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ISSUES OF CAPITAL MOBITION AND SERVICE PROVIDED FOR PUBLIC PROFESSIONAL UNITS IN THE HEALTH - POPULATION SECTION

Assoc.Prof.PhD. Pham Ngoc Dung* - MA. Nguyen Thi Thu Hien*

Abstract: *The promotion of socialization, promoting the dynamism and initiative of medical facilities, mobilizing organizations, individuals and businesses to invest in the development of medical facilities is very necessary, urgent need today. Therefore, in order to promote borrowing, capital mobilization, joint ventures, association, and property leasing in the future, the health sector needs to be improved.*

• Keywords: work of borrowing, capital mobilization, joint venture, association, asset lease, service provision, public units in the health.

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Tóm tắt: Việc đẩy mạnh xã hội hóa, phát huy tính năng động, chủ động của các đơn vị sự nghiệp công lập, huy động các tổ chức, cá nhân, doanh nghiệp đầu tư phát triển các đơn vị sự nghiệp công lập là hết sức cần thiết. nhu cầu cấp thiết hiện nay. Nghiên cứu đưa ra 1 số giải pháp để đẩy mạnh hoạt động vay, huy động vốn, liên doanh, liên kết, cho thuê tài sản.

• Từ khóa: công tác vay vốn, huy động vốn, liên doanh, liên kết, cho thuê tài sản, cung ứng dịch vụ, các đơn vị sự nghiệp công lập.

of diagnosis and treatment, development of high and new techniques, people can enjoy the service right on the spot, limiting the transfer to higher levels and going abroad for medical examination and treatment...

1. The current situation and solutions to improve the work of borrowing, capital mobilization, joint venture, association, asset lease

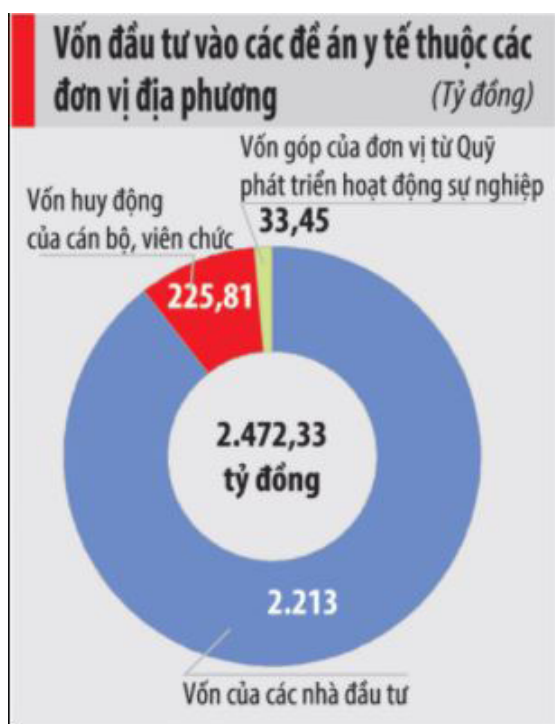
Currently, the forms of socialization are very diverse, prescribed in many legal documents, but many regulations such as forms, order, implementation procedures, decision authority, users of the social services. This service, service price... is only a principle, there are no specific regulations, leading to many difficulties and obstacles, even some violations have been violated by state management agencies and payment agencies, inspection, audit, and law enforcement agencies to handle depending on the seriousness of the violation.

According to aggregated reports from 26 provinces, cities and units under the Ministry of Health, so far, the units have borrowed capital from the Vietnam Development Bank and the Demand Stimulus Fund about VND 3,000 billion to invest in infrastructure and equipment.

INTRODUCTION

Implementing the Party's guidelines and the State's legal policies on socialization and autonomy, in recent times, many public units have mobilized non-budget resources through the loans, capital mobilization, joint ventures, associations, and leases of assets to invest in facilities, improve capacity and quality of medical services, gradually meet the increasing and diverse needs of healthcare providers. the People's class; changing the perception of units in investing in equipment, not only waiting for the budget to have equipment to meet the needs

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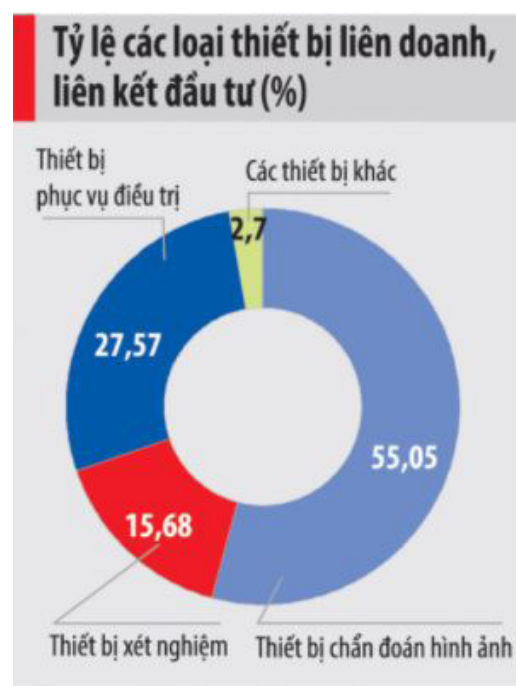
Source: Ministry of Health, Investment Report, 2021

Implementing Resolution 93/NQ-CP of the Government, currently, there are 4 commercial banks (BIDV, Vietinbank, VIB, Vietcombank) have deployed preferential credit packages for public hospitals and investors with Preferential interest rate is better than normal loan interest rate (the first 2 years is about 6-7%/year, from the 3rd year onwards, it is equal to 12 months' savings interest rate + maximum 2%). According to reports of banks, public service providers, private hospitals, and investors have registered to borrow about VND 44,000 billion, disbursed about VND 5,000 billion.

According to the data of the Ministry of Health in the General report of 55 Departments of Health and 26 hospitals under the Ministry of Health: Up to now, about 729 joint venture projects have been implemented in the health sector with a total capital of VND 5,686.38 billion. Specifically, local units have 491 projects with a total capital of VND 2,472.33 billion, of which investors' capital is VND 2,213 billion, accounting for about 89.5% employees are VND 225.81 billion, accounting for about 9.1% and the unit's contributed capital from the

Non-Business Development Fund is VND 33.45 billion, accounting for 1.4%.

Units under the Ministry of Health have 238 projects with a total capital of VND 3,214.06 billion. Of which, there are 166 projects in the form of equipment investment partners, service providers and profit sharing according to capital contribution ratio, 47 projects in the form of equipment rental and shift payment. There are 25 projects in the form of mobilizing capital contributions from officials and employees.



Source: Ministry of Health, Investment Report, 2021

Regarding the rental of infrastructure to expand the examination and treatment area, a number of hospitals currently, due to the unsatisfactory land and house area, have had to rent facilities to meet the needs of medical examination and treatment such as: Central Eye Hospital rents a facility in Bui Thi Xuan, K Hospital at Quan Su campus is investing in construction and upgrading, so it has to rent a facility in Phan Chau Trinh to serve as a medical examination and treatment facility. Some units such as: Hanoi Central Hospital of Odonto-Stomatology Hospital, Ho Chi Minh City University of Medicine and Pharmacy Hospital, Hanoi Medical University Hospital due to very narrow facilities, these hospitals have the ability to expand, development should be proposed to rent premises.

Regarding the situation of public health facilities cooperating with investors to invest in the construction of medical examination and treatment facilities, the current public health facilities and investors co-managing across the country have deployed in some localities. Implementing Resolution 93/NQ-CP, the People's Committees of some provinces have approved a number of projects to build new medical facilities according to the model: People's Committees allocate land, investors invest in construction, Provincial General Hospital and investors jointly manage and operate this new facility. Currently, there is Dong Nai General Hospital; Binh Dinh General Hospital, Tien Giang Provincial General Hospital, Nghe An General Hospital; Gia Lai Provincial General Hospital... Some units operate in the form of business cooperation (BCC), such as Cho Ray Hospital, which cooperates with Japan Welfare University to cooperate in implementing health check-up activities. The hospital follows the advanced model of Japan: The hospital contributes capital with the infrastructure invested by the hospital with the Foundation for the development of professional activities, the Welfare University of Japan contributes equipment.

2. Evaluation of the positive aspects of borrowing, capital mobilization, joint venture, association, and property leasing in recent times

The socialization of investment in health has brought many practical benefits to public health facilities such as:

2.1. Contributing to meet diagnostic and treatment equipment: Many hospitals are still lacking in equipment, without socialization, there will be no equipment to serve patients. Socialization devices are mainly high-value diagnostic, treatment and high-tech equipment that cannot be invested by the state budget, such as: Out of 05 PET.CT machines, the budget is only invested in hospitals. 108, and hospitals: Cho upland, Viet Duc, Bach Mai, K Hospital are socialization; CT-Scanner 256 series, 128 series and many 64 series systems; magnetic resonance (MRI), linear acceleration system, extracorporeal

stone breakers, Phaco surgery, color ultrasound, automatic testing machine system; creating conditions for technical development, improving the quality and efficiency of diagnosis and treatment, contributing to bringing Vietnam's medical technology level to gradually progress to par with advanced countries in the region.

2.2. Having invested in equipment and machinery in some hospitals: In fact, if there is no loan, the completion must be 3-4 years later, increasing the efficiency of capital use. Some hospitals in Ho Chi Minh City such as 115 hospital, Tu Du Obstetrics and Gynecology Hospital, Gia Dinh People Hospital, Thu Duc District Hospital... have borrowed hundreds of billions of dong to invest in infrastructure, equipment procurement. The examination and treatment area is spacious, with better service conditions such as rooms with 1-2 beds, equipped with televisions and refrigerators. Gradually meet the increasingly diverse medical examination and treatment needs of all classes of people, especially those who can afford to pay, limiting the need for patients to go abroad for medical examination and treatment. People, including the poor, near-poor, children, and beneficiaries of social policies also benefit because they can use these services, including high-tech, high-cost services and are covered by health insurance, because in many hospitals, socialization facilities are shared by the entire hospital.

2.3. Changing people's perception in using public services. Many people with conditions are ready to use and pay for the high-quality services of the socialization sector. Socialization projects have been completed and put into use in accordance with the committed goals, promoting efficiency, creating jobs for many workers, and ensuring social security.

2.4. Changing thinking and perception of units, not only relying on the state budget. Some grassroots investment projects are funded from the state budget, but due to budget constraints, they are soon completed and put into use, due to budget constraints, and are soon completed and put into use.

2.5. Diversify types and modes of operation, management of public health facilities, diversify types of services (medical examination, on-demand wards, health check-up models, examination and care services) high quality health...), creating competition among units, improving service quality.

2.6. Respond quickly and promptly to professional needs: Joint ventures and associates are responsible for maintenance and repair by investors, so the time to repair and replace equipment is fast and timely; while the equipment is from the budget, when it has to be repaired, replaced, etc., the procurement procedure takes a lot of time (for example, replacing the CT scanner bulb, filling the MRI machine with helium...);

2.7. The units have separately recorded and tracked revenue and expenses of each joint venture and association activity; reflected in the entity's financial statements. Pay full obligations to the state. The difference between revenues and expenditures ranges from 20-50% depending on the unit, so it contributes to increasing revenue and operating costs of the unit, increasing income for officers and employees of the unit, and contributing to the bank, state books.

3. Evaluation of some gaps and limitations in the recent time of borrowing, capital mobilization, joint venture, association, and property lease.

The forms of socialization are very diverse, prescribed in many legal documents, but many regulations such as forms, order, implementation procedures, decision authority, users of services. In this regard, the service fee is just a principle, there are no specific instructions, leading to many difficulties and problems. In the process of implementation, there are still units that have not implemented seriously, even in cases of violations that have been handled by state management agencies, inspection and audit agencies, and law enforcement agencies depending on the situation, seriousness of the violation.

3.1. The socialization and mobilization of resources outside the state budget to invest in health have not been strongly promoted in many localities, mainly concentrated at central and

provincial/city hospitals, places with the ability to quickly recover capital; in medical examination and treatment establishments. The equipment is not diversified, most of which are medical equipment for testing and diagnostic imaging, which is easy to recover capital.

3.2. The mobilization of non-budget capital sources for investment and rental of properties and equipment is stipulated in the Law on management and use of public property, the Law on public investment, the Law on investment under the mode of public-private partnership: The law stipulates projects with total investment not less than VND 100 billion. Thus, projects with a total investment of less than VND 100 billion have not been regulated and do not comply with the Law on Investment under the method of public-private partnership, while in fact many units have the need to invest in projects below VND 100 billion; In the Government's decrees on the mechanism of autonomy and self-responsibility, but in reality, there are still many regulations that are not specific, complicated and still heavy on public investment procedures, especially in terms of order, procedures and appraisal. the right to approve policies, schemes, projects...In addition, there are still difficulties in terms of land, taxes¹, mechanism for sending and assigning public employees and employees of public hospitals to work at medical examination and treatment facilities implemented under the combined public-private project of the hospital, institutes, etc., so we have not encouraged units and localities to boldly implement.

- It is very difficult to determine the value of assets to contribute capital to joint ventures and

¹ There is no clear guidance on CIT incentives for newly established and operating socialization establishments, so there are difficulties in implementation. For example, the hospital is operating with a scale of 500 beds according to the plan assigned by the state. The hospital borrows money to build its own area of about 100 beds to perform medical examination and treatment on demand. But there is an opinion that this area is not a new facility, so CIT exemption or reduction is not allowed. Therefore, it is necessary to provide specific regulations to allow new socialized establishments to be exempted and reduced from CIT.

Difficulties in implementing the criteria of human resources, construction area, and equipment because of the fact that due to large investment capital, many facilities have low land area, m²/bed, and do not meet the standards, even should not enjoy tax incentives...

associations. The new rules for determination in Clause 3, Article 58 of Decree 151/ND-CP are specified, specifically:

- Point a stipulates: For assets being land use rights eligible for capital contribution under the provisions of the law on land and relevant laws, the value of land use rights shall be determined according to the market price at time of capital contribution to a joint venture or association.

- Point c stipulates: For assets that are trademarks of public units, the determination of the brand value to contribute capital to joint ventures and associations shall comply with Vietnam's valuation standards and the law, on intellectual property and related laws.

Determining the brand value of the whole unit is very difficult. There are no more specific instructions for determining brand value in projects that only joint venture, link one or several equipment or in the case of joint venture, invest in a new medical examination and treatment facility.

- Point d stipulates: For other assets (besides land use rights, assets attached to land, brand value), the asset value is determined in accordance with the market price at the time of joint venture, association of property of the same type or property of the same specification, quality, origin. While determining the market price of the property is very difficult.

3.3. Human resources for the construction and implementation of investment projects in the form of socialization in health care units are still lacking and capacity is not guaranteed, especially in project proposal and contract negotiation. Determine the appropriate lending and mobilizing interest rates; order, procedures and competence to approve schemes and projects; The mechanism of using budget capital for projects using both loans and the budget is not clear², so it has not

² For many projects, the Bank only lends 70-85%, the rest is arranged by the unit, if the state budget grants this part, it will encourage the unit to borrow and need to specify the unit must use the area, the project's capacity or capacity is equivalent to the proportion of state budget capital to operate according to functions and tasks; the loan capital is operated on demand, with amortized price and loan interest to pay principal and interest.

really encouraged the units to mobilize capital, not attractive to investors.

3.4. The cost of medical examination and treatment by health insurance, the price of medical examination and treatment usually does not include enough costs, and the cost of management and amortization during the implementation of socialization, joint venture and association, the service price must be fully calculated, costs, with amortization and accumulation, should be higher than the cost of medical examination and treatment covered by health insurance, leading to a mechanism of 2 prices in 1 unit; formulating and determining prices from socialization activities is still complicated. There are units with limited capacity but joint ventures and links with high-tech equipment. There is also abuse of services and techniques from socialization devices. Some joint venture contracts due to large fluctuations in the number of users compared to the time of project construction, but the service price has not been reduced or the time for joint venture, association, income sharing with the company has not been adjusted, partner.

3.5. There are no specific regulations on bidding to select investors for projects in the form of socialization, joint venture or association³.

3.6. Although the Government has issued Resolution 93/NQ-CP stipulating mechanisms and policies for health development, which allow units to enter into joint ventures and associate with investors to build and establish new medical examination facilities. Diseases and treatment operate according to the business model, but there are no guiding documents, so there are difficulties, obstacles and confusion

³ Clause 3, Article 16 of Decree No. 25/2020/ND-CP dated February 28, 2020 of the Government detailing a number of articles of the Bidding Law on investor selection, stipulating: Ministries, ministerial-level agencies, Governmental agencies shall, within the scope of their management, issue regulations on investor selection for projects in accordance with specialized laws and laws on socialization on the basis of ensuring competition and fairness., transparency and economic efficiency, which includes the formulation, approval and publication of the project list, bidding documents form and other contents (if any)

for localities and units in the organization and operation of social establishments⁴.

4. Proposing solutions to promote borrowing, capital mobilization, joint ventures, association, and property leasing in the coming time.

The promotion of socialization, promoting the dynamism and initiative of medical facilities, mobilizing organizations, individuals and businesses to invest in the development of medical facilities is very necessary. urgent need today. Therefore, in order to promote borrowing, capital mobilization, joint ventures, association, and property leasing in the future, the health sector needs to have the following specific solutions:

4.1. The first solution: To promote socialization, units can borrow capital, enter into joint ventures and associations to mobilize resources outside the budget for investment in development, renovation and expansion of establishments. Encourage public-private partnerships. Encourage public-private partnerships and cooperation among public health facilities to invest in the high-end, on-demand service segment.

4.2. The second solution: Create conditions to promote and encourage medical facilities with qualified human resources to mobilize capital in the forms specified and guided by the Government to invest in facilities and equipment. equipment to improve service quality, reduce the number of people going abroad for medical examination and treatment, in addition to attracting overseas Vietnamese for medical examination and treatment, attracting foreigners to Vietnam for tourism and medical examination and treatment.

4.3. The third solution: Create a legal corridor as the Government needs to issue a Decree

⁴ Many investors proposed to establish a new legal entity as an enterprise to manage and operate the socialization facility in the public unit. The Law on Management and Use of Public Property allows a form of joint venture to establish a new legal entity, but does not specify whether this new legal entity is an enterprise or a non-business unit, or whether a unit can appoint civil servants, public employees participate in management or not?. If businesses are not allowed in hospitals, socialization will be limited, but if businesses are allowed in hospitals, there are many different opinions.

to guide the units to borrow capital, mobilize capital, joint ventures, internal and external links, and regulate investment projects according to regulations, the form of investors building infrastructure on the unit's land and subleasing it to the unit (not investing in the method of public-private partnership because, according to regulations, public-private partnership projects must establish a business in the form of a public-private partnership, project industry); regulations on bidding for materials, chemicals and machine rental costs (currently, the law stipulates bidding for materials and chemicals, and regulations on bidding for machinery rental, but not yet regulations on bidding for materials, chemicals and costs. machine rental fee in a bidding package); bidding for service providers, especially testing and diagnostic imaging services.

4.4. The fourth solution: Strengthening the accountability mechanism for the quality and performance of medical facilities, renewing the payment method according to the diagnosis group, and improving the capacity of the management team at medical facilities. Transforming the traditional structure to autonomy in search of solutions to improve efficiency and performance; Hospital autonomy works with socialization to reform the relationship between government and service providers by empowering hospital management with decision-making power. The government views public hospitals as an independent organization with greater autonomy, while ensuring the public good and accountability of hospitals to Government priorities.

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Widening the door for loans and association in health activities (Phuong Dung).

Socialization of healthcare - need to think differently (Nguyen Binh).

The autonomy for public health facilities reveals many limitations (Manh Bon).

PUBLIC EXPENDITURES ON CLIMATE CHANGE ADAPTATION AND RESILIENCE: AN EMPIRICAL ANALYSIS FROM VIETNAM

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Abstract: Climate change is a global issue, attracting the attention of many countries as well as international unions. Vietnam, with its special geographical position, is forecasted to be one of the countries that will be hardest hit by climate change. Therefore, it is extremely important to allocate public spending on increasing adaptation and resilience to climate change. This article is written to analyze the current state of public spending in Vietnam on climate change response at two levels: provincial and ministerial level. The structure of public spending for climate change adaptation and resilience in Vietnam in the 2016-2020 period is analyzed in detail, thereby suggesting several reasonable directions for the process of completing the budget framework for these activities.

• Keywords: public expenditures, climate change, climate change adaptation, climate finance.

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Tóm tắt: Biến đổi khí hậu đã và đang là một vấn đề toàn cầu, thu hút sự quan tâm của nhiều quốc gia cũng như các tổ chức liên hiệp quốc tế. Việt Nam với vị trí địa lý đặc biệt, được dự báo là một trong những quốc gia sẽ phải chịu ảnh hưởng nặng nề nhất từ biến đổi khí hậu. Do đó, việc phân bổ chi tiêu công cho tăng cường thích ứng và chống chịu với biến đổi khí hậu là vô cùng quan trọng. Bài báo được viết nhằm mục đích phân tích hiện trạng chi tiêu công ở Việt Nam cho ứng phó với biến đổi khí hậu ở hai cấp: cấp tỉnh và cấp bộ. Cơ cấu chi tiêu công cho thích ứng và chống chịu với biến đổi khí hậu ở Việt Nam giai đoạn 2016-2020 được phân tích cụ thể, từ đó gợi mở một số hướng đi phù hợp cho quá trình hoàn thiện khung ngân sách cho hoạt động này.

• Từ khóa: chi tiêu công, biến đổi khí hậu thích ứng với biến đổi khí hậu, tài chính cho biến đổi khí hậu.

