).

### 5. Implications and Conclusion

The results of our study could have policy implications for Asian countries in general and Vietnam in particular in taking advantage of the benefits of digital transformation as follows.

First, the research results show that increasing digital transformation can boost economic growth in Asian countries. Therefore, national governments need to have a reasonable strategy to promote digital transformation. With the advantage of a young population compared to countries in other continents, Asian countries need to promote digital transformation in the fields of economy, transportation, education, and health. In particular, develop the digital economy focusing on developing e-commerce and digital payment system to promote economic growth.

Second, the research results also show that a 1% increase in the rate of individual Internet users also has a great impact on economic growth, increasing the economic growth rate by 0.1% (the regression coefficient of this variable is 0.1046592). The proportion of Individuals using the Internet in Asian countries in the period 2004 - 2021 is only 35.81% of the population, which is a low number. Therefore, we recommend that Asian countries have policies to promote the proportion of individual Internet users through increasing Internet access, especially in remote areas, so that people can actively access a vast amount of knowledge and information, actively learn, exchange, connect, and trade with others anytime, anywhere.

Third, the research results show that it is difficult for developing and emerging countries to

take advantage of digital transformation to “take a shortcut” in promoting economic growth. Digital transformation contributes to solving the biggest challenge of industries, which is the reduction of production costs due to the decreased advantage of cheap labor. Through digital transformation, businesses can improve their resource management and reduce misdirected expenditures, thereby enhancing productivity (Aly, 2020). Faster digital transformation also helps high-tech enterprises to effectively use intangible assets, which are more expensive than buying tangible assets of many traditional industries. Therefore, governments of developing and emerging countries (including Vietnam) need to actively create conditions to attract investments in digital technology. On the other hand, governments also need to have policies to learn and attract investments from overseas large digital technology companies with wide networks, high reputations, and success internationally.

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# THE IMPACT OF STATE OWNERSHIP ON EARNINGS MANAGEMENT: THE MEDIATING ROLE OF EXTERNAL FINANCING IN AN EMERGING COUNTRY

PhD. Bui Thu Hien\* - Nguyen Thi Yen Nhi\*\* - Chu Ngan Anh\*\*  
Nguyen Minh Chau\*\* - Doan Dieu Thuy\*\*

**Abstract:** *We empirically examine the impacts of state ownership on earnings management with mediating role of external financing by using path analysis. Analyzing a sample of 423 non-financial listed companies on HOSE and HNX across an 11-year period (2011-2021), our results indicate a negative correlation between state ownership and earnings management. The results also confirm the mediating role of external financing which explains 28.06% of the relationship between state ownership and earnings management. This implies that state ownership poses low demand for external financing which results in an avoidance of earning-managing behaviors among SOEs in Vietnam.*

• Keywords: *state ownership, intermediaries.*

Date of receipt: 02<sup>nd</sup> May, 2023

Date of delivery revision: 08<sup>th</sup> May, 2023

Date of receipt revision: 15<sup>th</sup> May, 2023

Date of approval: 01<sup>st</sup> June, 2023

Tóm tắt: Nhóm tác giả khảo sát thực nghiệm các tác động của sở hữu nhà nước đối với quản lý thu nhập với vai trò trung gian của nguồn tài chính bên ngoài bằng cách sử dụng phân tích đường dẫn. Phân tích mẫu gồm 423 công ty phi tài chính niêm yết trên HOSE và HNX trong khoảng thời gian 11 năm (2011-2021), kết quả của chúng tôi cho thấy mối tương quan nghịch giữa tỷ lệ sở hữu nhà nước và quản lý thu nhập. Kết quả cũng khẳng định vai trò trung gian của nguồn vốn bên ngoài giải thích 28,06% mối quan hệ giữa sở hữu nhà nước và quản lý thu nhập. Điều này ngụ ý rằng sở hữu nhà nước đặt ra nhu cầu thấp đối với nguồn vốn bên ngoài, dẫn đến việc tránh các hành vi quản lý thu nhập giữa các DNNN ở Việt Nam.