Introduction

Vietnam is a Southeast Asian country with a long coastline and a temperature that ranges from moderate to tropical, but is generally warm. In 2020, the population of Vietnam was expected to be over 97 million people, with nearly 40%

of them living in the urban areas, especially in the country's two megacities, Hanoi and Ho Chi Minh City [13]. Agriculture, forestry, and fishing's relative contribution to the country's economy has decreased in recent years due to the rapid growth of the industry and service sectors. For example, in 2017, only 15.3% of GDP was built up by the agricultural sector while around 40.3% of the country's labor force worked in this sector (World Bank, 2020). Rice cultivation is also important for the country in terms of food security, rural employment, and foreign exchange, employing two-thirds of the rural labor population and putting Vietnam as one of the world's major rice exporters all over the world. Vietnam's vast coastline, geographic location, and different topography and temperatures make it one of Asia's and the Pacific Region's most hazard-prone countries. Because a large portion of the country's population and economic assets (including irrigated agriculture) are concentrated in coastal lowlands and deltas, and rural areas face poverty and deprivation, Vietnam has been identified as one of the five countries most likely to be impacted by climate change. According to an estimate conducted by Arndt et al (2015), the total national income of Vietnam is forecasted

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to reduce by up to 3.5% by 2050 owing to the climate change.

Vietnam demonstrates the commitment to response to climate change by implementing an array of national policies and real adaptation measures. The National Climate Change Strategy was established in 2011, targeting the objectives for the years 2016 to 2050. The National Green Growth Strategy, which contains mitigation targets and initiatives, was authorized in 2012. The Law on Natural Disaster Prevention and Control was enacted in 2013 with the intention of addressing the country's numerous natural dangers, which are mostly climate-related. In addition, the 2014 Environmental Law contains a whole chapter on climate change. On November 3, 2016, Vietnam ratified the Paris Agreement and the related Nationally Determined Contribution. Besides, the Vietnamese public expenditures to deal with climate change have been rising during the period 2016-2020. Following the research from UNDP (2022), the climate budget of 29 chosen provinces increased from about VND 15,000 billion in 2016 to almost VND 24,000 billion in 2020. The climate change budget of the 6 ministries combined rises relatively from 2016 -2020, between 8,000 - 13,500 billion VND, and representing between 26 and 38% of the combined total ministry budget. And most of these public expenditures were spent on climate change adaptation and resilience activities.

In this paper, we would like to analyze the role of public expenditure on accelerating climate change adaptation in Vietnam. Based on the data collected from the previous report, the overview picture of climate change adaptation and resilience financed by the Vietnamese government will be drawn and several financial strategies to support the climate change adaptation in Vietnam in the future will be proposed.

Literature review

Climate change

Following United Nations Framework Convention on Climate Change (United Nations, 1992) climate change is defined as a change of

climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods. In this definition, climate change is known as global warming due to a significant increase in the concentration of GHGs in the atmosphere. Climate change refers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity (The Intergovernmental Panel on Climate Change, 2007).

Uejio et al (2015) considers climate change as a systematic change in the long-term state of the atmosphere over multiple decades or longer, causing five critical global environmental changes, as following: (i) Warming temperature of the earth's surface and the oceans; (ii) Changes in the global water cycle ('hydrologic' cycle); (iii) Sea level rise; (iv) Ocean acidification.

Climate change adaptation and resilience

Adaptation to climate change received a wide set of definitions, both by the scientific and the policy environments (among the first group, see e.g. Burton 1992; Smit 1993; Smithers and Smit 1996; Smit et al. 2011; among the second group, see e.g. EEA 2005; Lim and Spanger-Sieghed 2005; UNFCCC 2007). The large number of not always coincident definitions already highlights a specific problem concerning adaptation: it is a process that can take the most diverse forms depending on where and when it occurs and on who is adapting to what. Indeed, probably the most comprehensive, known and widely accepted definition of adaptation is the one provided by the IPCC Third Assessment Report, which states that adaptation is any "adjustment in ecological, social, or economic systems in response to actual or expected climatic stimuli, and their effects or impacts. This term refers to changes in processes, practices or structures to moderate or offset potential damages or to

take advantage of opportunities associated with changes in climate” (McCarthy et al. 2001), which is general enough to encompass the widest spectrum of options.

Resilience is defined as “*the capacity to recover quickly from difficulties*”. In the context of climate change, resilience is the ability of a system or community to rebound following a shock such as a natural disaster. Building resilience requires not only recognizing potential hazards like extreme weather events, but also understanding the underlying vulnerabilities that may affect recovery from them. Climate change resilience could be defined as the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a potentially hazardous event in a timely and efficient manner. Improving climate change resilience involves assessing how climate change will create new, or alter current, climate-related risks, and taking steps to better cope with these risks. The USGCRP Glossary defines resilience as “*a capability to prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment*”. The interagency U.S. Climate Resilience Toolkit defines resilience as “*the capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a disruption*”.

The role of public expenditures on climate change adaptation and resilience

Michele Catalano¹, Lorenzo Forni and Emilia Pezzolla (2019) indicated the role of public expenditures on climate change adaptation and resilience in their research. They employed an overlapping generations (OLG) model for a small open economy in which adaptation and resilience reflects the extent to which public policies reduce the negative influence of climate change on the capital depreciation rate. Adaptation includes both preventive measures, i.e. investment in infrastructure, and remedial measures, i.e. post-disaster relief and reconstruction. The key finding of research is that preventive intervention leads to higher

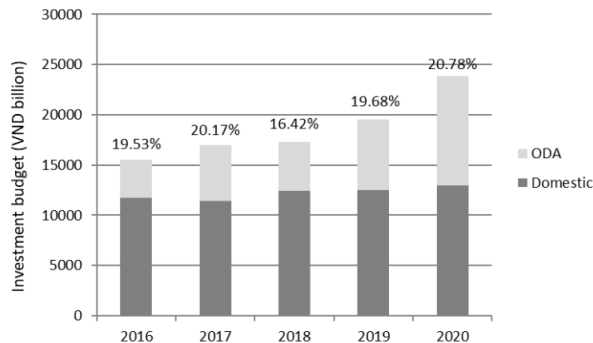
GDP growth rates than either taking no action or waiting until remedial action is necessary. However, the evidence shows that, due to high costs of early adaptation and budgetary constraints, countries tend to focus on late corrective actions, also relying on international assistance. Given the expected increase in climate-related risks, a comprehensive strategy including public spending on both preventive and corrective actions would be desirable to strengthen resilience to shocks and alleviate the financial constraints, which particularly affect small countries.

Public expenditures on climate change adaptation and resilience in Vietnam

Vietnam has issued many policies related to climate change since 2008. The government also made public spending decisions related to climate change in the period up to 2020. Several main policies should be mentioned as following. Firstly, two main resolutions issued by Vietnamese National Assembly relating to climate change response, Resolution No. 24-NQ/TW (2013): Active in response to climate change, improvement of natural resource management and environmental protection and Resolution No. 55-NQ/TW (2020): Vietnamese national energy development strategy orientation to 2030, vision to 2045. Secondly, a list of sectoral laws were issued to support these strategies, such as Law on Economical and Efficient Use of Energy (2011); Law on Water Resources (2012); Law on Natural Disaster Prevention and Control (2013); Law on Land (2013); Law on Environmental Protection (2014) (amended in 2020, effective in 2022); Law on Meteorology and Hydrology (2015); and the Law on Forestry (2017); Law on Fisheries (2017); Law on Cultivation (2018); Law on Livestock (2018); Law on Biodiversity (2018); and the Law on Natural Resources and Environment of Sea and Islands (2018). Based on these laws, the national framework to allocate public expenditures on climate change adaptation and resilience has been created during the period 2016 - 2020.

Provincial climate change budgets

Figure 1: The provincial climate change budgets from 2016 to 2020



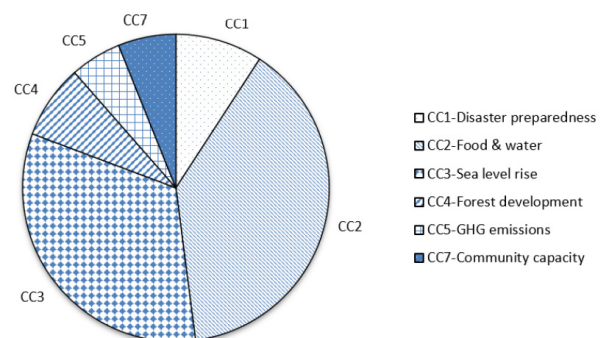
Source: UNDP (2022)

Figure 1 shows the information of public expenditures on climate change in 29 chosen provinces of Vietnam from 2016 to 2020. The chosen provinces include Cao Bang, Lao Cai, Tuyen Quang, Hoa Binh, Quang Ninh, Thanh Hoa, Ha Tinh, Quang Binh, Thua Thien Hue, Kon Tum, Gia Lai, Dak Lak, Dak Nong, Lam Dong, Long An, Tien Giang, Dong Thap, Vinh Long, Tra Vinh, Hau Giang, Soc Trang, Ben Tre, Kien Giang, Bac Lieu, Ca Mau, Can Tho, Quang Nam, Bac Ninh and An Giang. The climate investment budget for the 29 provinces were broken down into ODA and domestic sources (figures in brackets on top of bars are the % of the total provincial investment budget represented by the climate investment budget). The average total climate budget of 29 provinces during the period is about VND 18,000 billion. And the climate budget has increased gradually between 2016 and 2020, from about VND 15,000 billion in 2016 to nearly VND 24,000 billion in 2020 (see figure 1). Following the data, the domestic budget allocation was stable, but due to the increasing trend of ODA, the total budget also increased. The budget for climate change accounts for a relatively stable proportion of the total provincial budget, accounting for about 16-21% of the total budget.

Among the climate budget of the chosen provinces, the expenditure on climate change adaptation accounted for 90% of the budget, the highest one. Climate change adaptation is now

the first priority of Vietnam while the climate change mitigation actions are significantly done by the private sector, for example, investment in the renewable energy sector. The combined investment for adaptation and mitigation contributed for most of the rest of the budget, but was always less than 10%. More than 50% of climate change response investment budgets focus on four tasks (as defined in the classification method): Transport, Resilience of cities and residential areas, irrigation, river dike and sea embankment. These four tasks are mainly related to infrastructure, so interventions are relatively expensive. These four tasks are mainly related to infrastructure, so interventions are relatively expensive. The year-to-year variation in the climate change budget was higher than the total provincial budget. The main reason for this variation is fluctuations in ODA funding at the start or completion of large projects, which significantly increase the annual climate budget, sometimes in combination with the reduction of climate change, related to the medium-term public investment planning cycle of the province.

Figure 2: The allocation of provincial climate change budgets in accordance with the National Climate Change Strategy



Source: UNDP (2022)

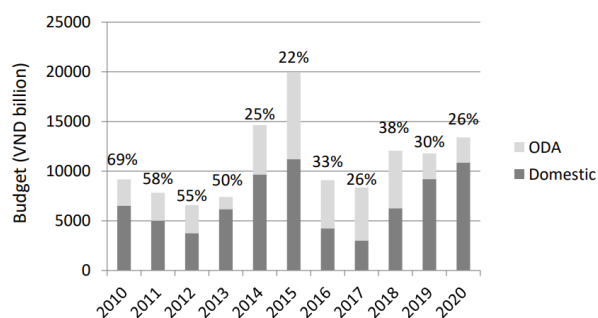
Provinces placed a greater emphasis on actual and practical climate-related initiatives than on technology components offered by central ministries, for example. Food and water, sea level rise, forest development, and greenhouse gas emissions account for the vast majority of National Climate Change Strategy funding (see Figure 2). These efforts are primarily

infrastructure-related, and therefore ignore “soft” parts of provincial climate policy, such as increasing awareness and building ability to advocate local action, which are frequently detailed in provincial climate policy.

Ministry climate change budgets

From UNDP (2022), the budget for climate change of 6 ministries, namely Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment, Ministry of Transport, Ministry of Industry and Trade, Ministry of Construction, and Ministry of Science and Technology, fluctuated dramatically from 2010 to 2020. Public expenditures on climate change delivery accounted for 90% of ministry climate change budgets from 2016 to 2020. Besides, 10% of these budgets were allocated for other fields, such as science, society and technology and policy and governance. Furthermore, most of these budgets were spent on climate change adaptation. For example, in 2019 and 2020, about 75% of these budgets were spent on climate change adaptation activities (equal to VND 10,000 billion).

Figure 2: The ministry climate change budgets from 2010 to 2020



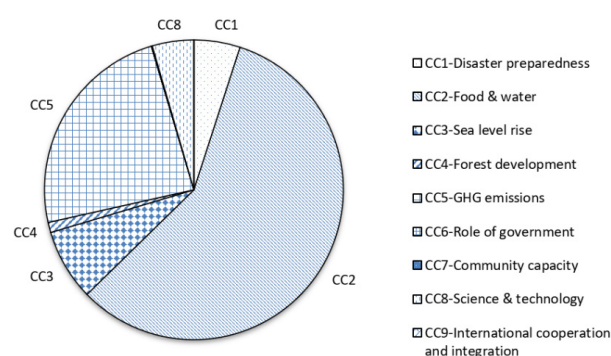
Source: UNDP (2022)

The Ministry of Agriculture and Rural Development and the Ministry of Transport accounted for the majority of the budget for climate change with a total expenditure of more than VND 8,000 billion per year in the period 2016-2020, equivalent to more than 80% of the total budget for climate change. The projects of the Ministry of Agriculture and Rural Development and the Ministry of Transport mainly focused on two climate change delivery tasks: irrigation

and transport. Both of these tasks are relatively expensive as they involve the infrastructure. Other ministries had more diverse expenditures, especially the Ministry of Natural Resources and Environment with spending on climate change adaptation and mitigation. At the same time, these ministries also allocated budgets for activities belonging to all three task groups (i) implementation of climate change response, (ii) science, technology and society, and (iii) policy and management, state management. The variety of climate-related tasks undertaken by ministries reflected the broad range of climate interventions identified in the country's climate change response policy.

The allocation of climate budget to the National Climate Change Strategy showed a variety of responses, with over 50% of the budget being linked to food and water (see figure below). These ministries targeted strategic actions of the National Climate Change Strategy which together represented 86% of the overall climate change related budget: Ministry of Agriculture and Rural Development focusing on food and water and Ministry of Technology on reducing green house gas emissions.

Figure 3: The allocation of ministry climate change budgets in accordance with the National Climate Change Strategy



Source: UNDP (2022)

From data collected by UNDP (2020), the public expenditures on climate change adaptation and resilience of Vietnam still concentrated mainly on the infrastructure, which cost high value and not flexible ways to adapt to climate change situations. The climate change budgets

at provincial level and ministry level should be allocated more for supporting the adaptation and resilience activities of vulnerable communities. Furthermore, the Vietnamese government should focus more on the climate change mitigation policies because they are considered as crucial duties of the government, not the main issues of the private sector. In the short to medium term, it is suggested that the Ministry of Planning and Investment release guidelines for integrating climate change-related plans and projects in greater detail into an annual consolidated action plan (e.g., an annual public investment plan) of ministries and provinces/cities. The long-term, sector-based strategies and action plans (such as Action Plan on Climate Change Response Action Plan or Green Growth Action Plan) should be incorporated into the strategic objectives and social economic development plans of the sector. Moreover, systematic climate expenditure tracking should be built into the planning and budgeting system. To accomplish this, it is necessary to develop a comprehensive monitoring and reporting system for climate investment and expenditure that can meet international reporting requirements and be utilized effectively at the national level. This system should include the following components: (i) Investment expenditure and recurrent expenditure; (ii) Integration of public expenditure at the central and provincial levels; and possibly (iii) Private investment in climate change.

Conclusion

Implementing the provisions of Article 7 of the Paris Agreement on climate change, Vietnam has developed and approved a national plan to adapt to climate change. This plan is elaborately prepared and built on the basis of the United Nations Framework Convention on Climate Change's guiding documents on information collection, data, analysis, and impact assessment. propose tasks and solutions to adapt to climate change... The National Plan to adapt to climate change for the period 2021-2030 with a vision to 2050 sets out a common goal to reduce vulnerability and risk to the impacts of climate change through strengthening resilience and adaptive

capacity of communities, economic sectors and ecosystems; promote the integration of climate change adaptation into the strategy and planning system. Public expenditures are the vital financial resources to support the Government to complete the climate change delivery targets. Therefore, when establishing the climate change budgetary framework, the Vietnamese government should allocate reasonably for strengthening the resilience and adaptive capacity of communities, economic sectors and ecosystems through spending on adaptation actions, science and technology, and readiness to adjust to the impacts of climate change.

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IMPACTS OF HEALTH INSURANCE POLICY TO SUSTAINABLE DEVELOPMENT HEALTH INSURANCE IN VIETNAM

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Abstract: Health insurance is one of the most important social policies, with humanitarian significance and profound community sharing, which is highly valued by the Party and State in the Social Security policy system. The health insurance policy began to be implemented in 1992 with the Health Insurance Charter issued together with Decree No. 299/HDBT dated August 15, 1992 of the Council of Ministers (now the Government). After nearly 30 years of implementation, the health insurance policy has been revised and supplemented to create the most effective mechanism in risk sharing, reducing the burden of medical examination and treatment costs and health care costs for the insured and at the same time create the trust of the people to decide to participate in health insurance. This is a condition for the Government to expand health insurance coverage, fulfill the goal of universal health insurance and sustainable development.

• Keywords: health insurance policy, sustainable development, health insurance fund.

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Tóm tắt: Bảo hiểm y tế là một trong những chính sách xã hội quan trọng hàng đầu, mang ý nghĩa nhân đạo và có tính chia sẻ cộng đồng sâu sắc được Đảng và Nhà nước ta hết sức coi trọng trong hệ thống chính sách an sinh xã hội. Chính sách bắt đầu được thực hiện từ năm 1992 bằng Điều lệ Bảo hiểm Y tế ban hành kèm theo Nghị định số 299/HĐBT ngày 15/8/1992 của Hội đồng Bộ trưởng (nay là Chính phủ). Sau gần 30 năm triển khai, chính sách BHYT đã được sửa đổi, bổ sung nhằm tạo nên cơ chế hiệu quả nhất trong chia sẻ rủi ro, giảm gánh nặng chi phí khám chữa bệnh, chăm sóc sức khỏe cho người tham gia bảo hiểm đồng thời tạo nên sự tin tưởng của người dân để quyết định tham gia bảo hiểm y tế. Đây chính là điều kiện để Chính phủ mở rộng diện bao phủ bảo hiểm y tế, hoàn thành mục tiêu bảo hiểm y tế toàn dân và phát triển bền vững.

• Từ khóa: health insurance policy, sustainable development, health insurance fund.

1. Health Insurance policy in Vietnam

The care and protection of people's health is always the primary concern of the Party and State. During the subsidy period, people get free health care, provided by the state budget. But the increase in health costs due to the increasing risk of diseases in the community requires a high diagnosis and treatment process, limited budget, so the subsidy

mechanism in health care cannot be maintained. Therefore, the Party and State have changed their views on health care development and focused on developing health insurance in Vietnam on the basis of mobilizing resources not only from the state budget but also from all sources. Article 39 of the 1992 Constitution of the Socialist Republic of Vietnam stipulates: "The State makes investment in, ensures the development of and exercises unified management over the protection of the people's health; it mobilises and organises all social forces in the building and development of Vietnamese medicine following a far-sighted orientation; prevention shall be combined with treatment, traditional medicine and pharmacology with modern medicine and pharmacology, State health services with people's health services; the State shall see to the organisation of health insurance and create the necessary conditions for all citizens to enjoy health care". This is a very important legal basis, a premise for the implementation of health insurance in Vietnam and at the same time clearly shows the views of the Party and State in implementing people's health care. With the active preparation of the Drafting Committee of the Ordinance on Health Insurance - Ministry of Health, with the results and lessons learned after 2 years of piloting the health insurance model in some localities, on August 15, 1992, The Council of Ministers (now the Government) has issued Decree No. 299/HDBT attached to the Health Insurance Charter, which is the first legal

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regulation on Health insurance in Vietnam. During the implementation phase of Decree 299, this Decree has had amendments and supplements to suit the practice and development goals of Health insurance in each period. The changes focused on some basic contents: compulsory subjects to participate in health insurance, Payment rates and support levels for paying health insurance premiums, health insurance benefits. The subject of compulsory participation in social insurance has been expanded, the benefits of social insurance participants have been suitably changed, especially encouraging the group of subjects to voluntarily participate in insurance to gradually increase the coverage of health insurance. The subject of compulsory participation in social insurance has been expanded, the benefits of social insurance participants have been suitably changed, especially encouraging the group of subjects to voluntarily participate in insurance to gradually increase the coverage of health insurance. On August 13, 1998, the Government issued the Health Insurance Charter together with Decree No. 58/1998/ND-CP replacing the 1992 Health Insurance Charter to overcome the its limitations.

In 2002, on the basis of Decision 139/2002/QĐ-TTg of the Prime Minister, the Fund for Medical Examination and Treatment for the Poor was established. Under this policy, the poor can be covered by the State budget for medical examination and treatment costs. This mechanism has arisen inadequacies. And in 2005, Decree 63/2005/ND-CP was issued, the poor were required to participate in insurance and were subsidized by the state for the entire cost of buying health insurance cards.

On November 14, 2008, the National Assembly passed the Law on Health Insurance, marking the development and completion of policies and laws on health insurance, developing a health system in the direction of equity and efficiency, achieving the goals of universal health insurance coverage. The Law on Health Insurance 2008 took effect from July 1, 2009. The Government and the Inter-Ministry of Health and the Ministry of Finance have issued documents to detail and guide the implementation of the 2008 Law on Health Insurance. New and important contents of the Law include:

-Expanding compulsory subjects to participate in health insurance: It stipulates compulsory subjects to participate in health insurance are full-time employees, pensioners, pupils, students, children under 6 years old, the poor and near-poor. The Law also stipulates the roadmap to participate in insurance

for other subjects in society. With that provision, the Law on Health Insurance 2008 laid the foundation for the state's policy of implementing universal health care coverage and clearly expressed its view, mobilizing capital for health mainly through health insurance.

- The scope of benefits is determined relatively comprehensively, both for prevention, treatment and rehabilitation

- Applying the regulation of co-payment with some target groups as a measure against abuse of health insurance funds

- Equality between public and private health facilities in providing health insurance services

- Continue to maintain the treatment system by line, ensuring convenience, saving costs, and preventing overcrowding at central medical facilities.

- Legalize the assessment of medical examination and treatment with health insurance and the role of social insurance in performing the assessment

Based on Resolution No. 21 of the Politburo which affirms that the health insurance policy is one of the main pillars of the social security system and clearly outlines the roadmap for the implementation of universal health insurance, on March 29, 2013, the Prime Minister approved the Scheme to implement the roadmap to universal health insurance for the period 2012 - 2015 and to 2020 by Decision 538/QĐ-TTg dated March 29, 2013. Objectives of the project are many fold: (i) Expand the coverage of health insurance in terms of the proportion of the population participating in health insurance, in terms of the scope of health services to be benefited (ii) reduce the payment rate from the out-of-pocket of health service users (iii) ensuring the interests of health insurance participants; (iv) Towards universal health insurance, contributing to creating a stable financial source for people's health care in the direction of fairness, efficiency, quality and sustainable development. Specific objectives: by 2015, to reach 70% of population insurance coverage, by 2020, to reach 80% of health insurance coverage; by 2015, reduce the proportion of out-of-pocket payments to less than 40% of total health spending.

2. Assessing the impact of health insurance policies on sustainable health insurance development

After nearly 20 years of implementation, health insurance policies have had a positive impact on

the quality of health insurance services but also on the accomplishment of health insurance goals. all people. That positive impact is reflected in the following basic aspects:

Firstly, the number of people participating in health insurance is increasing

With the regulation of expanding compulsory insurance coverage according to the roadmap, the number of people participating in health insurance has increased significantly.

Table 1: Situation of participation in health insurance in Vietnam

Year	Number of people participating in health insurance (Thousand people)	Percentage of population participating in health insurance (%)
1993	3,790	5.4
2000	10,622	13.84
2004	18,356	22.81
2008	39,749	47.09
2014	64,600	71.22
2018	83,540	88.50
2019	85,745	88.89
2020	87,970	90.85

Source: Report on the implementation of health insurance policies of the Ministry of Health and Vietnam Social Insurance

Expanding the participants participating in compulsory health insurance, providing support for specific participants in terms of health insurance costs along with changes in the regulations on benefit levels, focusing on improving the quality of facilities. medical examination and treatment, regulations on referral for medical examination and treatment have created people's trust in the medical insurance system in Vietnam. The proportion of people participating in health insurance is increasing. In 1993, only 5.4% of the population participated in health insurance, nearly 20 years later, 90.85% of the population of Vietnam had a health insurance card. This is a great success of Vietnam in implementing health insurance in recent years.

Secondly, it is easier for health insurance participants to access health insurance services

This is evidenced by the significant change in the number of people performing medical examination and treatment with health insurance. According to the statistics of the Vietnam Social Security, in 1993, there were 63,300 turns of people receiving medical examination and treatment with health insurance. In 2014, the number of outpatient treatment was 2,500,000, the number of inpatient treatments was 250,000, the average cost was about 3 millions VND/time. From 2015-2019, more than 809 million

medical visits were paid by the health insurance fund. The increase in the number of medical examination and treatment patients is not only due to the change in the number of people participating in health insurance but also due to a number of other basic reasons associated with current regulations, specifically:

- There is no distinction between private and public health care facilities in terms of being contracted for medical examination and treatment with health insurance. Therefore, the quality of medical care covered by health insurance at the frontline has been significantly improved. In 2020, the number of private medical examination and treatment facilities registered for medical examination and treatment with health insurance is 835, nearly double that of 2014 (424 units). The commune medical examination and treatment system has also been invested to improve the quality of medical examination and treatment at the grassroots level.

- Regulations on registration of initial medical examination and treatment and off-line medical examination and treatment have created conditions for health insurance participants to receive medical examination and treatment in their localities with medical examination and treatment quality meeting the needs of patients. Currently, if medical examination and treatment are covered by health insurance at the district level, patients are entitled to 100% of medical examination and treatment costs; If the patient is examined at the provincial level, the patient will be paid 100% of the cost of inpatient treatment.

- Reducing administrative procedures in receiving and issuing health insurance cards, receiving health insurance medical examination and treatment requests and processing dossiers. Vietnam Social Insurance is the agency in charge of implementing health insurance that has implemented many reforms in administrative procedures. Regarding the time to issue the health insurance card, if there is any change in information, provided that the documents are complete, the Vietnam Social Security Administration will only do so within 03 days, 04 days shorter than the provisions of the Law on Health Insurance; In case there is no change of information, the time for re-issuance is only 01 day. Regarding receiving dossiers and returning results, Vietnam Social Insurance has diversified forms, including: electronic transactions, post and telecommunications services and directly at the one-

stop transaction department at the social insurance system of localities, direction. E-transactions are a remarkable reform of Vietnam Social Security in order to create maximum convenience for policyholders when making transactions related to health insurance.

Thirdly, the health insurance policy has contributed to reducing people's out-of-pocket direct spending on health services, contributing to equity in health care

Expenditure for medical examination and treatment health insurance is the most important expenditure in the expenditures of the health insurance fund. Many incurable diseases, expensive and long-term treatment have been covered by health insurance funds up to hundreds of millions of dong, such as kidney failure, cancer, and cardiovascular disease. This is a very meaningful support for the insured, especially for the disadvantaged such as the poor, the near-poor, the disabled, and those who are subject to social protection. Without the state's health insurance policy, the disadvantaged will certainly not be able to access good medical care services with low fees, even 100% of the state budget's support.

With the above assessments, it can be seen that the implementation of health insurance in Vietnam has achieved encouraging results, especially in terms of health insurance coverage. However, in recent years, the risk of overspending on health insurance funds has always existed, affecting the sustainable development of health insurance. In the period from 1993 to now, there have been a number of years when the health insurance fund fell into a rather serious overspending situation. In 2006, 2007, 2008 the health insurance fund had an overspending of VND 1,500 billion, VND 1800 billion and VND 1,400 billion. The overspending of the health insurance fund at this stage is due to the expansion of the subjects participating in compulsory insurance under Decree 63/2005/ND-CP and at the same time, the benefits of health insurance participants have been significantly increased with the removal of regulations: 20% co-payment, removing the ceiling fee for medical examination and treatment, more than 200 drugs added to the list of drugs allowed to be issued to patients. Inadequacies in the payment mechanism of the health insurance fund have set a requirement for the Government to perfect legal regulations. The 2008 Law on Health Insurance came into being with very positive changes in regulations on contribution levels and principles of co-payment, but the problem of balancing the health

insurance fund has not yet been resolved. In 2008 and 2009, the deficit of the health insurance fund was VND 1,400 billion and nearly VND 2000 billion. The reason why the overspending situation still occurred in 2009 was due to the rapid increase in the number of people participating in health insurance, the lack of unified management software, and the increasing phenomenon of profiteering from the health insurance fund due to poor management and control. Recognizing the causes, with the efforts and coordination of the Ministry of Health, the Ministry of Finance, and the Vietnam Social Insurance, the shortcomings have been gradually overcome. From 2010 onward, the insurance fund has always been safe, with revenue greater than expenditure, but there is still a risk of overspending - overspending occurs locally in some localities.

Table 2: Final settlement of health insurance funds in some localities in 2019

Unit: Billion VND

Item	Ha Noi	Ho Chi Minh city	Da Nang	Nghe An
Revenue	10,292.58	12,854.62	1,319.74	2,715.25
Expenditure	17,264.39	18,578.36	2,389.88	3,221.48
Balance	(6,974.81)	(5,723.74)	(1,017.14)	(506.23)

Source: 2019 financial settlement of Vietnam Social Security

4. Conclusion

Although the risk of overspending the health insurance fund affects the sustainable development of health insurance in Vietnam, it is clear that the implementation of health insurance in Vietnam has achieved great success, especially the coverage of health insurance premiums. Those successes are influenced by the Party and State's viewpoint on development of health insurance and the efforts of state management agencies and health insurance implementing agencies in perfecting health insurance policies. The health insurance policy is always towards the goal of implementing universal health insurance, ensuring the revenue of the health insurance fund, rationally and effectively using the health insurance fund, ensuring the interests of the insured, dangerous. That is the solid foundation for the sustainable development of health insurance in the coming time.

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APPLYING COBB-DOUGLAS PRODUCTION FUNCTION IN ESTIMATING ECONOMIC GROWTH MODEL IN VIETNAM

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Abstract: The article explores the relationship between GDP at current prices (dependent variable) and labor and capital (independent variables) in Vietnam, using the Cobb-Douglas production function. The study uses time series data for the period 1990-2020. The ordinary least squares (OLS) method was used to estimate the model. The results show that there is a statistically significant relationship between labor and capital and GDP in the case of Vietnam. In which, capital has an immediate impact on GDP, but labor only takes effect after 2 years. That is, the change in Vietnam's GDP can be explained by labor and capital.

• Keywords: Cobb-Douglas production function, production efficiency, GDP, capital, labor.

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Tóm tắt: Bài viết thực hiện tìm hiểu mối quan hệ giữa GDP theo giá hiện hành (biến phụ thuộc) với lao động và vốn (các biến độc lập) Việt Nam, sử dụng hàm sản xuất Cobb-Douglas. Nghiên cứu sử dụng dữ liệu chuỗi thời gian trong khoảng thời gian 1990-2020. Phương pháp bình phương tối thiểu thông thường (OLS) được sử dụng để ước lượng mô hình. Kết quả cho thấy có một mối quan hệ có ý nghĩa thống kê giữa lao động và vốn với GDP trong trường hợp của Việt Nam. Trong đó vốn có tác động ngay lập tức đến GDP nhưng lao động chỉ phát huy tác động sau 2 năm. Nghĩa là, sự thay đổi trong GDP của Việt Nam có thể được giải thích bởi bằng lao động và vốn.

• Từ khóa: hàm sản xuất Cobb-Douglas, hiệu quả sản xuất, GDP, vốn, lao động.

1. Introduction

Economic growth is one of the core issues of the theory of economic development. Economic growth, which is always the primary objectives of each country as well as worldwide, creates high-wage jobs and conditions to improve the standard of life. Sustainable development becomes a popular trend in the world; Digital economy, circular economy, green growth are the development models chosen by many countries. The 2030 Agenda for Sustainable Development

of the United Nations has a great influence on the growth model, economic cooperation, trade and investment in the world. Shifting to renewable energy, green energy will be a clearer trend in the coming period.

On September 25, 2020, the Government issued Resolution No. 136/NQ-CP on sustainable development. The resolution sets out 17 sustainable development goals for Vietnam by 2030, including: (1) End all forms of poverty everywhere; (2) Eliminate hunger, ensure food security, improve nutrition and promote sustainable agricultural development; (3) Ensure healthy lives and promote well-being for people of all ages; (4) Ensure quality, equitable, and inclusive education and promote lifelong learning opportunities for all; (5) Achieve gender equality; empower and create opportunities for women and girls; (6) Ensuring adequate and sustainable management of water resources and sanitation facilities for all; (7) Ensure access to affordable, reliable and sustainable energy for all; (8) Ensure sustainable, comprehensive and continuous economic growth; create employment, productivity and decent work for all; (9) Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation; (10) Reducing inequality in society; (11) Sustainable and resilient urban and rural development; ensure a safe living and working

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environment, and reasonably allocate population and labor by region; (12) Ensuring sustainable production and consumption; (13) Timely and effective response to climate change and natural disasters; (14) Conservation and sustainable use of oceans, seas and marine resources for sustainable development; (15) Protect and develop forests sustainably, conserve biodiversity, develop ecosystem services, combat desertification, prevent degradation and restore land resources; (16) Promote a peaceful, democratic, fair, equal and civilized society for sustainable development, create access to justice for all; building effective, accountable and participatory institutions at all levels; (17) Strengthen implementation and promote global partnerships for sustainable development.

The efficiency of a country is measured by Gross Domestic Product (GDP). Over the past two decades, the story of the world economy has been heavily focused on Asia, with its steady economic growth. The Asian economy is no longer just that of Japan. Economic growth in the Asia region has consistently outperformed the West over the past two decades (APO, 2014). This study partly quantifies the level and growth pattern of Vietnam. The research method in this article considers GDP as a function of labor and capital. When capital is invested and labor is used, there is a positive impact on production. In order to keep up with the world economy, it is more necessary for Vietnam to raise the GDP level.

2. Literature review

Economic growth had been discussed by classical economists Adam Smith and David Ricardo since the late 17th century and early 18th century, but it was not until the middle of the 20th century that economic growth was studied systematically by scientists. Economic growth is the increase in income of the economy over a certain period of time (usually a year). The nature of growth is to reflect quantitative changes in the economy.

Economic growth theories are also increasingly being improved to clarify theoretical and practical problems posed in economic life. Researching on the origin of economic growth, scientists have

divided growth factors into two groups: exogenous factors and endogenous factors. The relationship of factors to output is basically explained in the Cobb-Douglas production function. In economics and econometrics, the Cobb-Douglas production function is a specific form of the production function, widely used to express the relationship between the quantities of two or more inputs (especially are physical capital and labor) and the amount of output that can be produced by those inputs. The Cobb - Douglas function was developed and tested against statistical evidence by Charles Cobb and Paul Douglas between 1927–1947. According to Douglas, the functional form itself was developed earlier by Philip Wicksteed (Cobb & Douglas, 1928).

On the basis of the Cobb-Douglas production function, Solow built an economic growth model, then it became a basic production function for modern economic growth studies. In his model, Solow included the factor of technological progress, however, he only considered technological progress to be an exogenous factor. The most important point of the Solow model was capital accumulation. In addition, the model also assumes that there is a direct relationship between existing capital reserves and new capital accumulation, as the level of saving increases, output also increases. Another factor in the Solow model is population. In which, the concept of population and workability population are identical, so an increase in population will lead to a decrease in the capital intensity for working-age population. From there, the model suggests that, in order to ensure a stable state of the economy, it is necessary to ensure a steady growth rate of both capital and labor. Thus, countries with high population growth will have low capital intensity and, therefore, low growth rates. Also from this model, it can be seen that GDP is determined by the total amount of labor and capital that each country uses and the efficiency of exploiting these factors. From there, the source of the increase in GDP will depend on the increase in the total amount of capital and labor and the increase in efficiency or productivity in exploiting these factors.

Up to now, many studies on this topic have been carried out, based on the Cobb-Douglas production

model. For example, the study of Munguisa et al (2019) presents a new approach to estimate the Solow-Cobb-Douglas economic growth model. In this case, the extended Kalman filter is used to estimate the time-varying parameters of the model and the system state, from a subset of partially available economic data measurements. Different from traditional econometric techniques, all the system model parameters are defined as state variables in order to treat them as time-varying parameters. Based on the state-space representation, the observability properties of the system defined by the Solow-Cobb-Douglas economic growth model, are investigated by mean of an extensive nonlinear observability analysis. From this analysis, the necessary conditions for achieving the property of observability are derived, which in turn, is needed for estimating the full system state from different subsets of measured economic data. Experiments with real macroeconomic data are presented to validate the proposed approach. Empirical results show that among the subsets of available economic data, some specific economic data are more relevant than others for better model estimation. Another study by Andaregie et al (2020) identifies the factors affecting the economic efficiency of charcoal production in Northwest Ethiopia using cross-sectional data collected from 372 households. Cobb-Douglas and Tobit production frontier models were used to identify the determinants of economic efficiency. The results show that land area, seedlings and labor are the variables affecting charcoal productivity. The estimated technical efficiency, allocative efficiency, and economic efficiency scores were 85%, 94% and 80%, respectively. The sex and the age of the household head, the size of the household, the duration that the household was producing charcoal, charcoal production as a major livelihood base, producing charcoal for marketing purpose as a major motive, and Acacia decurrence as the major type of tree for producing charcoal were the influential variables of economic efficiency in charcoal production. Since the cropping cycle practiced in Northwest Ethiopia can benefit the environment, and since charcoal production generates income to a very large number of households, the government can use the findings of this study to expand its intervention

in the charcoal sector and promote charcoal production and productivity in an environmentally sustainable way. The study by Oryani et al (2021) scrutinized the symmetric/asymmetric impact of energy consumption on the economic growth (RGDP) of Iran in the framework of the extended Cobb-Douglas production function from 1970 to 2017. The linear and nonlinear Autoregressive Distributed Lag (ARDL) confirmed that a positive and negative shock on energy consumption had the same impact on RGDP. The empirically obtained outcomes supported confirmed the positive impact of energy consumption and capital stock on GDP in both the short and long terms. The opposite was true for CO₂ emissions and labour force. The results of a Toda Yamamoto (T-Y) test showed bidirectional causality between CO₂ emissions and energy consumption. Moreover, CO₂ emissions and energy consumption exhibited a causality effect on economic growth. Furthermore, residual diagnostic/model stability tests and sensitivity analyses based on Fully Modified Ordinary Least Squares (FM-OLS) and Dynamic Ordinary Least Squares (DOLS) verified the perfectness and robustness of the results obtained from the ARDL model, respectively. Based on the growth-enhancing and environment-degrading effects of energy consumption, switching from conventional energy to renewable energy must be considered in national energy policies. Appropriate policy implications were recommended under two categories: market-based interventions (both directly and indirectly) and non-market-based interventions.

About domestic research, there has been a qualitative study by Do Van Duc (2016) which analyzes the main factors for deep economic growth and origin of economic growth in recent years. On that basis, the article comes to the conclusion that our country's economic growth in the coming time must rely on accumulating and improving the quality of human capital and effectively promoting institutional capital. Another domestic study by Chu Thi Thu and Hoang Thi Dung (2013) used the Cobb-Douglas function to analyze the factors affecting coal mining output in Vietnam. That is, the problem of using the Cobb-Douglas function to analyze economic growth in Vietnam is still a gap for the authors to conduct this study.

3. Research model and data

Cobb-Douglas production function is one of the most widely used production functions in economic analysis. Cobb-Douglas production function not only reflects the basic economic law, but is also easy to calculate and interpret the estimated parameters. The purpose of applying Cobb-Douglas function is to estimate the coefficients of the inputs that affect total output and returns to scale. The Cobb-Douglas function has the following form:

$$Y = AK^{\alpha}L^{\beta}$$

where the output Y is a function of labor (L) and capital (K), A is the total factor productivity.

The Cobb - Douglas production function can be converted to a linear model by taking the logarithm of both sides of the equation:

$$\ln Y = \ln A + \alpha \ln K + \beta \ln L$$

A is the total factor productivity, α represents the output elasticity of capital, β represents the output elasticity of labor. $\alpha + \beta$ represents returns to scale. If $\alpha + \beta > 1$ represents increasing returns to scale, $\alpha + \beta < 1$ represents decreasing returns to scale, $\alpha + \beta = 1$ represents the constant returns to scale.

4. Research results

Table 1. Descriptive statistics of variables in the model

	GDP	K	L
Mean	1898004.	544906.7	45.19957
Median	914001.0	308543.0	44.25255
Maximum value	6293145.	1699865.	55.89882
Minimum value	41955.00	5272.000	32.73797
Standard deviation	2007238.	535829.1	7.988347
Skewness	0.912504	0.749427	0.006307
Kurtosis	2.420659	2.241086	1.506649
Jarque-Bera Test	4.735628	3.645744	2.880747
p-value	0.093685	0.161561	0.236839
Observations	31	31	31

Source: Authors

The research data collected includes gross domestic product (calculated at current prices of Vietnamese Dong, billion VND), accumulated fixed assets (calculated at current prices of Vietnamese

Dong, billion VND), total number of employees (million people) from 1990 to 2020 from the World Bank. The variables are denoted by GDP, K and L respectively. The descriptive statistics of the research variables are presented in Table 1.

For the convenience of estimation, the time series are taken as natural logarithms, denoted LOG_GDP, LOG_K, LOG_L. First, we test the stationarity of the data series, using the Augmented Dickey-Fuller test. The results are presented in Table 2.

Table 2. The results of testing the stationarity of the research variables

Time series	Chain yield	t-value in Augmented Dickey-Fuller Test	Conclusion
Origin	LOG_GDP	-1,555	Non- Stationary
	LOG_K	-3,199**	Stationary
	LOG_L	-1,682	Non- Stationary
The first difference of a time series	D(LOG_GDP)	-5,629***	Stationary
	D(LOG_K)	-4,816***	Stationary
	D(LOG_L)	-2,710*	Stationary

Note: *, **, ***significant at 10%, 5%, 1% respectively

Source: Authors

Table 3. Estimation results of Cobb-Douglas production function

Dependent Variable: D(LOG_GDP)				
Method: Least Squares				
Sample (adjusted): 1991 2020				
Included observations: 30 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.043428	0.022160	1.959763	0.0604
D(LOG_K)	0.547081	0.070333	7.778472	0.0000
D(LOG_L)	1.024544	1.123530	0.911897	0.3699
R-squared	0.742757	Mean dependent var		0.167021
Adjusted R-squared	0.723702	S.D. dependent var		0.110532
S.E. of regression	0.058100	Akaike info criterion		-2.758650
Sum squared resid	0.091143	Schwarz criterion		-2.618530
Log likelihood	44.37975	Hannan-Quinn criter.		-2.713824
F-statistic	38.97949	Durbin-Watson stat		1.642961
Prob(F-statistic)	0.000000			

Source: Authors' estimation

Thus, in the natural logarithmic series of the original data series, LOG_K is stationary, and the two series LOG_GDP and LOG_L are non-stationary. But after taking the first difference,

we get 3 stationary series. Therefore, the first-difference series will be used to estimate the Cobb-Douglas model. The results of Cobb-Douglas function estimation for Vietnam are presented in Table 3.