• Từ khóa: *sở hữu nhà nước, trung gian.*

## 1. Introduction

State-owned enterprises (SOEs) are a term commonly used to refer to enterprises in which the state plays an important role in management and operation by owning part or all of that enterprise (Ruggiero et al., 2021). For a socialist-oriented

market economy like Vietnam, SOEs are even more crucial since they limit capital market failure (Tran, 2012; Huyen, 2021), prevent monopolies over the means of production ensure social justice, and national security (Tran, 2012; Nguyen & Nguyen, 2022). As a result, the financial information of state-owned enterprises particularly the information on the financial statements is constantly given a lot of attention.

It has been demonstrated by numerous research conducted worldwide that state ownership and earnings management are related. The existence of earning management in state-owned businesses has been disputed by Ahrarony et al. (2000), Jian & Wong (2003), Chen & Yuan (2004), Chen et al. (2008), and Aharony et al. (2010). However, mixed evidence has been withdrawn regarding the impacts of state ownership on earnings management. While the positive results are explained by corporate governance, business performance, and corruption (Guo and Ma, 2015; Ben-Nasr et al., 2015; Poli, 2015; Nguyen et al, 2022; Nguyen et al, 2018; Nguyen et al (2020), the negative findings have not been supported with plausible reasons (Ding et al., 2007; Wang and Yun,

\* *Foreign Trade University; email: hienbt@ftu.edu.vn*

\*\* *Student - Foreign Trade University*

2011; Capalbo et al., 2014; Tran, 2017, Capalbo et al., 2018). Also, some mediators are proven to exist in the relationship between state ownership and earnings management have been carried out in other emerging such as China (Cheng et al., 2015; Gaio et al., 2018). As Vietnam's economy differs significantly from other economies analyzed in earlier studies, particularly in terms of national corporate law, regulations, and treatments toward SOEs, we aim to identify the connection between state-owned enterprises and earnings management of listed companies as well as to examine the role of external financing as a moderator in the relation of publicly owned businesses and earnings management, therefore, proposes possible recommendations to SOEs, investors, auditors, and the government.

The paper, next, includes the following sections: (2) literature review and hypothesis development; (3) Research methodology; (4) Research results and discussions and (5) Conclusions, recommendations, and limitations.

## 2. Literature review and hypothesis development

In Vietnam, problems regarding SOEs' overdependence on state ownership were voiced for economic growth, innovation, and market competition. Specifically, SOEs are subjects to beneficial regulations and interest groups by which no obstacles were suffered in acquiring resources and capital. Besides, these firms also confront no pressures on capitalization nor dividends, or growth goals. Instead, they were required to only maintain, and expand the level of state ownership. This leads to the poverty of innovation and competition in this form of business. Hence, it is argued that the increase in state ownership would reduce the amount of capital financing in total since the companies were not triggered to get other external funds rather than the state's (Guariglia et al., 2011; Stiglitz and Weiss, 2007; Myers and Majluf, 1984). Furthermore, regarding debt finance, an increase in state ownership is not expected to correspondingly gain more bank loans due to evidence showing that banks began to not discriminate SOEs against other types of business (Lin and Bo, 2012) which can be reasoned by banks' fear of non-performing loans and inefficient usage due to the overdependence on state ownership

(Dong et al., 2016; Hab et al, 2019). Therefore, we propose the following hypothesis:

*H1. State ownership negatively influences external financing*

Regarding the influence that external financing posed on accruals-earnings management, there were empirical findings that external financing may help firms to gain financial incentives which leads to earnings-managing behaviors (Bradshaw et al., 2006; Bui et al., 2022; Gao et al., 2017; Lo et al., 2017; Nagata, 2013; Teoh et al., 1998; Zhang et al., 2020). In particular, managers of high-debt firms tended to manage earnings upward to prevent violating bank debt covenants (DeAngelo et al., 1994; DeFond and Jambalvo, 1994). Furthermore, earnings quality was also ruined to get the beneficial cost of debt (Liu et al., 2010; Rhodes, 2016).