The main objective of the study is to examine whether both labor and capital can contribute significantly to the growth of manufacturing in Vietnam, and empirical results using the Cobb-Douglas production function help provide these results. From the estimation results in Table 3, the elasticity of GDP to capital is 0.547. That is, if capital is increased by 100%, Vietnam's GDP will increase by 54.7%. However, the impact of the labor force on economic growth has not been found. To improve the model, the author chooses a lag after 2 years for the labor variable to get the results as shown in Table 4.

Table 4. Estimation results of Cobb-Douglas function with lagged variable of labor

Dependent Variable: D(LOG_GDP)				
Method: Least Squares				
Date: 04/15/22 Time: 15:51				
Sample (adjusted): 1993 2020				
Included observations: 28 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.060499	0.021661	2.793006	0.0099
D(LOG_K)	0.282184	0.097716	2.887797	0.0079
D(LOG_L(-2))	2.059447	1.050394	1.960643	0.0612
R-squared	0.447163	Mean dependent var		0.144354
Adjusted R-squared	0.402936	S.D. dependent var		0.063880
S.E. of regression	0.049360	Akaike info criterion		-3.078402
Sum squared resid	0.060910	Schwarz criterion		-2.935666
Log likelihood	46.09763	Hannan-Quinn criter.		-3.034766
F-statistic	10.11064	Durbin-Watson stat		1.788802
Prob(F-statistic)	0.000606			

Source: Authors' estimation

The results show that both capital and labor have an impact on GDP, but capital has an immediate impact, but labor has an impact after 2 years. The elasticity of GDP for capital is 0.282, for labor is 2.059. That is, if capital is increased by 100%, Vietnam's GDP will increase by 28.2%. At the same time, if the labor force is increased by 100%, after 2 years Vietnam's GDP will increase by 205.9%.

5. Conclusions and recommendations

The main objective of this paper is to find out the impact of Vietnam's labor force using time

series data from 1990-2020 based on the Cobb-Douglas production model. The results confirm that capital contributes significantly to productivity as measured by GDP in Vietnam, and the impact of labor is larger than the impact of capital, but the effect of labor has a lag of 2 years. From the results of this study, the authors propose some recommendations towards promoting economic growth as follows:

Firstly, in order to maintain the positive impact of capital on economic growth, Vietnam needs to increase capital generation from the internal resources of domestic economic sectors. For example, speeding up the economic restructuring process from mining, agriculture and fishery sectors with low resource efficiency to high value-added manufacturing industries and services, with higher resource efficiency. Or establish socio-economic institutions that effectively promote economic management.

Secondly, change the perception of human capital and increase accumulation, improve the quality of human capital through human resource development, improve the quality, qualifications and skills of workers combined with efficient use of labor resources to reduce the lag of labor impact on economic growth. That is to increase the speed of the impact of labor on economic growth.

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THE HARMONIZATION OF IFRS IN VIETNAM: THE THEME OF LAND ACCOUNTING

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Abstract: *This paper re-considers the notion of “the harmonization of IFRS” as it has been applied to the accounting standard harmonization project and its implications for accounting practices that are emerging in Vietnam. There exist some challenges in the process in Vietnam, in terms of land accounting regulations. In order to explore this, given the unique legal status of land in Vietnam, we consider how it is classified and represented in Vietnamese financial reports. This example shows that there are still significant challenges that need to be overcome in order to implement IFRS in Vietnam and there are still substantial comparability problems for cross-border users.*

• Keywords: *IFRS; accounting; land ownership; Vietnam.*

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Tóm tắt: Bài báo đề cập đến quá trình hội tụ theo IFRS, một số cản trở trong quy định kế toán ở Việt Nam. Một trong những thách thức trong quá trình áp dụng IFRS ở Việt Nam, đó là những quy định pháp lý trong luật đất đai, kế toán đối với quyền sử dụng đất. Một số đề xuất để hạn chế những thách thức và nhằm củng cố thông tin trên Báo cáo tài chính có tính so sánh giữa các quốc gia.

• Từ khóa: *IFRS, kế toán, quyền sử dụng đất, Việt Nam.*

1. Introduction

Based on the goal of the International Financial Reporting Standard - IFRS, regulations are issued to improve the usefulness, comparability, and consistency of financial reporting information. To achieve those criteria, accountants are required to report one economic situation in different contexts in similar manners. For financial statement information users, comparing the financial statements of Vietnamese companies presents a significant challenge because of an important class of assets of the company, land, which has a very different legal status from similar assets in accordance

with international practice. We believe that accounting standards should be flexible enough to allow different reporting of these assets in different social contexts, yet recognized and presented in the financial statements in a consistent principles to ensure comparability among enterprises in the world.

From the perspective of corporate accounting, the research team proposes a number of contents related to the principle of recording and presenting financial statement information for land in Vietnam.

2. Literature review

Much of the literature that raises the issue of harmonization is connected with the internationalisation of accounting standards. Many researchers supporting harmonisation through international accounting standards have referred to ‘accounting uniformity. According to Zeff (2007) “there are those who believe, and many have believed this for a long time, that comparability is promoted, or assured, by all companies being required to use the same accounting methods, that is to say, ‘standardisation’ or ‘uniformity’ of method”. Early researchers (see Wilkinson

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1965, Morgan 1967, Bromwich 1980, Fitzgerald 1981, Dopunik 1987, Goeltz 1991, Wallace 1990, Schweikart et al. 1996) indicated a strong interest in the achievement of greater levels of international harmonisation, with the eventual goal of achieving uniformity in accounting practice. Wilkinson (1965) even suggested that “each company presents only one set of accounts for all investors, of whatever nationality”. Along with the accelerating trend of convergence toward International Financial Reporting Standards (IFRS) since the late 1990s, one of the primary arguments for IFRS, on the ground of economic rationality, was to achieve a global accounting uniformity which brought about an open and accountable world (Lehman 2005). Saravanamuthu (2004) argued that “the IFRS projects an aura of objectivity by transcribing complex local reality into universal recognisable and acceptable information”. A major assumption of these arguments, as indicated by the IASB (2008), is that accounting uniformity leads to comparable financial information across international boundaries.

On the other hand, many have questioned the possibilities of a single regulatory framework that could meet the financial reporting needs of all societies. There have been considerable counter-arguments that have focused on environmental factors, such as difference in culture (Violet 1983, Riahi- Belkaoui and Picur 1991, Belkaoui 1983, Taylor-Zarzeski 1996), economic factors (Gray 1988, Chow and Wong 1987, Ampofo and Sellani 2005, Chand and White 2007) and political systems (Luther 1996, Chandler 1992, Ahadiat and Stewart 1992, Craig and Diga 1996). Some of these studies have raised issues such as the impact of language; the historical development of a nation; the different legal systems; the different nature of property rights; the size, structure and complexity of the economy within a nation; the education system; the social stabilities; and differences in capital markets – all of which present challenges to the development of uniform accounting practices.

The research shown above has been largely descriptive in arguing that international differences in reporting and disclosure has been attributed to the different economic and political environment of each country and has consistently presented challenges to the globalisation of accounting standards. This prior research has not actually provided evidence of the perceived costs or benefits of harmonisation by concrete cases or empirical analysis of real data. Further, the major weakness of the existing literature, in the context of this paper, is that they have not explained specially the underlying assumption of how the definition would influence any studies on the topic of global harmonisation of accounting standards.

3. Research Methodology

This paper follows qualitative research. Short interviews were carried with 5 specialists in the Accounting and Auditing Supervisory Department, the results show the challenges of Land- use rights accounting in terms of VAS and Vietnamese financial Regime. Furthermore, past literature and research findings are used to gather information on a global perspective. Textbooks, journal articles and websites are also used for collecting information.

Research questions:

- a. How current situations of accounting treatment for Land in Vietnam?
- b. What are challenges for IFRS harmonisation in terms of Land- use rights accounting?
- c. What are the solutions for Land- use rights accounting to aim to IFRS harmonisation?

4. Findings - Current status of Land accounting regulations

Currently, in Vietnam, there exist accounting treatments for Land-use rights as tables belows:

4.1. Land-use rights is intangible fixed assets or prepaid expenses

Topic	VAS 04	IAS 38	Vietnamese financial Regime	Remark
Initial recognition	Under Vietnamese law, entities and individuals are not permitted to own land but only land use rights. Land use rights are recognized as intangible fixed assets or long-term prepaid expenses in accordance with prevailing regulations (VAS04.18).	Under IFRS, land use rights are considered to be within the scope of IAS 17 – Leases and are classified as finance or operating lease as appropriate.	According to Article 4.2d of Circular 45, a land use right which is recognized as intangible fixed assets comprise: + Those granted by the State for which land use levy is collected; + Those acquired in a legitimate transfer; + Land rights to use leased land obtained before the effective date of Land Law (2003) for which payments have been made in advance for more than 5 years and supported by land use right certificate issued by competent authority. + Land use rights which are not recognized as intangible fixed assets comprise: + Land use rights granted by the State without collecting land use levy. + Land lease payment paid one time for the entire lease term (the land lease date is after the effective date of the Land Law 2003 and therefore certificate of land use right is not granted).	In accordance with IFRS, land use rights may be classified as finance lease or operating lease depending on each circumstance. + In case of operating lease, land lease payment paid for future lease period will be recognized by lessees in long-term prepaid expenses similarly as according to VAS; + In case of finance lease, lessees will recognize a finance lease asset.
Subsequent measurement - Amortisation	x (VAS04.54) Maximum useful life of intangible fixed assets is 20 years. x (VAS 04.57) In some cases, the useful life of intangible fixed assets may exceed 20 years upon reliable evidences but must be specified. In this case, the enterprises must: (a) Depreciate the intangible fixed assets according to their most accurately-estimated useful life; and (b) Justify the reasons for the estimation of the assets' useful life in the financial statements. x (VAS4.65) Useful life and amortization method must be reassessed at least at the end of every fiscal year.	x (IAS38.88) An entity shall assess whether the useful life of an intangible asset is finite or indefinite and, if finite, the length of, or number of production or similar units constituting, that useful life. An intangible asset shall be regarded by the entity as having an indefinite useful life when, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the entity. x (IAS38.107) Intangible assets with indefinite useful life are not amortized. x (IAS38.109) The events and circumstances relevant to the classification of an intangible asset as having either a finite or indefinite useful life may change over time. A change in the assessment of the useful life from indefinite to finite is accounted for as a change in estimate under IAS8.	(Article 11.2) Land use rights is amortized over the land lease period. Land use rights with indefinite useful life is not amortized.	x Requirements on range of useful lives for intangible fixed assets of Circular 45 are not consistent with those of IAS 38. IFRS permits measurement of intangible assets with indefinite useful life for which amortization is not required. x Similarly to tangible fixed assets, VAS permits reassessment of useful life and amortization method on an annually basis while under Circular 45, method of amortization is allowed to be changed only once during the use of assets.

4.2. Land-use rights is investment property

Topic	VAS 04	IAS 38	Vietnamese financial Regime	Remark
Definition	(VAS05.5) Investment property is property being land-use rights or a or both, building - or part of a building - infrastructure held by the owner or by the lessee under a finance lease to earn rentals or for capital appreciation or both, rather than for use in the production or supply of goods or services or for administrative purposes; or sale in the ordinary course of business.	(IAS40.5) Investment property is property (land or building or part of building or both) held (by the owner or by the lessee under a finance lease) to earn rental income or for capital appreciation, or both, rather than for use in the production or supply of goods or services or for administrative purposes; or sale in the ordinary course of business.	<p>According to Circular 16, for properties held as a result of foreclose in accordance with Clause 3, Article 132 of the Law on Credit Institutions:</p> <p>x For properties held for sales or transfer for purpose of recovering capital within 3 years, the credit institutions shall not record the increase in assets and depreciation;</p> <p>x For properties acquired for use in normal course of business, the credit institution shall record the increase in assets and depreciation them according to prevailing regulations. The procurement of such assets must comply with the provision of in Clauses 3 and 4, Article 6 of Decree No.93/2017/ND-CP, in which the net book value of those assets must not exceed 50% of the charter capital and reserve for supplementary</p> <p>x For properties acquired for use in normal course of business, the credit institution shall record the increase in assets and depreciation them according to prevailing regulations. The procurement of such assets must comply with the provision of in Clauses 3 and 4, Article 6 of Decree No.93/2017/ND-CP, in which the net book value of those assets must not exceed 50% of the charter capital and reserve for supplementary charter capital.</p>	<p>x Under Vietnamese law, entities and individuals are legally not allowed to own land but only land use rights. Therefore, definition of investment property in VAS 05.5 is modified in accordance with this requirement.</p> <p>x With respect to the provisions in Circular 16, no recognition of properties held as a result of foreclose may result in understating of enterprises' assets in their financial statements</p>

The authors synthesized

4.3. Advantages and limitations of current regulations on accounting for land use rights in enterprises

Advantages

The regulations on accounting for land use rights in enterprises have been standardized, creating favorable conditions for enterprises to determine the value, record and present information on the financial statements relatively fully.

Limitations

In addition to the above advantages, the regulations on accounting for land use rights at enterprises also have some limitations that lead to the presentation of information that is not really useful in the financial statements:

Firstly, for land use rights that are leased by an enterprise and the land rent is paid annually or once without a land use right certificate but has an irrevocable land lease contract and the enterprise has the right to control the benefits derived from that land, current Vietnamese accounting regulations do not guide this type of land use right to be valued, recognized and presented in the financial statements as an intangible asset, and only instructs that this one-time rental will be gradually amortized to expenses on Account 242 - prepaid expenses.

Secondly, for land use rights that are intangible fixed assets, the valuation subsequent to initial recognition follows historical cost model. There is neither guidance in recognition for impairment loss nor recognition under revaluation model.

Thirdly, in case of the land use right that is assigned by the State to the enterprise without land use levy, the historical cost of this type of land use right is being guided by Decree 151/2017 to be determined according to the land price bracket of the People's Committee of the province or city according to Article

100, which is not very reasonable, because in many cases the price based on the land price bracket of the People's Committee of the province or city does not truly reflect the market price.

Fourthly, the current guidance on amortization of land use rights regarding the amortization period and amortization method according to Circular 45/2013/TT-BTC is for tax purpose only. Meanwhile, VAS 04 on intangible fixed assets and VAS 05 on investment properties do not have clear instructions for the case of long-term land use rights without amortization. In this case, the enterprise needs to test for impairment, and report any impairment loss in the financial statements.

Fifthly, there is a need for more complete guidance for specific businesses that are assigned land for preserve afforestation, or forestry enterprises that are assigned land for afforestation and do business on it, or enterprises that produce and trade in salt, agricultural enterprises that produce seeds...For these enterprises, the State neither collects land use fees nor issues land use right certificate (LURC). Therefore, it is necessary to guide them on how to determine the value and reflect in the accounting books and financial statements about the land resources assigned by the State to enterprises, thereby providing more complete and transparent information about the financial resources of the enterprises.

Sixthly, the current regulations on accounting have not yet guided enterprises to fully disclose the land resources that the enterprise is entitled to manage and use to bring benefits to the enterprise in the financial statements.

5. Discussions

5.1. Completing the identification and recognition of land use rights

According to international practice, land is considered a tangible fixed asset while in Vietnam it is an intangible fixed asset because it is the right to use. However, land is an asset with a specific shape, so the classification according to Vietnam's regulations is not suitable with the nature of the property. On the other hand, a subleased land is classified as investment property along with the premises on it as a tangible asset leading to inconsistent classification of property as land in Vietnam.

In Vietnam, land is collectively owned by the people and managed by the government on their

behalf. Thus, under such a system, property owners cannot have full and legal title to the land. Their rights are limited to the land use rights permitted by law.

Land users usually receive a land use right certificate which shows the land user's rights to the property. There are different types of land use rights, however it is important to note that under current regulations people can have indefinite LURCs. An individual can rent a piece of land and pay the rent annually (known as an "annual arrangement") or pay the entire rent in one payment (known as a "one-time arrangement").

More practically, the different legal status of land ownership has a great influence on the assumptions made about asset recognition. According to land ownership law of Vietnam, the physical form of land cannot be recognized in Vietnamese accounting standards, only land use rights can be measured and reported as intangible assets. This rationale to a certain extent reinforces our assumption that the economic nature of land use rights in Vietnam is similar to physical land in western countries. If they are formally different but are of the same "economic nature", the different measurement and presentation in accounting will make it difficult to achieve the "true comparability" in the current financial statements.

Specifically, the difference is as follows: The IASB defines an asset as "a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow into the entity" (IASB, 2010). Land is measured as an asset in the financial statements of companies when they have control over the land. However, Vietnamese reporting entities do not control the land but only hold land use rights. Companies do not report land in their financial statements but as "land use rights", which are often classified as intangible assets in their Statements of financial position.

While the underlying economic nature of these two accounts in relation to companies' businesses may not be so different, if we shift our focus to the reported financial position and performance the issue of comparing financial statements will become clearer.

Under IFRS, intangible assets must be recognized at cost, just like PPE assets. However, unlike PPE assets, intangible assets cannot then

be measured to fair value or revalued unless there is an active market. By their very nature, most intangible assets have no active market and therefore will not be subject to revaluation (Kimmel et al. 2006). Using the cost model, after initial recognition, intangible assets are recognized at cost less accumulated amortization and accumulated impairment loss. As mentioned, land use rights in Vietnam have a limited term of use. An entity must systematically value an asset based on its useful life, resulting in a depreciation expense in the profit or loss account for each period.

In summary, in order to make the information on the financial statements of the enterprise be comparably informative, the accounting regulations should consider the recognition of land in the form of land use rights so as to clearly show the nature of the current transactions related to the land use rights.

In our opinion, from the point of view of accounting, relevant accounting standards should clarify and provide specific conditions for determining land use rights or distinguishing land use rights from long-term leased land. It cannot be implied that land use rights are subject to the provisions of other legal documents (land law).

In Vietnam, land acquisition is essentially like a lease, i.e. Vietnamese companies lease land for 50 years from the State. However, it is not completely the same as a lease because Vietnamese companies divide land into two parts: (1) physical land (not recorded in accounting); (2) and intangible land use rights, but they only recognize the intangible part of land use rights. The physical part is off the balance sheet. To make the financial statements comparable, a consistent treatment of the financial position and performance is made based on the underlying economic nature of the transaction.

5.2. Completing accounting for assigned land use rights as intangible assets

Regarding the legal status of land use rights, with (1) land use rights assigned by the State with land use levy or legally transferred and (2) leased land use rights existing before the effective date of the 2003 Land Law, enterprises have been granted land use right certificates by competent authorities and have paid land rent for the entire lease period or for many years, of which the remaining lease period is at least five years. The above cases are

considered as intangible assets at the enterprises. Meanwhile, land use rights are allocated by the State without land use levy, with leased land with one-off rental payment for the entire lease period (land lease period after the effective date of the 2003 Land Law and the land use right certificate is not granted), the land rent shall be gradually amortized into business expenses according to the number of years of land lease, and shall not be recorded as an intangible asset. Thus, all cases of prepayment of land rent after the effective date of the 2003 Land Law must be recorded as prepaid expenses, regardless of whether there is a land use right certificate or not. If the land is leased with annual rental payment, the land rental shall be accounted into business expenses in the period corresponding to the annual land rental payment.

However, in our opinion, in the case of leasing land use rights, it is advisable to consider recording and presenting information in accordance with regulations on leased properties. Meanwhile, land use rights assigned by the State with land use levy or legally transferred are recorded as intangible assets. Specifically, enterprises need to consider the following contents related to land use rights eligible for intangible assets:

Initial recognition at cost:

The historical cost of a fixed asset as a land use right is determined to be the entire amount spent to acquire the lawful land use right plus (+) expenses for compensation for site clearance, leveling, and registration fees (excluding expenses for construction of works on land); or the value of land use rights received as capital contribution.

Valuation subsequent to initial recognition:

Enterprises choose one of two models:

+ Cost model:

Carrying amount (land use rights) = Initial cost - Accumulated amortization - Accumulated impairment loss of land use rights (if any)

+ Revaluation model:

Carrying amount (land use rights) = Revaluation amount of land use rights - Subsequent accumulated amortization - Accumulated impairment loss of land use rights (if any)

However, using the revaluation model of land-use rights assets requires an active market for the asset.

Amortization of land use right assets:

+ If the land use right has a finite useful life: calculate amortization

+ If the land use right has an indefinite useful life: excluding depreciation, periodically test for impairment of the asset.

5.3. Completing state-leased land use rights

According to the provisions of Clause 8, Article 3 of the 2013 Land Law, the State leases land use rights (hereinafter referred to as the State leases land) means the State's decision to grant land use rights to the subjects who wish to use the land through the lease of land use rights.

Currently, the law stipulates two cases when the State leases land, including:

- Land rental with one-time payment;
- Land rental with annual payment.

This was allowed under previous lease accounting standards with operating leases. However, under the new accounting treatment of IFRS 16, finance leases and operating leases should be treated equally, at least, when it comes to capitalization of payments to the government for the use of land. The IASB's IFRS Interpretation Committee found that there are characteristics of a lease based on the definition of a lease, that is, "A lease is an agreement whereby the lessor transfers to the lessee an amount or a series of payments for the right to use an asset for an agreed period" is satisfied. The characteristics identified in this standard include:

Property use right: land use right is the right to use property.

The existence of lessor and lessee: government, identified as lessor and subject as lessee.

One-time or multi-time payment: the payment for the purchase of rights is made directly from the organization or individual that is assigned land and pays the annual land rent to the State for continued use.

Agreement period: there is an agreement between the State and the entity on the time, including the extension plans.

Given this analysis, it is therefore correct that the annual land payments include land rent and therefore should be capitalized under IFRS 16 by creating a new depreciable lease that is characterized by annual land rent paid to a

government representative the right to use the land for the lease term (for example, 49 years or 50 years) and at the same time creates a lease obligation that represents an obligation to pay annual land rent for the lease period in the statement of financial position.