In this research, we opt for an accrual-based measure of earnings management validated by Jones (1991) since this is still popular among Vietnamese firms, especially in the 2011-2021 period. According to Li et al. (2018), in China, firms have been shifting to real earnings management provided that accruals are recognized in corporate law and accounting standards. Yet, Vietnamese regulators are still in the very first steps against earnings management. Besides, studies on earnings management, mostly accruals base, have only been conducted in recent years. Based on the picture of research and regulations, we are convinced that accruals-based earnings management is popular in Vietnam and will be used for our analytic models. Hence, we expect the following hypothesis:

*H2. External financing positively influences accruals-based earnings management*

Regarding the relationship between state ownership and earnings management, there have been conflicting findings clarifying positive and negative correlations. Studies by Guo and Ma (2015), Ben-Nasr et al. (2015), Poli (2015), Nguyen et al. (2018), Nguyen et al. (2020), and Nguyen et al. (2021) figure out the positive impacts that state ownership poses on earnings management. It is stated that SOEs require earnings management due to poor corporate governance, business performance, as well as corruption. Whereas, findings of Ding et al. (2007), Capalbo et al. (2014), Wang and Yung (2011),



Tran (2017), Ho and Pham (2018), Hang et al. (2018) as well as Tran and Dang (2021) indicates that state ownership is inversely correlated with earnings management. According to Poli (2015), it may result from SOEs' low level of efficiency and their consideration to not be overly positive or negative in the eye of the public and other state bureaus. Combining the reasons provided by Poli (2015) and the overdependence of SOEs in Vietnam on state agencies' equity contribution, we expect a negative relationship between the two factors:

*H3. State ownership negatively influences accruals-based earnings management*

Based on the above-mentioned research on the relationship of external financing with state ownership, and accruals-based earnings management, we acknowledge the importance of external financing. Due to the characteristics of Vietnamese firms, while state ownership reduces the amount of external financing, the display of external financing on financial statements can help firms gain incentives (Bui et al., 2022; Zhang et al., 2020). Nevertheless, huge dependence on state ownership of these firms lowers their need for other external funds besides capital from state agencies. Resultedly, we assume that this small need for external finance prevents earnings-managing behaviors. Hence, in this research, we also intend to examine whether external financing is a mediator of the relationship:

*H3a. State ownership negatively influences accruals-based earnings management with mediating role of external financing*

### 3. Research methodology

#### 3.1. Measuring earnings management

We follow the Jones model (1991) to measure earnings management as DA by obtaining residuals from the above regression model:

$$\frac{ACC_{it}}{TA_{it-1}} = \alpha_0 \frac{1}{TA_{t-1}} + \alpha_1 \frac{\Delta Sales_{it}}{TA_{it-1}} + \alpha_2 \frac{PPE_{it}}{TA_{it-1}} + \epsilon_{it}$$

Where:

$ACC_{it}$  Total accruals equal change in current assets minus the change in current liabilities minus depreciation of firm  $i$  in year  $t$

$TA_{it-1}$  Total assets of firm  $i$  in year  $t - 1$

$\Delta Sales_{it}$  Change in sales of firm  $i$  in year  $t$

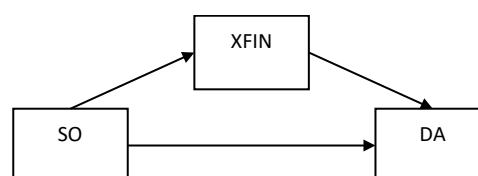
$PPE_{it}$  Property, plant, and equipment of firm  $i$  in year  $t$

$DA_{it}$  Discretionary accrual of firm  $i$  in year  $t$

#### 3.2. Path model

In order to investigate the relationship among three variables, namely state ownership (SO account for the proportion of shares owned by state agencies), accrual-based earnings management (DA), and external financing (XFIN account for cash flow from external financing over total assets), we apply the path analysis model, which is a subset of structural equation modeling (SEM) used to examine direct and indirect effects through multiple pathways.