The transaction costs to purchase the land will continue to be capitalized and amortized over the useful life as the first factor, but will be restored at the end of the land use term if the use right is renewed with the same entity or individual. In short, the combination of transaction costs and the present value of the annual land rent for the lease term will represent the amount capitalized for the land and amortized accordingly.

At the lease commencement, the lessee must recognize in the statement of financial position the land use rights and the obligation to pay the rent. The lessee is required to recognize the following items in the comprehensive income statement, except to the extent that other accounting standards require or permit this item to be included in the cost of the asset:

- (a) interest expense on the rental obligation
- (b) amortization on land use rights
- (c) any change in rental payment liability due to a revaluation of the expected rent or expected payments under the term option and the residual value in relation to current or previous period.
- (d) any impairment in the value of land use rights.

Initial recognition

At lease commencement, the lessee must identify:

(a) The lease liability is initially measured at the present value of the lease payments payable over the lease term, discounted at the rate implicit in the lease if that can be readily determined. If that rate cannot be readily determined, the lessee shall use their incremental borrowing rate.

(b) the land use right equivalent to the rental liability, plus any initial direct costs incurred by the lessee.

Valuation subsequent to initial recognition

After lease commencement, the lessee must identify:

(a) Liability to pay rent at the amortized price according to the effective interest method

(b) Land use right according to the amortized price

Amortization of lease land use rights

The lessee calculates the amortization of the land use rights according to the amortized value, the lessee must choose a method of analysis and consider the amortization period according to IAS 38.

Impairment test for land use right:

The lessee must apply the impairment test for the land use right at each end of the reporting period to determine if it is impaired and recognize any impairment loss in accordance with IAS 36.

Disclosure on financial statements:

The lessee must disclose the following items in the statement of financial position:

(a) lease liabilities, separately from other financial liabilities;

(b) land use rights as if they were assets

The lessee must disclose amortization on the land use rights and interest expense on lease liabilities separately from other amortization and interest expenses, either profit or loss.

The lessee must classify cash payments for leases as financing activities in the statement of cash flows and present them separately from other financing cash flows.

Conclusion

The problem of current IFRS harmonisation is that we try to create an appearance of “uniformity” and the appearance of “comparability”. Many financial numbers look alike in the accounts, but in fact, they may be subject to substantially different treatment. If we are satisfied with the current practices that are achieving comparability by treating different transactions in different ways, we may be undermining our own objective by creating the illusion of similarity. As pointed out above, there are many solutions to come with international convergence and comparability to be achieved. We might accept that we can work towards better comparability but that absolute uniformity of reporting practice and disclosure may be beyond this globalisation effort.

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FINANCIAL FACTORS AFFECTING EARNINGS MANAGEMENT: THE CASE OF FOOD AND BEVERAGE FIRMS LISTED ON VIETNAM STOCK EXCHANGE

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Abstract: *The purpose of this study is to examine the effect of financial factors on earnings management of Food and beverage companies listed on Vietnam stock exchange. The study is based on a panel data of 60 food and beverage listed enterprises over the period from 2008 to 2020. In addition, the Modified Jones model (1995) is used to provide more accurate and reliable information about earnings management behavior of these firms. The results indicate that working capital ratio (WC), growth rate (GROWTH) and business performance (ROA) have the effect on earnings management. Research findings provides further evidence of earnings management to help related parties easily access and use information to identify earnings management, especially for investors to make proper investment decisions.*

• Keywords: earnings management, financial factors, food and beverage companies.

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Tóm tắt: Bài viết phân tích ảnh hưởng của các yếu tố tài chính đến hành vi quản trị lợi nhuận của các công ty thực phẩm và đồ uống niêm yết trên thị trường chứng khoán Việt Nam. Nghiên cứu dựa trên dữ liệu bảng của 60 doanh nghiệp niêm yết thực phẩm và đồ uống trong giai đoạn từ 2008 đến 2020. Bên cạnh đó, mô hình Modified Jones (1995) được sử dụng để cung cấp thông tin chính xác và đáng tin cậy về hành vi quản trị lợi nhuận của các công ty này. Kết quả chỉ ra rằng tỷ lệ vốn lưu động (WC), tốc độ tăng trưởng (GROWTH) và hiệu quả hoạt động kinh doanh (ROA) có ảnh hưởng đến hành vi quản trị lợi nhuận. Kết quả nghiên cứu cung cấp thêm bằng chứng về hành vi quản trị thu nhập để giúp các bên liên quan dễ dàng truy cập và sử dụng thông tin một cách chính xác, đặc biệt để giúp các nhà đầu tư đưa ra quyết định đầu tư đúng đắn.

• Từ khóa: quản trị lợi nhuận, yếu tố tài chính, công ty thực phẩm và đồ uống.

1. Introduction

Profit plays a significant role in business performance, attracting the attention of investors as businesses with economic efficiency and

high growth prospects tend to be invested more. Therefore, managers, especially at listed companies, often use their powers to intervene in arising economic transactions and change information shown in the financial statements to achieve the desired corporate profit target in order to inflate business results in important periods. Therefore, earnings management has easily occurred in enterprises.

According to studies of Abbadiet al. (2016), Poli (2017) and Wang et al. (2018), earnings management is affected by a number of factors, of which the financial factors inside the business are the most obvious. Identifying and overcoming those factors is necessary for information users, especially investors, to have accurate information sources to make the right decisions. In particular, the food and beverage industry is developing rapidly and making great contributions to the Vietnamese economy (Vietnam GSO, 2021). With the desire to learn and analyze the earning management of listed companies in this industry, this paper investigates the effect of financial factors on earnings management of food and beverage companies listed on the Vietnam Stock market in order to provide some insight into the matter.

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2. Literature review and hypotheses development

2.1. Theories relating to earnings management behavior

Agency theory

Jensen and Meckling (1976) firstly published the agency theory, also known as the agency theory, explaining the separation between management and ownership when the use of resources leads to problems. Managers can act according to their own desires to achieve personal benefits more than the interests of the owners. Agency theory has its roots in economic theory, which, according to Jensen and Meckling (1976), focuses on the relationship between agents (Agents) and principals (Principals), whereby the agent will have a certain powers based on the authorization of the principal. Agency theory indicates that when there is information asymmetry (transaction subjects have unequal levels of information holding - an imbalance in the information structure) it will lead to a conflict of interest between representative and authorized party.

Signaling theory

The development of signaling theory was originally to explain asymmetric information in the labor market (Spence, 1973). This theory argues for the fact that the presence of information asymmetry could also be the reason that ethical corporations use financial information to send market signals (Ross, 1977). To some extent, market efficiency means that investors make rational decisions at any point in time and set prices based on a single stock or market, essentially integrating all of them, available information (Fama, 1970). Earlier, Chevis et al. (2007) suggested that managers can manipulate earnings to achieve their own ends in an effort to convey favorable or unfavorable information about the future prospects of the company to capital markets. The opportunity for earnings management to be reported captures a company's financial reserves and changes in corporate stock valuation, depending on actual cash flows (Sun et al., 2010).

Stakeholder theory

Stakeholder theory was firstly mentioned in the study of Freeman (1984). Accordingly, the theory states that the success of an organization

depends on the relationship between managers and stakeholders such as employees, suppliers, the State, customers, and others. According to Mattingly et al. (2009), the process of managing stakeholders is related to corporate governance and is therefore related to information transparency and data quality about corporate profitability. Empirical studies of many authors provide evidence that good corporate governance will have a good impact on the relationship between managers and stakeholders, thereby improving the quality of financial statements and reducing the ability of performing earnings management.

Asymmetry information theory

Akerl of (1970) published the theory of information asymmetry. Theoretically, transaction subjects have unequal levels of information holding, leading to an asymmetry of information, called information asymmetry. Research by Godfrey et al. (2003) suggests that there is always an imbalance in the information structure between managers and information users. According to Rajgopal and Venkatachalam (2011), managers often choose to change information on financial statements when there is a conflict of interest between members of the management board due to information asymmetry. Businesses tend to hide information that is detrimental to them and vice versa, will provide more detailed and complete information beneficial to businesses, even exaggerating the actual business situation (Staubus, 2000). Research of Thomas and Vyas (2013) gives evidence that when the information asymmetry is overcome, it will help businesses reduce their financial constraints and improve the quality of profits.

2.2. Financial factors affecting earnings management and hypothesis development

Company size (SIZE): Firm size is often used in previous research on earnings management. Although Jeong and Rho (2004) and Nuryaman (2009) suggest that larger firms tend to change earnings to report more predictable earnings. Several other studies (Krishnan, 2003; Park & Shin, 2004; Piot & Janin, 2007; Sánchez-Ballesta&García-Meca, 2007) indicate that large firms engage in earnings management to a much lesser extent. In addition, small-sized companies often do not gain the attention of investors, leading

to managers making moves to influence profit management to attract capital. Therefore, we propose the first hypothesis:

H1: Firm size has a negative effect on earnings management.

Working capital ratio (WC): Businesses with high net working capital mean increased inventory and accounts receivable. According to Kothari et al. (2005), companies with a high working capital ratio mean that managers are storing accruals to use for future earnings management, instead of using capital to increase earnings. Accordingly, the second hypothesis as follows:

H2: Working capital ratio positively affects earnings management.

Leverage (LEVERAGE): Financial leverage is an activity related to the use of borrowed debt, instead of using equity to purchase assets to gain benefits for the business. The higher the leverage, the greater the debt ratio of that business and vice versa. Investors will not invest in companies with high leverage, because they think that these companies will face high financial risks such as financial crisis, ability to pay debts and bankruptcy (Andrade & Kaplan, 1998). To avoid this situation, enterprises with high leverage ratio tend to implement earnings management (Bassiouny et al., 2016; Gombola et al., 2016; Iman & Nejad, 2015). Therefore, the study hypothesizes that:

H3: Leverage has a positive impact on earnings management.

Cash holding ratio (CASH): According to agency theory, managers can use excess cash to manipulate earnings and thereby increase corporate profits. Besides, companies with a high cash holding ratio show that the company is having poor business performance, the accumulation of excess cash will reduce the value of money and not achieve high profits (Alhadab et al, 2015; Sun et al, 2012). Accordingly, the study suggests that:

H4: Cash holding ratio has a positive effect on earnings management.

Growth rate (GROWTH): High growth companies are often seen as risky and potentially inflated returns for the purpose of attracting investors. Stock speculators are often attracted to and decide to invest in businesses with high growth rates because they expect large profits in a

short time. However, companies with high growth rates often have poor business performance and must use earnings management to attract capital for the company (Albersmann & Hohenfels, 2017; Gul et al., 2009; Menon & Williams, 2004; Sáenz-González & García-Meca, 2014). Therefore, we propose that:

H5: Growth has a positive impact on earnings management.

Company performance (ROA): The ROA variable shows investors how efficiently a business is using its assets. The higher the ROA, the better the firm's asset utilization. The studies of Ali (2015) and Debnath (2017) show that the higher the profit target, the more likely the enterprise is to implement the earnings management. The more investment capital flows into the business, the more the business must maintain or show a better profit ratio than investors would like. Therefore, the study expects that:

H6: ROA positively affects earnings management.

Earnings per share (EPS): EPS is the ratio of net profit to the number of shares issued. EPS is also an indicator of a company's business results that investors are interested in. There are many studies that have shown the positive reactions when the EPS is high, the more investors participate. Therefore, businesses will have earnings management to show the above profit on financial statements, thereby attracting more and more investors (Almaryani et al., 2016). Accordingly, the study hypothesizes that:

H7: EPS positively affects earnings management.

3. Research methodology

3.1. Research Model

To investigate the influence of financial factors on earnings management behavior of food and beverage firms listed on Vietnam stock exchange, our paper propose the model as follows:

$$EM = \beta_0 + \beta_1 * SIZE + \beta_2 * WC + \beta_3 * LEVERAGE + \beta_4 * CASH + \beta_5 * GROWTH + \beta_6 * ROA + \beta_7 * EPS + \varepsilon$$

Where:

EM: earnings management measured by Modified Jones model (1995);

SIZE: firm size measure by logarithm of total assets; WC: working capital measured by current assets divided by current liabilities; LEVERAGE: leverage measured by current liabilities divided by total assets; CASH: Cash holding ratio measured by cash divided by current assets; GROWTH: growth rate of the firm; ROA: firm performance measured by returns on total assets; EPS: earnings per share.

According to Jones (1991), the non-discretionary accruals is dependent on revenue and fixed assets. Applying the Modified Jones (1995) model, the non-discretionary accruals is made according to the following equation:

$$\frac{NDA_{it}}{A_{it-1}} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}}$$

In which:

NDA_{it} : non-discretionary accruals in year t;

A_{it-1} : book value of total assets at the end of year t - 1;

ΔREC_{it} : the change in receivables between year t and t-1;

ΔREV_{it} : the change in revenue between year t and t-1;

PPE_{it} : gross value of property, plant and equipment in year t.

To minimize heterogeneity variance, the variables in the equation will all be divided by. Parameters α_1 , α_2 , α_3 are estimated by the least squares method of the coefficients α_1 , α_2 , α_3 in the following model:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}}$$

After estimating the non-discretionary accruals (NDA), we will determine the discretionary accruals (DA) from which to calculate the earnings management according to the following formula:

$$\frac{DA_{it}}{A_{it-1}} = \frac{TA_{it}}{A_{it-1}} - \frac{NDA_{it}}{A_{it-1}}$$

Therefore, earnings management can be determined as follows:

- If $EM > 0$: Enterprise has increased earnings management

- If $EM < 0$: Enterprise has reduced earnings management

- If $EM = 0$: There is no earnings management

Research data is collected from the financial statements of 60 companies in the food and beverage industry listed on the Vietnam Stock Exchange in the period of 2018-2020 through the FiinPro platform. We employ descriptive statistics, correlation matrix analysis, regression analysis including Pooled OLS, FEM, REM.

4. Findings and discussions

Table 1. Descriptive statistics

Variable	Mean	Std.Dev.	Min	Max
EM	-0,1182	0,2285	-0,7039	1,5294
SIZE	27,4476	1,8313	21,8791	32,3823
WC	1,6044	1,3373	0,0147	12,978
LEVERAGE	0,5337	0,6063	0,0011	6,6055
CASH	1,1344	7,9472	0,0003	80,1571
GROWTH	0,0912	0,4774	-0,8645	5,2653
ROA	6,6648	15,8057	-68,52	138,1
EPS	2722,815	4743,539	-9094	27224

Table 2. Correlation matrix

	EM	SIZE	WC	LEVERAGE	CASH	GROWTH	ROA	EPS
EM	1,000							
SIZE	-0.0745	1,000						
WC	0.1872 **	-0.0333	1,000					
LEVERAGE	0.092	-0.2935 ***	-0.202 ***	1,000				
CASH	0.0312	0.0746	-0.1323 *	-0.0938	1,000			
GROWTH	0.4727 ***	-0.1186	0.1694 **	0.0869	-0.0244	1,000		
ROA	0.3793 ***	0.1084	0.068	-0.1688 **	-0.0417	0.0157	1,000	
EPS	0.1088	0.2914 ***	0.1195	-0.1247 *	-0.0611	0.0391	0.5114 ***	1,000

Notes: *** and ** with statistical significance at the 1% and 5% levels, respectively.

The variables Working capital ratio (WC), Return on total assets (ROA), and Growth rate (Growth) are positively correlated with the dependent variable, which is earnings management. In which, WC has a positive correlation with

EM at 5% significance level; while Growth and ROA are positively correlated at the 5% level of significance. In addition, no multicollinearity occurs in the model.

Table 3. Regression results

	POOLED OLS	FEM	REM
SIZE	0,0014877	-0,0055	0,0005
WC	0,0241651	0,0251 **	0,0245 ***
LEVERAGE	0,0582719	0,0382	0,0481 **
CASH	0,0024401	0,0019	0,0021
GROWTH	0,2091682	0,1671 ***	0,1880 ***
ROA	0,0066975	0,0076 ***	0,0074 ***
EPS	-6,80E-06	-7,80E-06	-7,87E-06 **
Observations	180	180	180
R ² (%)	40,95	45,41	44,97
Prob> F	0,000	0,000	0,000

Notes: *** and ** with statistical significance at the 1% and 5% levels, respectively.

Table 4. Suitable model test

	Pooled OLS	REM	FEM	Suitable model
Breusch - Pagan Lagrange Test	Chibar2(01) = 31,23 Prob> chibar2 = 0,0000 Sig = 0,0000 (<5%) So, reject Pooled OLS model, and choose random-effects model			FEM
Hausman Test		Chi2 (6) = 77,97 Prob> chi2 = 0,0000 (<0,05) So, refuse random-effects model, and selecting the Fixed-effects model		

The above tests support for the results of FEM, indicating that WC has a positive influence on the profit management of the enterprise with the statistics 10% ($p < 0.1$) Coefficient $\beta = 0.0251$ ($p < 0.1$) means that the higher working capital ratio is, the more earnings management will increase accordingly. Therefore, hypothesis H2: *Working capital positively affects earnings management* is accepted. This results are in line with the study of Kothari et al. (2004).

In addition, both Growth and ROA positively effect on the dependent variable (EM) at 1% significance level ($p < 0.01$). The coefficients $\beta_{\text{GROWTH}} = 0.0019$ and $\beta_{\text{ROA}} = 0.1671$ mean that the higher the growth rate of the business or the higher the ROA, the better the earning management of

the business will be. This is consistent with the research results of Albersmann and Hohenfels (2017), Sáenz-González & García-Meca (2014) or Ali (2015) and Debnath (2017). Therefore, hypothesis H5 and H6 are theoretically accepted.

Other independent variables, including SIZE, LEVERAGE, CASH, and EPS are not statistically significant because $p\text{-value} > 0.1$. Therefore, there is no conclusion about the relationship of these variables to dependent variable.

5. Conclusions and recommendations

Based on the empirical study, the research results show that there are three financial factors that affect the earnings management and their statistically significant are 1%, 5% and 10%. All three financial factors, including working capital (WC), Growth and ROA have a positive impact on earnings management behavior.

In order to control and limit the behavior of earnings management in food and beverage enterprises, the author proposes some recommended solutions associated with the above factors as follows:

Firstly, a high working capital is not only sufficient to cover fixed assets and long-term assets, but also has excess capital to invest and finance other assets. This is the state in which the business proves to be financially stable and well developed, the state that every company wants to move towards. Therefore, a high working capital is an attractive point for investors to make decisions. For that reason, according to the information asymmetry theory, managers will take advantage of working capital to provide inaccurate information on financial statements to investors. Besides, a high net working capital ratio also shows that the enterprise is holding working capital accumulations that are not strictly managed. Administrators can easily manipulate and use this accumulation for their own purposes such as earnings management.

Secondly, growth is used by a company's analysts, investors, and management to evaluate a company's growth periodically and make predictions about future performance. This correlation is expected to hold true for agency theory. Managers will use the company's high growth rate to attract investment capital to achieve

their own interests. Managers manipulate financial statement and choose to provide false figures about the growth rate of their businesses with the aim of maintaining the position of the business and the advantage of the business. Especially for companies with high growth rates, which are often assessed as high-risk companies with the ability to inflate profits, the motivation for managers to perform good governance behavior is to try to retain the best companies, investors and maintain investment flows into the business.

Thirdly, people who use ROA to compare firms should compare ROA between similar companies over the years. The assets of a company including borrowed capital and equity are used for the purpose of financing the operations of the company. ROA represents the efficiency of converting investment capital into profit. Therefore, a higher ROA indicates more profit for the company on less investment. This attracts more business-oriented investors, thereby creating motivation for managers to do earnings management.

As a result, investors need to be cautious before investing in businesses with sudden high growth rates. They should properly evaluate the actual business performance of the enterprise as well as be careful when using the information on the financial statements of these enterprises to make accurate and wise investment decisions. Moreover, it is necessary for investors to keep an eye on the company's working capital and ROA, especially when these indexes are trending up. Furthermore, it is essential for independent audit firms to put the truthfulness of information on the top, to promptly detect errors through careful assessment of possible risks and report them to other units and agencies, relevant competent authorities to take sanctions against violating companies. In addition, relevant agencies such as the Stock Exchange, the State Securities Commission, the Ministry of Finance and the State management agencies need to closely monitor and issue strict laws on earnings management causing damage to the economy and threatening the transparency and legality of business operations.

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THE DETERMINANTS OF CUSTOMERS' INTENTION TO USE QR CODE MOBILE PAYMENT SERVICES

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Abstract: Based on the unified theory of acceptance and use of technology (UTAUT) model, this study extends the prior literature on consumer adoption of mobile payment by investigating the key factors affecting customers' intention to use Quick Response (QR) code mobile payment services. Covariance-based structural equation modelling (CB-SEM) is used to analyze survey data from 248 respondents in Hanoi, Vietnam. The results show that customers' effort expectancy is the most influential factor, followed by compatibility, performance expectancy, and personal innovativeness. This paper enriches research on mobile payment services, offers insights into user behavior, and provides important implications for suppliers of QR code mobile payment services.

• Keywords: QR code, mobile payment, intention to use, UTAUT.

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Tóm tắt: Dựa trên mô hình chấp nhận và sử dụng công nghệ (UTAUT), nghiên cứu này tiếp nối các nghiên cứu trước đây về việc chấp nhận thanh toán trên thiết bị di động của người tiêu dùng qua việc phân tích các nhân tố chính ảnh hưởng đến ý định sử dụng dịch vụ thanh toán trên thiết bị di động qua mã QR của khách hàng. Mô hình phương trình cấu trúc dựa trên hiệp phương sai (CB-SEM) được sử dụng để phân tích dữ liệu khảo sát từ 248 người dùng trên địa bàn Hà Nội. Kết quả cho thấy nỗ lực kỳ vọng của khách hàng là yếu tố ảnh hưởng lớn nhất, tiếp theo là sự tương thích, hiệu quả kỳ vọng và sự tự đổi mới. Nghiên cứu này làm phong phú thêm các nghiên cứu về các dịch vụ thanh toán trên thiết bị di động, cung cấp thông tin chi tiết về hành vi của người dùng và đưa ra các khuyến nghị hữu ích cho các nhà cung cấp dịch vụ thanh toán trên thiết bị di động qua mã QR.

• Từ khóa: mã QR, thanh toán di động, ý định sử dụng, UTAUT.

technologies. Fintech companies have also become competitors to banks in providing more affordable payment services. In recent years, consumers have more payment methods to select rather than just making cash or credit card transactions. QR code mobile payment, which is a payment service based on mobile payment, receives a lot of attention because of its convenience, ease of use and fast transaction speed. However, in one survey on internet users, just 5% of respondents use QR code mobile payment frequently to pay for their daily transactions.¹

In this era, Vietnamese banks and fintech companies have also found different ways to adopt new technologies to improve cashless payment services. However, the number of cashless transactions of Vietnamese consumers is much lower than other neighbor countries. Specifically, 4.9% of transactions in Vietnam is cashless, meanwhile in China, Thailand and Malaysia, this number is 26.1%, 59.7% and 89%, respectively.²

¹ <https://www.statista.com/statistics/248306/distribution-of-global-mobile-payment-volume-forecast/>. Accessed 16/12/2021.

² <http://tapchitaichinh.vn/nghien-cuu-trao-doi/phat-trien-thanh-toan-di-dong-tai-viet-nam-hien-trang-va-thach-thuc-300485.html>. Accessed 25/11/2021.

1. Introduction

With the emergence of Industry 4.0, financial sector has been restructured by integrated new

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Therefore, we attempt to examine the factors determining the intention to use QR code mobile payment to find solutions to develop this service as well as the cashless payment system in Vietnam and worldwide.

Based on the unified theory of acceptance and use of technology (UTAUT) model, we develop a model with seven constructs. Explanatory variables include performance expectancy (PE), effort expectancy (EE), social influence (SI), personal innovativeness (PI), compatibility (CO) and perceived cost (PC). We carry out both online and paper surveys to collect data and target respondents in Hanoi, Vietnam. The structure equation modelling (SEM) approach is used to analyze survey responses. The results show that customers' intention to use QR code mobile payment is affected by four factors, i.e. performance expectancy, effort expectancy, personal innovativeness, and compatibility. Social influence and perceived cost are found to have an insignificant influence on customers' intention to use.

2. Literature review

QR code was developed by Denso Wave in 2000. This is a storage system using a dot matrix or two-dimensional bar code, which can store thousands of digits compared to about 20 digits that traditional bar code can store. QR code can be printed or displayed on screen and be interpreted by a special reader. In Vietnam, VNPAY (Vietnam Payment Solution Joint Stock Company) provides the first payment gateway integrating QR code mobile payment solution on mobile banking. In this study, we follow prior studies and define QR code mobile payment as *a mobile service allows customer to pay for goods and services by using smartphone to create or scan a payment QR code*.

Intention to use is defined as "the individual's interest in using the system for future work" (Wu et al., 2008, 124). Iyer and Srivastava (2018, 76) refer intention to use as "a citizen's intention to adopt and make use of a certain tool in the future". In this study, following other researchers, we define customers' intention to use as *the plans of customers in making use of a service*.

Previous studies tend to use various models to find out which factors affecting the intention

to use a new product or service such as Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), Integration of Innovation Diffusion Theory (IDT), and Unified Theory of Acceptance and Use of Technology (UTAUT). Among these, TAM and UTAUT model are the most favorable in examining behavioral intention of mobile payment. However, UTAUT model, which is a unified model based on eight models, is more up-to-date and overcomes the shortcomings of the TAM model. IDT is a theory that has been usually used to explain new technology adoption.

Several studies have found evidence of factors affecting behavioral intention of using mobile payment. Liébana-Cabanillas et al. (2015) find that attitude, subjective norms, and personal innovativeness have positive effects on consumers' intention to use. Jung et al. (2020) show that performance expectancy, knowledge, trust, compatibility, and social influence have significant influence on the intention to use of an individual in the United States. Humbani and Wiese (2018) and Humbani and Wiese (2019) conclude that consumers' perceptions of convenience and compatibility are the drivers of intention to use in South Africa, meanwhile consumers' perceptions of insecurity is the barrier of using mobile payment.

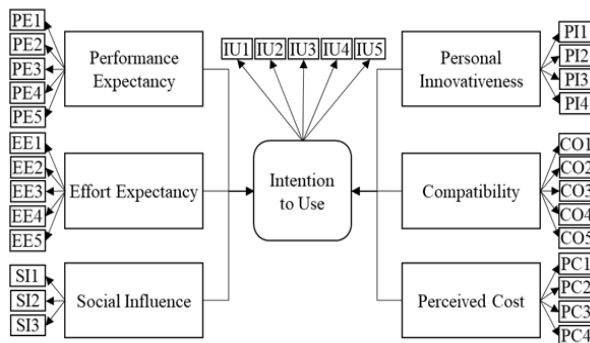
A few studies have been carried out in Vietnam regarding mobile payment as well as electronic payment and mobile banking. Nguyen et al. (2015) conclude that compatibility, perceived usefulness, and consumer trust affect the intention to use mobile payment of Vietnamese customers. Phan et al. (2020) report that performance expectation, effort expectation, social influence, security and privacy and reputation of suppliers influence the intention to use mobile payment service in Hanoi, Vietnam. More recently, Dao and Nguyen (2021) show that perceived value, social norms, and social self-image significantly influence users' intention to use mobile payment services.

3. Hypothesis development

Based on the UTAUT model, this study develops a model with seven constructs as demonstrated in Figure 1. Intention to use (IU) QR code mobile payment is the dependent variable. Explanatory variables include performance expectancy (PE), effort expectancy (EE), social influence (SI),

personal innovativeness (PI), compatibility (CO) and perceived cost (PC). Specifically, PE, EE and SI are adapted from the UTAUT model. Because QR code mobile payment is a new technology service, we include PI and CO from the IDT model. Also, as we aim to explore the barriers of customers' intention to use, PC, which is adapted from studies of Humbani and Wiese (2018), is integrated to the model.

Figure 1. Proposed Model for Intention to use



PE is defined as “the degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh et al., 2003, 447). PE is a construct in the UTAUT model and is a unified construct based on five other constructs and relating theories as follows: perceived usefulness (TAM), extrinsic motivation (MM), job fit (MPCU), relative advantage (IDT), and outcome expectations (SCT). In this study, PE can be understood as the benefits offered by using QR code mobile payment such as enhancing the customers' job or daily work, according to an individual's perception.

H1. Performance expectancy (PE) will positively affect customers' intention to use (IU) QR code mobile payment.

Like PE, EE is a construct in the UTAUT model. Three constructs that capture the concept of EE are perceived ease of use (TAM), complexity (MPCU) and ease of use (IDT) (Venkatesh et al., 2003). Therefore, EE is defined as “the degree of ease associated with the use of the system” (Venkatesh et al., 2003, 450). If an individual finds it hard to learn and use a new technology, his or her intention to use would decrease. On the other hand, if it does not take much effort to use a new system, customers would have more motivation to adopt.

H2. Effort expectancy (EE) will positively affect customers' intention to use (IU) QR code mobile payment.

SI is unified based on three constructs and corresponding theories which are subjective norm (TRA/TAM2/TPB/C-TAM-TPB), social factors (MPCU), and image (IDT). Therefore, SI is defined as “the degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al., 2003, 451). In this study, SI is defined as the degree that customers think their important others believe they should use QR code mobile payment. Specifically, important others refer to their family, friends, colleagues etc. who have close relationship to the customers.

H3. Social influence (SI) will positively affect customers' intention to use (IU) QR code mobile payment.

Rogers (1983) defines innovativeness as the extent to which a person adapts to a new idea or technology earlier in comparison with other people of the same system. In addition, individual innovativeness is affected by an individual's personality and the characteristics of the social system in which that individual is a member as well. In this study, PI is evaluated by the degree to which an individual is willing to try out a new technology and is affected by that individual's personality. An individual is compared with those who have similar situations and living conditions such as colleagues or friends.

H4. Personal innovativeness (SI) will positively affect customers' intention to use (IU) QR code mobile payment.

In the context of new technology adoption, CO is one construct in the IDT model. Rogers (1983) defines CO as the degree to which a new idea or technology is perceived as being relevant to the existing values, past experiences, and needs of potential users. Therefore, a new technology “can be compatible or incompatible (1) with sociocultural values and beliefs, (2) with previously introduced ideas, or (3) with client needs for innovations” (Rogers, 1983, 223). CO is also one of the constructs that pertains to unification of facilitating conditions in the UTAUT model.

H5. Compatibility (CO) will positively affect customers' intention to use (IU) QR code mobile payment.

PC is defined as the extent to which an individual believes that using a service will cost him or her extra money (Luarn & Lin, 2005). Regarding mobile payment, the usage costs may include communication and transaction fees. In this study, PC is considered as the financial barriers that customers may deal with to use QR code mobile payment.

H6. Perceived cost (PC) will positively affect customers' intention to use (IU) QR code mobile payment.

4. Research methodology

4.1. Variable measurement

This study uses a standardized, self-administered questionnaire to collect data for assessing the research model. All the measurement items are used with a 7-point Likert scale with scores anchored between 1 (totally disagree) and 7 (totally agree). The questionnaire also comprises several questions about respondents' demographic characteristics and behaviors (e.g., gender, age, education level, monthly income, job, occupation status, operating system of mobile devices, experience with QR code mobile payment...).

To ensure that the questionnaire is readable and reliable, the first version of the questionnaire was sent to a group of interviewees who are requested to validate the content of the questions. Accordingly, some minor changes were made to some questions to form the final version of survey questionnaire.

4.2. Data collection

We employ a convenience sampling method to target voluntary respondents in Hanoi and apply both paper-print and web-based survey approaches. After excluding invalid survey responses with invalid or missing information, there are 248 usable survey responses collected in the final research sample.

Bentler and Chou (1987) suggest that the ratio of sample size to the number of measurement items should be over 5:1, while Hair et al. (2009) propose that 150 is the minimum sample size for a model with 7 constructs or fewer, in which each construct contains at least 3 measurement items. Therefore, given 248 usable responses to assess a research model with 7 constructs and 31 measurement items, the rule proposed by Hair et al. (2009) is satisfied. We also fulfill the minimum

sample size suggested by Bentler and Chou (1987) because the ratio between the number of sample and measurement items is 8:1.

The sample characteristics are summarized in Table 1. The frequency in each characteristic is 248, except for occupation because some respondents have more than one job at the same time. Although we have approached almost all groups of customers in Hanoi, most respondents are quite young at the age of 18-21 years and still working as students with relatively low incomes. Besides, although 43.95% respondents prefer to use mobile payment, almost all respondents state that they only use QR code mobile payment for below 20% of transactions. The education level of respondents in this study is quite high, with 100% respondents have studied at a university or college. In addition, 100% respondents use smartphones, with 59.68% using iOS devices and 40.32% using Android devices.

Table 1. Sample characteristics

Demographic characteristics	Group	Frequency	Percentage
Gender	Male	58	23.39%
	Female	190	76.61%
	Total	248/248	100.00%
Age	18 - 21	215	86.69%
	22 - 30	19	7.66%
	Above 30	14	5.65%
	Total	248/248	100.00%
Education level	Bachelor's degree	236	95.16%
	Master's degree	9	3.63%
	PhD's degree	3	1.21%
	Total	248/248	100.00%
Monthly income	Below VND5,000,000	187	75.40%
	VND5,000,000 - VND10,000,000	32	12.90%
	VND10,000,000 - VND20,000,000	14	5.65%
	VND20,000,000 - VND35,000,000	6	2.42%
	VND35,000,000 - VND50,000,000	3	1.21%
	Above VND50,000,000	6	2.42%
	Total	248/248	100.00%
Occupation	Student	204	82.26%
	Freelancer	18	7.26%
	Office worker	46	18.55%
	Professional worker	10	4.03%
	Other	2	0.81%
	Total	280/248	112.90%

Demographic characteristics	Group	Frequency	Percentage
Type of preferable payment method	Mobile payment	109	43.95%
	Traditional payment (cash)	62	25.00%
	Card payment	46	18.55%
	Online payment	31	12.50%
	Total	248/248	100.00%
Operating system of mobile devices	iOS	148	59.68%
	Android	100	40.32%
	Total	248/248	100.00%
Length of QR code mobile payment usage	Never used	43	17.34%
	Less than 1 month	18	7.26%
	1-3 months	39	15.73%
	4-6 months	27	10.89%
	7 months - 1 year	31	12.50%
	1 year – 2 years	51	20.56%
	More than 2 years	39	15.73%
	Total	248/248	100.00%
The percentage of payments using QR code mobile payment	0%	43	17.34%
	01 - 10%	101	40.73%
	11 - 20%	43	17.34%
	21 - 30%	31	12.50%
	31 - 40%	27	10.89%
	>40%	3	1.21%
	Total	248/248	100.00%

4.3. Data analysis

The statistical data is analyzed using SPSS 23 and Amos 20 software. Structure equation modelling (SEM), a second-generation statistical analysis technique, is used to analyze survey responses. This method is appropriate to this study because each construct in the proposed model is measured by multiple indicators. Data is analyzed through reliability analysis (i.e., Cronbach's Alpha indicator), exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and covariance-based structural equation modeling (CB-SEM).

5. Results

5.1. Reliability analysis and exploratory factor analysis

To measure the reliability of the scales, Cronbach's Alpha indicator is used. The Cronbach's Alpha value is higher than 0.8 and below 0.95 in all scales. The corrected item-total correlation is also higher than 0.3 for all items. In addition, deleting any item would not increase the Cronbach's Alpha. Therefore, the variables have adequate reliability levels.

Next, we carry out an exploratory factor analysis (EFA) using Principal Axis Factoring with Promax rotation as the extraction method. The results show the factor analysis process with KMO of about .900 (> 0.5) and Bartlett's test with statistical significance level of .000. Moreover, total variance explained is 70.502% ($> 50\%$), which proves the appropriateness of factor analysis.

The EFA pulls out seven major factors from 31 variables. In addition, all factors extracted is consistent with the proposed hypotheses, including intention to use (IU), performance expectancy (PE), effort expectancy (EE), social influence (SI), personal innovativeness (PI), compatibility (CO) and perceived cost (PC). Besides, all factor loadings exceed 0.5, which is the minimum threshold required (Hair et al., 2009).

5.2. Confirmatory factor analysis

Confirmatory factor analysis is used to test the measurement model fit and convergent and discriminant validity. First, we use some different fit indices to measure the model fit, namely Root Mean Square Error Approximation (RMSEA), Chi-square/df, Comparative Fit Index (CFI), Tucker & Lewis Index (TLI), and Goodness of Fit Index (GFI). The value of df is equal to 403. Chi-square is 948.282 with p value equals 0.000. Chi-square/df is 2.353, lower than the maximum threshold of 0.3 (Hair et al., 2009). In addition, the value of the CFI (0.914) and TLI (0.901) indices exceed the threshold of 0.9, and the RMSEA value (0.074) is lower than the maximum recommended level of 0.8 (Hair et al., 2009). The GFI value (0.811) is also acceptable given that it is above the level of 0.8 as suggested by Doll et al. (1994).

Next, the values of average variance extracted (AVE), composite reliability (CR), maximum shared squared variance (MSV) are calculated to assess convergent and discriminant validity, as well as composite reliability. All values of AVE are higher than the threshold of 0.5 and all CR values exceed the minimum recommended level of 0.7 (Hair et al., 2009). Besides, all factor loadings are higher than 0.6 and significant at 5% level, which meets the requirement recommended by Hair et al. (2009). Moreover, all AVE values are higher than the corresponding MSV as required by Fornell and Larcker (1981). The squared roots of AVE are all greater than the inter-construct correlations

as suggested by Hair et al. (2009). Thus, the measurements are reliable, and convergent validity and discriminant validity criteria are satisfied.

5.3. Structure equation modeling results

Structure equation modeling using the maximum likelihood method is applied to test the hypotheses. The total effects are tested and the statistical significance of four out of the six estimated coefficients are confirmed. In other words, hypotheses H1, H2, H4, and H5 are supported. EE is the most influential factor on intention to use with a standardized estimate of 0.342, followed by CO, PE, and PI. The independent variables explain 66,3% of the variance of the intention to use QR code mobile payment.

Table 2. Hypothesized relationship

Hypothesis				Standardized estimate	S.E.	C.R.	P	Result
H1.	IU	<---	PE	0.241	0.098	3.002	0.003	Support
H2.	IU	<---	EE	0.342	0.077	4.601	***	Support
H3.	IU	<---	SI	-0.093	0.061	-1.455	0.146	Not support
H4.	IU	<---	PI	0.129	0.055	2.188	0.029	Support
H5.	IU	<---	CO	0.331	0.066	4.426	***	Support
H6.	IU	<---	PC	0.036	0.034	0.774	0.439	Not support

Note: *** $p < 0.01$

6. Discussion and conclusion

The objective of this study is to analyze the factors affecting customers' intention to use QR code mobile payment. The predictive power of the resulting model is 66.3%. The results show that customers' intention to use is influenced by four factors, i.e. performance expectancy, effort expectancy, personal innovativeness, and compatibility.

The most influential factor on the intention to use is effort expectancy. This result is consistent with Phan and Dang (2019) and Phan et al. (2020) who argue that effort expectancy is the strongest factor affecting behavioral intention of customers who have not used mobile payment. Overall, this result shows that the easier to use a new payment method like QR code mobile payment, the more willing are customers to adopt. This is because payment is a daily work, an individual would

like to interact with an application with a clear display. Moreover, payment is related to financial matters. Therefore, users might want to deal with a clear and understandable interaction to decrease the risk of false manipulation.

The significant effect of compatibility on the intention to use is also discovered. An application which is compatible with lifestyle, habits, and needs of the customers will be accepted easier. This finding is supported by many previous studies (Humbani & Wiese, 2018; Jung et al., 2020; Nguyen et al., 2015). The influence of compatibility on the intention to use can be explained by the frequency of an individual's payment transactions. As everyone needs to proceed many payment transactions daily, people would prefer an application which is suitable for their daily habits.

Moreover, performance expectancy is found to have a significant effect on the intention to use QR code mobile payment. Several studies report the same results, such as Al-Saedi et al. (2020) and Jung et al. (2020). To increase customers' intention to use, a service must have outstanding features, which are different from other relative services. In addition, QR code mobile payment is a new payment method, then it might be compared with other popular payment methods in the market. Therefore, the higher the performance expectancy, the higher customers' intention to use.

Personal innovativeness does not strongly affect the intention to use as does effort expectancy, compatibility, and performance expectancy. However, it still has a remarkable influence on customers' intention to use QR code mobile payment. Liébana-Cabanillas et al. (2020) and Liébana-Cabanillas et al. (2015) also point out the significant effect on the intention to use of personal innovativeness. Because QR code mobile payment is an innovation, people who have high personal innovativeness would be the first customers to try this service.

On the other hand, social influence and perceived cost are found to have an insignificant influence on the intention to use. Regarding social influence, this can be explained by the low popularity of QR code mobile payment.

Therefore, customers would not be affected by others' opinions when deciding to choose QR code mobile payment or not. In addition, QR code mobile payment is a service developed based on some previous mobile payment services like mobile banking and mobile wallets. As a result, if customers have used these mobile payment services before, there is almost no cost for them to use QR code mobile payment.

This study provides significant practical implications for the providers of QR code mobile payment to develop this service. First, the providers should focus on investment and research, such as developing an easy-to-interact interface and simplifying the operation for users. Second, it is essential for them to thoroughly understand the needs and lifestyle of customers by proceeding market investigation. Furthermore, it is also important to develop a service that is suitable for a multimedia platform and for many different operations of smartphones. Third, it is imperative that suppliers research and optimize the speed and flexibility of the products. In addition, service providers should also regularly update the software to ensure the efficiency of the service operation. Finally, providers should do promotions aimed at these customers in the early stages. Their attention should be adequately paid to collecting feedback from this customer group to improve their service, thereby gradually expanding to individuals who are reluctant to try new information technologies.

Despite this research contributions to the literature on the intention to use QR code mobile payment, some limitations should be acknowledged. Firstly, the surveyed respondents are based in Hanoi, hence the research results may not be generalized for other regions or countries. Secondly, this study uses convenience sampling method with 248 respondents and most of them are students. Accordingly, the representativeness of this study's results might be affected. Finally, although great efforts have been made in reviewing the extant literature in order to select most appropriate variables to use in the research model, this study still may not control for some other influential factors. Such limitations provide potential avenues for other studies in the future.

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THE IMPACT OF OWNERSHIP STRUCTURE ON THE AUDIT QUALITY OF VIETNAM LISTED COMPANIES

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Abstract: *The paper aims to investigate the impact of ownership structure on the audit quality in Vietnam listed companies within a five-year period 2015-2019. The empirical results from Probit models and Feasible Generalised Least Squares method show that ownership by institutional and foreign investors have positive impact on listed firms' audit quality while family and government ownership do not affect audit quality. To a certain extent, firm size also influences company's audit quality.*

• Keywords: audit quality, family ownership, foreign ownership, government ownership, institutional ownership, ownership structure.

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Tóm tắt: Bài viết nghiên cứu ảnh hưởng của cấu trúc sở hữu đến chất lượng kiểm toán trong các công ty niêm yết tại Việt Nam trong giai đoạn 5 năm 2015-2019. Kết quả từ mô hình Probit và Bình phương tối thiểu tổng quát khả thi (FGLS) cho thấy sở hữu tổ chức và sở hữu nước ngoài có tác động tích cực đến chất lượng kiểm toán của các công ty niêm yết, trong khi sở hữu gia đình và sở hữu nhà nước không có ảnh hưởng đến chất lượng kiểm toán. Ở một mức độ nhất định, quy mô doanh nghiệp cũng ảnh hưởng đến chất lượng kiểm toán của công ty.