Figure 1: Path model



Source: From Stata16

#### 3.3. Sampling and data analysis

Our sample has 4653 firm-year observations including data from 423 non-financial listed firms on HOSE and HNX over an 11-year period (2011-2021). The data is collected from audited financial reports on the FINNPRO platform which is known as an accurate, timely, and in-depth database for analytics. Following, variables will be computed and we utilized STATA 16 to conduct path analysis for assessing the direct and indirect relationships between variables through multiple pathways. Besides, the validity of results will be evaluated through model fit indices considering suggested indices from in-depth studies.

### 4. Research results and discussions

#### 4.1. Descriptive statistics and correlation matrix

Generally, values of mean and standard deviation show that our sample is relatively homogenous. Except for DA, means are all smaller than the standard deviation which indicates small fluctuations existed among variables. Regarding DA, it records the mean of 0, which means that the level of using accrual-based earning management tends to be low in our sample, however, fluctuates significantly.

**Table 1: Descriptive statistics**

Variable	Obs.	Mean	Std. Dev.	Min	Max
SO	4653	0.256	0.248	0	1
XFIN	4653	-0.019	0.139	-1.852	0.885
DA	4653	0	0.694	-1.986	42.664

Source: From Stata16

The correlation matrix representing most of these correlation coefficients between the variables is less than 0.9, indicating no multicollinearity among variables.

**Table 2: Pairwise correlations**

Variables	SO	XFIN	DA
SO	1.000		
XFIN	-0.142	1.000	
DA	-0.042	0.086	1.000

Source: From Stata16

**4.2. Path analysis result**

As for the relationship between SO and XFIN, the coefficient value is negative and statistically significant at a significant level of 1%, confirming the H1. This means that state ownership enlarges firms' dependence on equity contributions of state agencies other than fundings of other investors, and institutions. Besides, state ownership also significantly lowers the firms' efficiency in utilizing assets to attract external funds.

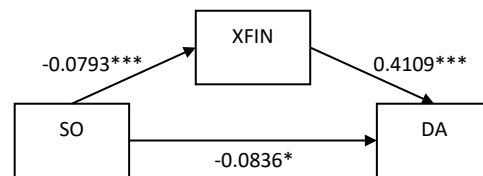
Regarding the relationship between XFIN and DA, our results are in line with previous research (Bui et al., 2022; Zhang et al., 2020) clarifying a positive correlation between them which accepts H2. The coefficient value is 0.4109 and statistically significant at level 1%. To be specific, firms' earnings management adoption aims to obtain incentives from external funds and institutions, especially in the context that external equity and debt are crucial for business development in Vietnam. On the other hand, investors and financial partners accept the high value of the ratio since it indicates that firms are making good use of their assets and also their high demand for financing. As a result, the high value of the ratio is obtained through earnings management so that firms can gain more external financing for their operations.

Most importantly, our results also confirm the relationship between state ownership, and accruals-based earnings management with mediating role of

external financing, proving our H3 and H3a. When the proportion of shares owned by state bureaus reduces the chance that earnings management taken place, state ownership questions on the need for external financing leading to an avoidance of earning-managing behaviors.

Since the product of the coefficients is positive  $(-0.0793 * 0.4109 * -0.0793 = 0.0032)$ , the role of external financing is complementary mediation (Baron and Kenny, 1986; Zhao et al., 2010). Particularly, when the high value of XFIN is a significant predictor of earnings management, an increase in state ownership goes along with a decrease in the value of XFIN. Broadly, because state ownership reduces reliance and, demand for external finance other than shares contributions of state bureaus, there is no need for these firms to manage earnings to boost the inflow of external funds. Besides, the results also indicate that 71.94% of relationships are determined by direct pathway while the rest 28.06% belongs to the mediation of external financing (Ditlevsen et al., 2005; MacKinnon et al., 1995).