• Từ khóa: chất lượng kiểm toán, sở hữu gia đình, sở hữu nước ngoài, sở hữu nhà nước, sở hữu tổ chức, cấu trúc sở hữu.

1. Introduction

Ownership structure, which is defined by the distribution of equity and the identity of the equity owners, holds a key role in corporate governance because it points out who has the ultimate decision-making power and affects the incentives of managers, thereby the efficiency of the firm (Denis & McConnell, 2003). As these characteristics vary greatly among types of owners, it is also expected that each type of owner has a distinctive view towards audit and its importance and thus makes different decisions when it comes to matters surrounding audit, which might severely affects the audit quality in different ways. Meanwhile, listed

companies' financial reporting is an important source of information on which stakeholders can rely to make economic decisions. Owing to the great information asymmetry between internal and external stakeholders, however, pre-verified company-prepared financial reports are always under questions for its relevance and faithful representation. Therefore, audit report is also of great value for company management, since auditors, through their working process to assure the company's compliance with standard accounting practices, also make several advice and proposals attributed to the improvement of the company's internal control, corporate governance, financial management and so forth.

In the case of Vietnam - an emerging market whose legal protection for investors is rather weaker as compared to the developed ones', audit quality is more vulnerable to external determinants. A few studies cover the influence of ownership identity on audit quality are: Mitra et al. (2007), Adeyemi & Fagbemi (2010), Zureigat (2011), Ashrafi et al. (2017), Alhababsah (2019),... Despite having extremely high public demand for market transparency and audit quality due to the recent bloom of the stock market and high-profile financial scandals among listed companies, it is necessary to enrich the literature by offering an analysis of the impact of ownership structure on the audit quality in the specific case of Vietnam.

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2. Literature review and Hypothesis development

2.1. Family ownership

From one perspective, Alhababsah (2019) suggests that family members who hold company's shares demand higher audit quality to ensure the "going concern" status of their company. From another perspective, families are often believed to be capable of expropriating firm's wealth and other shareholders through excessive compensation, related-party transactions,... (Anderson & Reeb, 2003). If family members own low proportion of company's shares, they may wish to hire a large reputable audit firm to serve as their external monitoring mechanism to improve and strengthen their position. Therefore, the family ownership is negatively related with audit quality, indicating that at a higher level of shares held by family owners, the level of audit quality will be lower. The above discussion motivates the study to state the following hypothesis:

Hypothesis 1: There is a negative relationship between family ownership and audit quality.

2.2. Institutional ownership

First, institutional investors have great incentives to increase the quality of corporate disclosure, as a firm's enhanced information transparency facilitates monitoring, and affects stock returns, investment, liquidity, resource allocation and cost of capital (Francis & Yu, 2009). One of the most effective ways to enhance information environment is to improve audit quality, by strengthening audit committee effectiveness and selecting high quality auditors. Second, Ashrafi et al. (2017) suggest that institutional investors require high quality data owing to their ability to analyse financial data and put pressure managers to use services of high-calibre audit firms due to their large influence in company. Abdullah et al. (2008) find that institutional ownership is an important factor that could assist companies to perform effectively and that companies tend to be audited by the Big4 if the level of institutional ownership increases. Overall, institutional investors are most likely to demand and exert power on the management to achieve high audit quality as an effective monitoring mechanism. Consequently, the study develops the following hypothesis:

Hypothesis 2: There is a positive relationship between institutional ownership and audit quality.

2.3. Government ownership

On the one hand, owing to the political pressure,

state ownership which is often linked with low firm performance usually leads to a higher probability of earnings management and auditor compromise, thus impairing audit quality (Song et al, 2014). In the same vein, by using unclean audit opinion as a proxy of audit quality, Wang & Zhao (2003) find that for Chinese SOEs, there is a positive relationship between state ownership and the likelihood of receiving a clean audit opinion, which suggests low audit quality. On the other hand, government representatives have an interest in increasing the credibility of financial reports in order to raise additional capital and give positive indications of their legal obedience (Ben-Nasr et al., 2015). Thus, it is expected that the state demands high audit quality to maintain firm performance, protect their reputation and promote trust and confidence in Vietnam on the global financial market. Given these discussion, the hypothesis could be stated as follows:

Hypothesis 3: There is a positive relationship between government ownership and audit quality.

2.4. Foreign ownership

Foreign investors always demand more reliable and transparent information environment to avoid expropriation by insiders (Ben-Nasr et al., 2015) and rely heavily on additional controls that enable them to effectively monitor and evaluate their investments. Fang et al. (2015) find that auditor selection is a mechanism through which foreign investors shape financial reporting comparability and increase the reliability of the firm's financial information. Likewise, Jiang & Kim (2004) suggest that large foreign shareholders usually exert pressure on management and ask for higher audit quality in order to decrease information asymmetry and obtain reliable financial reporting. Foreign ownership is significantly positively associated with audit fees, one common proxy for audit quality, which shows foreign owners' high demand for audit quality and investment for extensive auditing procedures, thus driving up audit fees (Probonis & Schaeuble, 2020). Therefore, the study posits the following hypothesis:

Hypothesis 4: There is a positive relationship between foreign ownership and audit quality.

3. Data and methodology

3.1. Data

To examine the impact of ownership structure on the audit quality in Vietnam listed companies, the initial sample consists of all non-financial companies listed on Hanoi Stock Exchange (HNX) and Ho Chi Minh Stock Exchange (HOSE) in Vietnam during

2015-2019¹. However, in order to be consistent with the methods and models below, some exclusive criteria are applied, including companies which do not have enough data in the research models and companies lack full-set data for all periods. In addition, all data are winsorized at the 1% level to control for outliers. As a consequence, the total sample includes 1560 firm-year observations, and the number of companies in each year are 312 listed companies in Vietnam.

3.2. Empirical models

Based on the theoretical analysis, prior studies as Mitra et al. (2007), Adeyemi & Fagbemi (2010), Zureigat (2011) and information availability in Vietnam, the following model is designed:

$$(1) AFR_{i,t} = \beta_0 + \beta_1 * FAM_{i,t} + \beta_2 * INST_{i,t} + \beta_3 * GOV_{i,t} + \beta_4 * FOR_{i,t} + \beta_5 * SIZE_{i,t} + \beta_6 * LEV_{i,t} + \beta_7 * ROA_{i,t} + \beta_8 * SHARE_{i,t} + \varepsilon_{i,t}$$

$$(2) ARL_{i,t} = \beta_0 + \beta_1 * FAM_{i,t} + \beta_2 * INST_{i,t} + \beta_3 * GOV_{i,t} + \beta_4 * FOR_{i,t} + \beta_5 * SIZE_{i,t} + \beta_6 * LEV_{i,t} + \beta_7 * ROA_{i,t} + \beta_8 * SHARE_{i,t} + \varepsilon_{i,t}$$

$$(3) BIG4_{i,t} = \beta_0 + \beta_1 * FAM_{i,t} + \beta_2 * INST_{i,t} + \beta_3 * GOV_{i,t} + \beta_4 * FOR_{i,t} + \beta_5 * SIZE_{i,t} + \beta_6 * LEV_{i,t} + \beta_7 * ROA_{i,t} + \beta_8 * SHARE_{i,t} + \varepsilon_{i,t}$$

Where:

Table 1: List of variables used in regression model

Symbol	Variable name	Description
Dependent variable		
AFR	Audit firm rotation	Dummy variable equals 1 if the company replaces its audit firm for the year, 0 otherwise
ARL	Audit report lag	The period between a company's fiscal year-end to the audit report date
BIG4	Audit firm size	Dummy variable equals 1 if the company is audited by one of Big4 (PwC, EY, Deloitte, KPMG), 0 otherwise
Independent variable		
FAM	Family ownership	Percentage of family ownership in the firm
INST	Institutional ownership	Percentage of institutional ownership in the firm
GOV	Government ownership	Percentage of government ownership in the firm
FOR	Foreign ownership	Percentage of foreign ownership in the firm
Control variable		
SIZE	Firm size	Natural logarithm of total assets
LEV	Leverage	Debt divided by total assets
ROA	Return on asset	Net profit divided by total assets
SHARE	Market share	Company's net sales divided by total industry's net sales

Source: Author's analysis & synthesis

¹ We exclude data in 2020 to avoid potential Covid-19 pandemic effects.

In this study, audit quality is measured by three proxies, namely audit firm rotation, audit report lag and audit firm size. The expected signs are listed in Table 2 for easy tracking.

Audit firm rotation

High audit firm rotation rate is considered to be associated with low audit quality given (1) the loss of long-term built client-specific knowledge which assists auditors in fully understand company operation to detect misstatements in financial reports and make relevant recommendations to the client and (2) a risk of company's unwillingness to cooperate in audit process or malpractice, thus increasing auditor resignation rate.

Audit report lag

Audit report lag is assumed as a reflection of low audit quality due to (1) decreased usefulness of information caused by unachieved timeliness and (2) a risk of financial misreporting thus requiring auditors to pay extra time and effort to form an opinion.

Audit firm size

The appointment of larger-scale audit firm, in this case: the Big4 audit firm, is considered as an indicator of high audit quality given these firms' higher capability (high requirement for applicants and staffs, rigorous training sessions, financial resource,...) and incentives (risk of reputation loss) to form accurate audit opinions.

Table 2: Expected signs of coefficients

	Audit quality		
	Audit firm rotation	Audit report lag	Audit firm size
Family ownership	+	+	-
Institutional ownership	-	-	+
Government ownership	-	-	+
Foreign ownership	-	-	+

Note: "+" depicts positive correlation and "-" depicts negative correlation

Source: Author's analysis & synthesis

3.3. Data analysis method

To examine the influence of ownership structure on Vietnam listed companies' audit quality from 2015 to 2019, the study applies Pooled OLS, FEM and REM simultaneously for audit report lag and probit model for audit firm rotation and audit firm size. In addition, Hausman test and the Breusch-Pagan test are then performed to select the most efficient model.

4. Empirical results

4.1. Descriptive Statistics

Table 3: Descriptive statistics

Variable	Observation	Mean	Standard deviation	Min	Max
AFR	1560	0.1447	0.3520	0	1
ARL	1560	73.3255	16.5845	8	140
BIG4	1560	0.2670	0.4426	0	1
FAM	1560	13.3927	17.1514	0.050	76.4700
INST	1560	30.6941	20.9408	0	96.4900
GOV	1560	24.7649	24.4090	0	82.9500
FOR	1560	11.7852	14.7708	0	77.5800
SIZE	1560	11.8127	0.6885	10.1801	14.6061
LEV	1560	1.4198	1.7340	0.0027	29.2345
ROA	1560	0.0602	0.0733	-0.2974	0.4845
SHARE	1560	1.6851	7.0785	0.0001	77.8293

Source: STATA 15 output results based on study data

It can be seen that the mean value of AFR is still greater than zero (0.1447), showing that Vietnamese enterprises do rotate audit firms on their own will, which probably roots in an attempt by company to avoid overfamiliarity with auditors or in worse case, company's dispute with previous audit firm. As for audit report lag (ARL), there is a surprisingly large range between the minimum and maximum value. While there are companies that have their financial reports audited within eight days after the fiscal year-end, there are some whose audit process takes almost five months. Audit firm size (BIG4) has an average value of only 0.267 as the majority of companies in the sample tend to choose small and medium-sized audit firms such as Bakertilly A&C, CPA Vietnam, RSM,... rather than Big4. Firm size, leverage, ROA and market share all vary greatly among firms with high dispersion as the selected sample includes companies from several industries, which are characterised by different capital structure, net income ratio, firm size,... In the same vein, companies also have distinctive ownership structure.

4.2. Correlation matrix

Table 4 shows the pairwise correlation coefficient matrix of variables used in the model. The correlation matrix also indicates that the correlations between the independent variables are not too large (under 0.5).

Table 4: Correlation matrix

	AFR	ARL	BIG4	FAM	INST	GOV	FOR
AFR	1.000						
ARL	0.091*	1.000					
BIG4	-0.009	0.130*	1.000				
FAM	-0.011	0.088*	-0.134*	1.000			
INST	-0.062	-0.162*	0.101*	-0.395*	1.000		
GOV	0.021	-0.176*	-0.094*	-0.222*	0.461*	1.000	

	AFR	ARL	BIG4	FAM	INST	GOV	FOR
FOR	-0.043	0.047	0.290*	-0.138*	-0.157*	-0.201*	1.000
SIZE	-0.012	0.257*	0.469*	-0.048	0.011	-0.162*	0.277*
LEV	-0.039	0.095*	0.041	0.001	0.148*	0.123*	-0.161*
ROA	0.039	-0.318*	-0.030	-0.100*	0.073*	-0.047	0.053
SHARE	-0.039	-0.105*	0.228*	-0.008	-0.111*	-0.087*	0.190*

	SIZE	LEV	ROA	SHARE
SIZE	1.0000			
LEV	0.2068*	1.0000		
ROA	-0.0773*	-0.2867*	1.0000	
SHARE	0.3327*	0.0007	0.1409*	1.0000

Note: "***": Correlation is significant at the 0,05 level

Source: STATA 15 Output Results based on study data

The study continues to run a test on model's variance inflation factor (VIF). As demonstrated in Table 5 below, model's average VIF is 1.25 with all values smaller than 2. Given this result and the conclusion from the correlation matrix, it is safe to conclude that there is no multi-collinearity threat to the interpretation of the regression coefficients.

Table 5: Variance inflation factor test result

Variable	VIF	1/VIF
FAM	1.26	0.7930
INST	1.54	0.6497
GOV	1.36	0.7341
FOR	1.24	0.8095
SIZE	1.33	0.7492
LEV	1.22	0.8197
ROA	1.16	0.8646
SHARE	1.19	0.8379
Mean VIF	1.29	

Source: STATA 15 output results based on study data.

4.3. Regression results and discussion

4.3.1. Audit firm rotation – Model 1 & Audit firm size - Model 3

The regression result presented in Table6 shows a significant yet quite weak relationship between institutional ownership, government ownership and foreign ownership with audit firm rotation. Such unclear relationships might be attributed to a lack of mandatory requirement for audit firm rotation, hence companies replace their audit firm rather based on preference and financial availability.

Specifically, INST and FOR are negatively correlated with AFR (–), which suggests that the more shares held by institutional and foreign investors, the less likely the company rotates its audit firm. As the study assumes that audit firm with longer tenure has better insight into client company, lower audit firm rotation rate equals better audit quality. Taken together, the result supports hypothesis 2 and 4. On

the contrary, there is a positive correlation between GOV and AFR (+), suggesting that companies with high proportion of state ownership tend to have its audit firm rotated more frequently. This result is not in line with hypothesis 3.

Table 6: Regression result for Audit firm rotation and Audit firm size

AFR	Coefficient	z value	BIG4	Coefficient	z value
FAM	-0.0041	-1.25	FAM	-0.0053	-1.51
INST	-0.0097	-3.06***	INST	0.0118	4.33***
GOV	0.0046	1.83*	GOV	-0.0036	-1.54
FOR	-0.0077	-1.89*	FOR	0.0151	4.20***
SIZE	0.1114	1.26	SIZE	0.9866	10.09***
LEV	-0.0388	-0.96	LEV	-0.0338	-1.03
ROA	1.0474	1.40	ROA	-1.3556	-1.78
SHARE	-0.0170	-1.55	SHARE	0.0334	2.94***
_cons	-2.0519	-1.98	_cons	-12.7549	-10.92***
LR chi ² (8): 17.41			LR chi ² (8): 285.72		
Prob > chi ² : 0.0261			Prob > chi ² : 0.0000		
Pseudo R ² : 0.224			Pseudo R ² : 0.2619		

*, **, ***: statistically significant at 10%, 5% and 1%

Source: STATA 15 Output Results based on study data

Table 6 also demonstrates that BIG4 is positively correlated with INST and FOR (+), suggesting that companies with high level of institutional and foreign ownership are more likely to hire Big4 audit firm. Though the correlation is quite weak, this finding is consistent with the hypothesis 2 and 4 that institutional and foreign investors demand high audit quality as an effective monitoring mechanism due to the high level of risk they bear and thus prefer the use of a large-size reputational audit firm like Big4.

In addition, there is a strong correlation between the dependent variable (Big4) and firm size, which is well expected given a common belief that Big4 audit firms offer better audit quality considered the high-quality human resources, long term reputation to protect, standardised audit methodologies and so on, which make stakeholders place more trust and prefer Big4's assurance service. Large-scale companies which have more stakeholders and receive more public and press attention, therefore, have a tendency to appoint Big4 as their audit firm to better protect its image of financial integrity

4.3.2. Audit report lag - Model 2

Based on the Hausman test, FE model is better than RE model as the Prob>chi² is smaller than 0.05 (0.0002). As the dataset suffers from heteroscedasticity and autocorrelation, the FE model will be estimated again using the Feasible Generalised Least Squares (FGLS) method to fix

both problems.

Table 7: Regression results for Audit report lag - Model 2

Variable	Pooled OLS	FEM	REM	FEM (FGLS approach)
FAM	-0.0006 (-0.02)	0.0509 (0.73)	0.0331 (0.76)	0.0267 (1.18)
INST	-0.0939*** (-3.29)	-0.0101 (-0.20)	-0.0651* (-1.77)	-0.0741*** (-3.56)
GOV	-0.0724*** (-3.14)	-0.0857 (-1.58)	-0.0800** (-2.45)	-0.0953*** (-5.14)
FOR	-0.0293 (-0.91)	0.160** (1.98)	-0.0129 (-0.25)	-0.0528* (-1.90)
SIZE	6.973*** (8.62)	21.66*** (6.41)	8.507*** (6.73)	6.8803*** (10.57)
LEV	-0.148 (-0.48)	-0.635 (-1.46)	-0.2600 (-0.73)	-0.4776* (-1.94)
ROA	-61.00*** (-8.62)	-38.79*** (-4.05)	-45.98*** (-5.76)	-44.5422*** (-7.65)
SHARE	-0.425*** (-5.71)	-0.503 (-1.54)	-0.488 (-4.11)	-0.3466*** (-5.84)
CONS	-0.577 (0.06)	-178.5*** (-4.45)	-19.82 (-1.33)	3.7449 (0.49)
R ²	0.2139	0.1681	0.2859	Wald chi ² (8): 320.42
P-value	0.0000	0.0000	0.0000	Prob > chi ² : 0.0000
Hausman test	0.0002			

*, **, ***: statistically significant at 10%, 5% and 1%

Source: STATA 15 Output Results based on study data

Table 7 shows that ARL is inversely correlated with INST, GOV and FOR (-). This result suggests that companies that have more shares owned by institutions, government and foreign investors tend to have their audited financial reports released earlier - an indicator of increased audit quality, and therefore supports hypothesis 2, 3, 4. Among these types of ownership, GOV has the greatest coefficient of -0.0953 at 1% significance level. This is in line with the finding of Ben-Nasr et al. (2015), suggesting that government representatives have an interest in increasing the credibility of financial reports in order to raise additional capital and give positive indications of their obligations to market-oriented policies, hence demanding higher audit quality from companies by having audit report released on time.

It is notable that ARL is correlated with all control variables used in the model, suggesting that it is closely associated with firm performance and characteristics. Significantly, the coefficient of SIZE is over 6.88, indicating a strong direct relationship between audit report lag and firm size (+). This is inconsistent with several empirical studies about

audit report lag which argue that audit report lag tends to be shorter in large companies because (1) larger companies may have stronger internal controls, which in turn should reduce the propensity for financial statements errors to occur and enable auditors to rely on controls and interim work more extensively, (2) larger companies have the resources to pay high audit fees so that audit process can be rapidly performed after the fiscal year end, (3) larger companies may be monitored more closely by investors, trade unions and regulatory agencies, and thus face greater external pressure to report earlier. However, in the case of Vietnam, the stock market is characterised by an excessively large number of small and medium-sized enterprises that have their financial reports audited within surprisingly short period (under 1 month) such as Dam Sen Water Park Corporation (DSN), Safoco Foodstuff Joint Stock Company (SAF),... As compared to these companies, those that release audited financial reports on time (ARL at around 90 days) are already considered to be “lagged”. Hence, such positive correlation is fairly understandable.

On the contrary, ARL is strongly and negatively correlated with ROA at a 1% significance level (–), suggesting that companies with worse financial performance (lower ability to utilise its assets in terms of profitability) often take much longer to release audited financial statements. On the bright side, such correlation might be due to the size bias just discussed as large-scale firms that have long audit report lag are also companies that have high asset value (which is used as denominator in the ROA formula). However, it can also be the case that in years of poor financial performance, management is under more pressure to keep their image among investors, thus making them more prone to earnings management and data manipulation. Auditors, therefore, need to pay extra time and effort to guarantee reasonable assurance over company's reports.

4.3.3. Hypothesis outcome

Table 8: Hypothesis outcome

	Expectation			Empirical results		
	AFR	ARL	BIG4	AFR	ARL	BIG4
FAM	+	+	–	/	/	/
INST	–	–	+	–	–	+
GOV	–	–	+	+	–	/
FOR	–	–	+	–	–	+

Note: “+”: positive correlation, “–”: negative correlation, “/”: insignificant correlation

Source: Author's analysis & synthesis

From those above results in Table 8, it can be concluded that hypothesis 2 and hypothesis 4 are accepted. This result is consistent with the findings of Zureigat (2011) and Alhababsah (2019).

5. Conclusion

This study analyses the impact of ownership structure on the audit quality of Vietnam listed companies from 2015 to 2019 by using data collected from 312 non-financial enterprises listed on Hanoi Stock Exchange and Ho Chi Minh City Stock Exchange. The empirical results provide evidence of a positive relationship between institutional and foreign ownership with audit quality while find no significant impact of family and government ownership on audit quality. Hence, besides raising capital from individual investors, firms should also attract institutional and foreign investors by enhancing the corporate governance system, firm performance, firm valuation.