**Figure 2: Path model results**



\*, \*\*, \*\*\*: significance at 0.1, 0.05, 0.01

Source: From Stata16

**Table 3: Path model results**

	Direct effects		Indirect effects		Total effects	
	Coef.	p-value	Coef.	p-value	Coef.	p-value
DA						
XFIN	0.4109***	0.000	(no path)		0.4109***	0.000
SO	-0.0836*	0.042	-0.0326***	0.000	-0.1162**	0.005
XFIN						
SO	-0.0793***	0.000	(no path)		-0.0793***	0.000
% mediated	71.94%		28.06%			

\*, \*\*, \*\*\*: significance at 0.1, 0.05, 0.01

Source: From Stata16

The reliability of our path results is guaranteed in light of model fit indices suggested by in-depth researches as below:

Table 4: Model fit indices

	Model fit	Reference fit	References
$\chi^2/df$	0.0000	< 3	Mclver and Carmines (1981)
Goodness-of-fit index	1.0000	> 0.9	Hooper et al. (2008)
Tucker-Lewis index	1.0000	> 0.95	Hu and Bentler (1999); Wamba et al. (2017)
Comparative fit index	1.0000	> 0.95	Hu and Bentler (1999); Wamba et al. (2017)
Standardized root mean square residual	0.0000	< 0.08	Hu and Bentler (1999); Hooper et al. (2008)

Source: From Stata16

## 5. Conclusions, recommendations, and limitations

### 5.1. Conclusions

Our study provides evidence for the negative relationship between state ownership, and accruals-based earnings management which confirms the findings of Ding et al. (2007), Capalbo et al. (2014), Ho and Pham (2018), Tran (2017), Wang and Yung (2011). This indicates that accruals-based earnings management is still popular in Vietnam which is opposite to the Chinese situation where the accruals approach is gradually replaced by a real one due to alterations in regulations, and accounting standards. Besides, heavy reliance of Vietnamese firms on state ownership is also clarified to be factor against earning-management behaviors among SOEs.

Furthermore, our results also accept external financing as a mediator in the linkage of state ownership to accruals-based earnings management. Direct pathway of the relationship accounts for 71.97% of the total effect while the rest 28.03% belongs to the mediating role of external financing. Although the impact of state ownership on external financing has not been examined in our references, it can be explained by our sample characteristics. In Vietnam from 2011-2021, it has been a national challenge that state-involved firms were resistant to business growth, innovation, and capitalization due to heavy dependence on governmental share contribution. Specifically, SOEs are subject to preferential treatment due to corporate law as well as their interest groups with state bureaus. Consequently, they can effortlessly gain abundant amounts of equity, and other resources which is a competitive

advantage over firms without state ownership. Not to mention, in this period, instead of growth and dividend targets, firms are only required to keep or enlarge the existing proportion of state ownership. As a result, while firms emphasize state ownership, a decrease in overall external finance is witnessed. Moreover, our results also imply that firms efficiency in collecting external funds are poor in the connection with state agencies.

### 5.2. Recommendations

For listed firms, besides the benefits of state ownership, it is a fact that the governance mechanism of SOEs lacks innovation, efficiency, and timeliness owing to overreliance on the government, which can be solved by boosting capitalization and enhancing the legal and internal control system. For the government, state agencies and regulators must highly focus on perfecting the system of institutions and policies on the development of SOEs.

### 5.3. Limitations

This research acknowledges its limitations. Our exploration of external financing does not specify two aspects, namely equity, and debt. However, based on our findings, further research directions may be conducted. Variables expressing ownership and external financing can be specified to explore whether differences are detected among diverse represents. Furthermore, investigations regarding the impacts of state ownership on the external financing of firms in this period are also worthy which may suggest sound solutions to reduce firms' reliance on state ownership.

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