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THE RELATIONSHIP AMONG STUDENT'S USE OF SOCIAL NETWORKS, SOCIAL COMPARISON AND DEPRESSION

PhD. Tran Van Dat*

Abstract: *This study incorporates a social comparison theoretical framework as well as human psychology topics including self-esteem, jealousy, and sadness. These instances are due to the usage of social media. The poll included 357 students. According to the conclusions of this research, students' usage of social networks leads to social comparison, which in turn leads to unfavorable psychological feelings. The students' own lack of self-esteem causes them to lack confidence, concern and a sense that life is no longer pleasurable; additionally, envy heightens the want to possess. All of the things that other people have will lead me to be gloomy and think badly. As a result, a decrease in self-esteem and an increase in envy are the primary causes of depression.*

• Keywords: social network, upward social comparison, self-esteem, envy, depression.

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Tóm tắt: Nghiên cứu này kết hợp khung lý thuyết so sánh xã hội cũng như các chủ đề tâm lý con người bao gồm lòng tự trọng, lòng ghen tị và nỗi buồn. Những trường hợp này là do việc sử dụng phương tiện truyền thông xã hội. Nghiên cứu được thực hiện bao gồm 357 sinh viên các trường đại học. Theo kết luận của nghiên cứu này, việc học sinh sử dụng mạng xã hội dẫn đến sự so sánh xã hội, từ đó dẫn đến cảm xúc tâm lý tiêu cực. Sự thiếu tự trọng của chính học sinh khiến họ thiếu tự tin, lo lắng và cảm thấy cuộc sống không còn thú vị; thêm vào đó, lòng đố kỵ làm tăng thêm ý muốn chiếm hữu. Tất cả những điều mà người khác mắc phải sẽ khiến tôi trở nên u ám và suy nghĩ không tốt. Kết quả là, sự suy giảm lòng tự trọng và sự gia tăng lòng đố kỵ là những nguyên nhân chính gây ra trầm cảm.

• Từ khóa: mạng xã hội, so sánh xã hội, lòng tự trọng, đố kỵ, trầm cảm.

1. Introduction

For young people, the transition from high school to college is both stressful and foreign. Young people must live away from home, develop friendships while studying, collaborate in groups, and cope with the pressures of schoolwork and exams. As a consequence of these changes, young individuals are more prone to experience despair or other unpleasant emotions (Mahmoud et al, 2012).

According to recent study, in addition to life changes, social media usage has a negative influence on the psychology of university students (Chou and Edge, 2012). According to a poll, students at Banking University use social media on a regular basis (more than 80% of the school's students do), spending 15-20% of their time on the platform each day. To communicate, update social information, and stay up with current events, people utilize Facebook, Zalo, Instagram, and other popular browsers. These are other ways for students to contribute personal information or discover what information, images, or lifestyles are shared on social media by others. According to current study, personal information and images are readily distributed on social networks, regardless of whether the content is real or not, and it acts as a trigger for others. As a consequence, Facebook has become the "perfect" social networking platform for comparing oneself to others (Taylor and Strutton, 2016). Based on Festinger's (1954) theory of social comparison, researchers have separated downward and upward social comparisons (Buunk & Gibbons, 2005). When college students compare themselves to classmates they feel are more competent than they are, they are engaging in upward social comparison. As a consequence of feeling depressed, miserable, and not believing in themselves when compared to others, they will have poor self-esteem, envy and sorrow (Schmuck et al).

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2. Theoretical Background

Social media is everywhere, especially big social networking sites (SNSs) like Facebook, which has over a billion users throughout the globe (Facebook, 2012). Users may create electronic profiles for themselves, provide details about their lives and experiences, post pictures, maintain relationships, plan social events, meet new people, observe others' lives, and express their beliefs, preferences, and emotions via social networking sites (Boyd & Ellison, 2007). We argue that people use SNSs as a foundation for social comparison functions such as self-evaluation (Festinger, 1954) or self-enhancement, given the relevance of SNSs for a variety of social functions (Haferkamp & Kramer, 2011). Because social networking sites (SNSs) offer a wealth of opportunities for social comparison based on detailed information about others, the current study investigated whether social media exposure is associated with changes in self-evaluation (e.g., self-esteem) and whether this is due to social comparison processes (Wills, 1981).

3. Hypothesis

In fact, social networking sites (SNSs) give the ideal setting for carefully presenting oneself. Users may choose whether or not to allow content to be added to their accounts on a case-by-case basis, contribute photos, and identify themselves in ways that best represent their ideal self (Rosenberg & Egbert, 2011). Finally, SNSs users may use images and posts to communicate personal characteristics that may make them a comparison target for other users. As a consequence, a person may acquire "social" upward comparison information in addition to "personal" upward comparison information by monitoring their social network's activities. As a result, we provide the following hypothesis:

H1: Frequency of SNSs usage positively affects upward social comparison.

Self-esteem, envy and depression

Appraisal is an important factor in defining an individual's self-esteem; it is influenced by social favoring or exclusion. Comparing yourself to others increases or decreases self-esteem in various comparison settings, which can be a stable trait or a condition of mobility (Vogel et al, 2014). The relationship between upward social comparison and self-esteem when using social networks is

currently the subject of a lot of research (Liu et al, 2017). According to studies, social comparisons have an impact on self-esteem, particularly when using social media on a regular basis. According to studies, those who regularly use social networks yet have an upward social comparison tendency have poor self-esteem and poorer self-esteem. As a result, this study proposes the following hypothesis:

H2: Upward social comparison affected negatively self-esteem.

In today's social networking world, upward social comparison and envy are frequent, according to Jordan et al (2011). According to research conducted outside of the surroundings of individuals who do not use social networks, people who do not use social networks tend to underestimate the unpleasant experiences of others while recognizing the positive one which is the cause of social networks establishing. Envy and negative emotions are sparked. Because most social network members constantly broadcast wonderful and positive things about themselves, envy is increasingly common in the widely used social networking environment. As a result, this study proposes the following hypothesis:

H3: Upward social comparison affected positively envy.

According to Beck and Beamesderfer (1974), pessimism, feelings of failure, self-disgust, social disengagement and preoccupation are all indicators of depression. Depression is a common type of mood disorder characterized by a persistently poor mood. Given the extensive use of social networking sites and the resulting upward social comparison when a person is exposed to information or images about another person's superior and better life, they get pessimistic, lose faith in themselves, and want to cut themselves apart from other people (Li et al, 2019). As a result, this study proposes the following hypothesis:

H4: Upward social comparison affected positively depression.

According to Meeks and Walker (1991), low self-esteem is linked to the onset, maintenance, and recurrence of depression. Because self-esteem levels are exceedingly dynamic and responsive to changes in self-esteem over time in reaction to daily stressors, they are not a good predictor of future depressive moods (Crocker & Knight, 2005;).

There is, however, a distinction to be made between self-esteem and depression: First, self-esteem is frequently examined and compared to one or more other people; nevertheless, if you encounter other people who are superior to you, you can maintain psychological stability; Furthermore, when social comparison becomes more prevalent, someone who is pessimistic or lacks self-confidence will always be in a foul mood, which can lead to depression. As a result, this study proposes the following hypothesis:

H5: Depression is positively affected by self-esteem

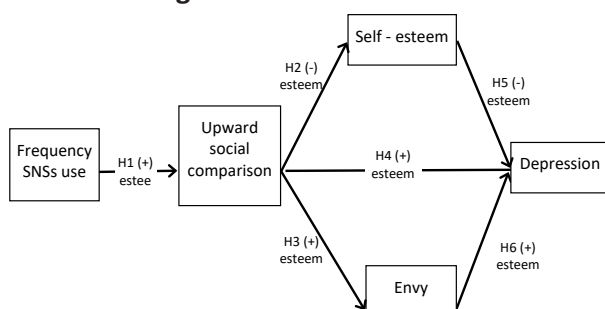
Some recent studies have suggested that people's depressive symptoms are influenced by social media use both directly and indirectly through social media envy (Tandoc et al, 2015). There are several clear distinctions between depression and envy, of course: To begin with, envy is always directed towards a specific audience, which may inspire the envious to close the distance between themselves and the object of their envy in order to establish psychological balance and eradicate bad emotional experiences (Taiet et al, 2012). Depression, on the other hand, is not directed towards a specific object; it is a negative emotional experience; it is strongly associated with a loss of purpose in life and it has no effect on growing envy (Owens & Laura, 2015). As a result, this study proposes the following hypothesis:

H6: Depression is positively affected by envy

The present study

The goal of this study is to see if the frequency with which Banking university students use social networking sites influences upward social comparison, as well as how such comparison affects self-esteem, envy and depression. As shown in Figure 1, we propose a research model based on the hypotheses:

Figure 1: Research model



4. Methodology

Participants: Among the 357 students who participated, 41.4% were boys and 58.6% were females. In the first, second, third, and fourth years, students study at a rate of 18,9%, 34,9%, 24,9%, and 16,9%, respectively. Spending less than 2 million VND per month accounts for 22,3 %; spending between 2 and 3 million VND accounts for 40%; spending between 4 and 5 million VND accounts for 17,1 % and spending more than 5 million VND accounts for 20,1 %. The most popular social networks are Facebook, Zalo, Instagram, Twiter and Tiktok with usage rates of 25,1 %; 23,7 %; 17,4 %; 18 % and 15,7 %, respectively.

Procedure and Measures

To quantify upward social comparison on SNSs, we used a scale developed by Lee (2014). On a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), respondents were asked to score their agreement with the following three statements: “When I read their news feeds or see their photos, I frequently believe that others have a happier life”; “When I read their news feeds or see their photos, I frequently believe that others have a better life”; and “When I read their news feeds or see their photos, I frequently believe that others feel better than me”.

To assess self-esteem, we used a scale developed by (Rosenberg, 1965). On a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), respondents were asked to score their agreement with the following five statements: “I believe I am no good at all at times”; “I believe I have little to be proud of”; “I certainly feel useless”; “I wish I could have more esteem for myself”; and “I believe I am a failure in general”.

We looked at the many ways in which envy has been operationalized (Chou & Edge, 2012). We integrated the components used in these many studies to construct a scale of envy. Three items were produced, and participants were given a 5-point Likert scale to rate them on. “I generally feel inferior to others”; “It doesn’t seem fair that some people seem to have all the fun”; “Many of my friends seem to have a better life and are happier than me” were among the statements that participants were asked to assess how much they agreed with.

The Center for Epidemiologic Studies is a non-profit organization that conducts epidemiological research. In this investigation, depression was used (CES-D). Radloff (1991) demonstrated that the Radloff Depression Scale, one of the most extensively used depression measures, is reliable and valid. The scale's dependability was later confirmed by other investigations (Lewinsohn et al, 1997). The scale is made up of four items that ask about depressive symptoms: "I was depressed"; "I believed my life had been a failure"; "I had the idea that others loathed me"; "I had restless sleep".

5. Results and Discussion

The Cronbach's Alpha coefficients for the factors of frequency of using SNSs, social comparison upward, self-esteem, envy, and depression are all more than 0,6, as shown in Table 1. A total correlation of 0.3 exists between all of the examined variables. We can see that the scales are really reliable from there (Hair et al, 2010). $X^2 = 141,345$; $df = 142$ (p -value = 0.000); $GFI = 0,96$; $AGFI = 0,947$; $NFI = 0,944$; $CFI = 1$; $RMR = 0,025$; $RMSEA = 0$, with a significance level of 5%, all of the observed variables' factor loading weights are greater than 0,5, confirming the monism and convergence of the observed variables in the composition of the factors: frequency of using SNSs, upward social comparison, self-esteem, envy and depression (Bentler & Bonett, 1980).

Table 1: Test results of Cronbach's Alpha reliability coefficient and confirmatory factor test CFA

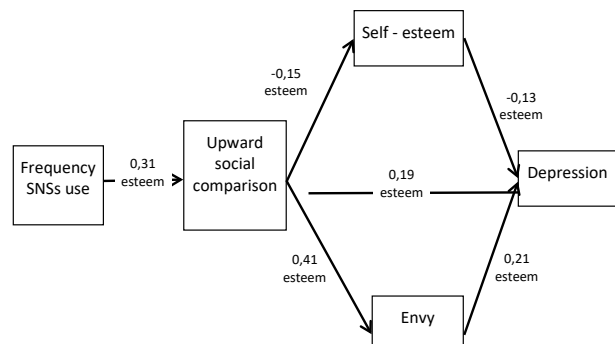
Questions		Factor Load	Cronbach's Alpha coefficient
I	Frequency SNSs use		0,727
(1)	Are you a frequent Facebook user ?	0,683	
(2)	How often do you update your Facebook status ?	0,656	
(3)	How often do you write comments on other people's Facebook profiles ?	0,649	
(4)	How many hours per week do you spend on Facebook ?	0,566	
II	Upward social comparison		0,800
(5)	When I read their news feeds or see their photos, I frequently believe that others have a happier life	0,885	
(6)	When I read their news feeds or see their photos, I frequently believe that others have a better life.	0,735	

Questions		Factor Load	Cronbach's Alpha coefficient
(7)	When I read their news feeds or see their photos, I frequently believe that others feel better than me	0,645	
III	Self - esteem		0,845
(8)	I believe I am no good at all at times	0,861	
(9)	I believe I have little to be proud of	0,764	
(10)	I certainly feel useless	0,704	
(11)	I wish I could have more esteem for myself	0,659	
(12)	I believe I am a failure in general	0,639	
V	Envy		0,781
(13)	I generally feel inferior to others	0,783	
(14)	It doesn't seem fair that some people seem to have all the fun	0,764	
(15)	Many of my friends seem to have a better life and are happier than me	0,645	
VI	Depression		0,846
(16)	I was depressed	0,855	
(17)	I believed my life had been a failure	0,843	
(18)	I had the idea that others loathed me	0,709	
(19)	I had restless sleep	0,668	

() corresponding 5%; $X^2 = 141,315$; $df = 142$ (p -value = 0.000); $GFI = 0,96$; $AGFI = 0,947$; $NFI = 0,944$; $CFI = 1$; $RMR = 0,025$; $RMSEA = 0$*

Based on the results of these coefficients, the SEM linear structural model is competent to make conclusions about the combined effect of the components (Bentler & Bonett, 1980). The following are the results of the SEM linear structural model $X^2 = 166,119$; $df = 146$; p -value = 0,00; $GFI = 0,953$; $AGFI = 0,939$; $NFI = 0,934$; $CFI = 0,991$; $RMR = 0,046$; $RMSEA = 0,002$ và $X^2(X^2/df)$ là 1,138 (see figure 2).

Figure 2: Results of SEM



The beta coefficient for the effect of SNS usage frequency on upward social comparison is 0,31. Regular use of social networking sites has been demonstrated to induce students to access information and photographs of others, leading

them to think they are not as happy, cheery, or capable of achieving as others (Vogel et al, 2014). As a consequence, accept hypothesis H1.

The beta coefficients for the effects of social comparison on self-esteem, envy and depression are -0,15; 0,41; 0,19. This might explain why students compare society upward as a result of their use of social media sites: To begin with, students who judge themselves only on the basis of others are now unable to live a happy existence; as a consequence, their self-esteem will deteriorate (Vogel et al, 2014). Second, most individuals on social media sites provide good information and photos about their life, which makes others envious, even if the information isn't always accurate. They loathe and want for a life like this (Li et al, 2019). Third, since they compare themselves to other students, students who use SNSs on a daily basis are more likely to have a bad mood, anxiety and find their life boring, resulting in depression (Li et al, 2019). Assume that hypotheses H2, H3 and H4 are correct.

Furthermore, the students' own lack of self-esteem causes them to lack confidence, concern and a sense that life is no longer pleasurable; additionally, envy heightens the want to possess. All of the things that other people have will lead me to be gloomy and think badly. As a result, a decrease in self-esteem and an increase in envy are the primary causes of depression (Owens & Laura, 2015; Sargent et al, 2006). The H5, H6, and H7 theories have been accepted.

6. Conclusion

Students should avoid making social comparisons while using social networking sites, according to the authors and should have a cheerful, pleasant and confident attitude when using social networking sites. You must work on yourself in order to maintain your self-esteem. Create a positive attitude about yourself. What others have today, you will have in the future, but it will take your own efforts to get it. Reduce your negative emotions and make use of social media as a source of entertainment to keep yourself from stressing out.

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INTERNAL AUDIT ACTIVITIES IN VIETNAM WITH THE RESOLUTION OF THE XIII CONGRESS OF THE COMMUNIST PARTY OF VIETNAM

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Abstract: *This article uses qualitative research methods on the basis of dialectical materialist methodology to conclude that the Resolution of the 13th Party Congress has an influence on internal audit activities in Vietnam through the provisions of the Law. Vietnam on Internal Audit and Vietnam's economic development goals up to 2025. The clear evidence is that the current legal framework on Internal Audit is adequate, absorbing international experience on Internal Audit, especially from the World Bank and the American Institute of Internal Auditors (IIA).*

• Keywords: *internal audit, IIA, Vietnam, World Bank.*

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Tóm tắt: Nghiên cứu sử dụng phương pháp nghiên cứu định tính trên cơ sở phương pháp luận duy vật biện chứng để kết luận rằng Nghị quyết Đại hội Đảng lần thứ 13 có ảnh hưởng đến hoạt động kiểm toán nội bộ ở Việt Nam. Bằng chứng rõ ràng là khung pháp lý hiện hành về KTNB đã đầy đủ, có sự tiếp thu kinh nghiệm quốc tế về KTNB, đặc biệt là của Ngân hàng Thế giới và Viện Kiểm toán Nội bộ Hoa Kỳ (IIA).

• Từ khóa: kiểm toán nội bộ, IIA, Việt Nam, World Bank.

1. Introduction

The 13th National Congress of the Communist Party of Vietnam will be held from January 25, 2021 to February 1, 2021 in Hanoi. After discussing the documents submitted by the 12th Party Central Committee, a Resolution was issued in which: Approving the basic contents of the evaluation of the implementation of the Resolution of the 12th National Congress and the general assessment of 10 years implementing the Platform for national construction in the transition to socialism in 1991 (supplemented and developed in 2011), 10 years of implementing the 2011-2020 socio-economic development strategy, 30 years implementing the 1991 Platform, 35 years of implementing the new change; development orientations and directions and tasks for the country's development in the

coming time are stated in the documents of the 12th Party Central Committee submitted to the Congress. Specific goals by 2025, the 50th anniversary of the complete liberation of the South, reunification of the country as a developing country with modern industry, over the low middle-income level.

On January 25, 2021, the Ministry of Finance issued Circular No. 08/2021/TT-BTC on Vietnam's internal audit standards, detailing and more specific the organization of the audit function. internal accounting in the enterprise. This is a detailed implementation circular for Decree No. 05/2019/ND-CP of the Government, according to which April 1, 2021 is the deadline to start implementing the internal audit function at enterprises and agencies. state agencies and relevant public service units. For the non-state sector, the Decree encourages application.

Therefore, it can be seen that the focus on implementing internal audit activities in a comprehensive and synchronous manner in the economy in our country has officially begun. The implementation of legal and practical bases has been prepared for a long time, but the promulgation of Circular 08/2021/TT-BTC right at the opening of the 13th Party Congress is a milestone and an important mark shown. the determination of our Party and the Ministry of Finance in leading and directing the implementation of internal audit activities, contributing to the achievement of socio-economic development goals by 2025.

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In this article, the author writes about the legal regulations, current situation and characteristics of internal audit activities in Vietnam and makes some comments to effectively apply internal audit activities. The author's analysis process clarifies the leadership and direction of the Resolution of the XIII Congress for internal audit activities. The article includes introduction, research materials and methods, current situation and discussion, conclusions, references. As follows:

2. Research materials and methods

About documents: The author reads, researches and quotes the content of the Resolution of the 13th Party Congress; Decree 05/2019 of the Government and legal documents related to Internal Audit; The author also uses information from a number of articles, seminars organized by the Ministry of Finance and some trusted websites.

About research methods: The author uses descriptive statistics, synthesis, analysis, induction and explanation methods with the background of dialectical materialism. The author also uses the method of expert experience by interviewing, reading documents. Finally, the author uses a comparative method with internal audit activities in Malaysia, Indonesia, and regulations of the IIA to learn and draw lessons when implementation in Vietnam.

3. Characteristics, status and comments

3.1. Characteristics and status of internal audit activities in Vietnam when implementing the Resolution of the XIII Congress

The system of legal documents on internal audit in Vietnam can be listed as follows:

Legal provisions of internal audit:

- Enterprise Law
- Accounting law number 88/2015/QH15
- Decree 05/2019/ND-CP on January 21, 2019
- Currency 66/2020/TT-BTC on July 10, 2020 issuance of the sample regulation for internal auditing for business
- Currency 08/2021/TT-BTC promulgating professional standards for internal audit.

The field of internal audit has existed since 1997, not new in Vietnam, but not clearly defined in Decree 05/2019/ND-CP. According to the Vietnamese version definition from the Institute of

Internal Auditor (abbreviated as "IIA"): "Internal audit is an independent and objective assurance and consulting activity designed to enhance add value and improve the organization's operations. Internal audit helps an organization achieve its objectives by applying a systematic and disciplined approach to evaluate and improve the effectiveness of its risk management, control and governance."

With the above definition, it can be understood:

- Internal audit is an independent and objective assurance and consulting activity related to governance, risk management, and control in an enterprise, thereby contributing to helping the enterprise achieve its objectives. In order to ensure independence and objectivity, the internal audit usually must be subordinated to the top management level of the enterprise (including independent and non-executive members). Depending on the specific organizational model, the highest level of leadership to approve and work with internal audit can be: Supervisory Board (under the General Meeting of Shareholders), Audit Committee (under the Board of Directors, with independent and non-executive members), Board of members, etc.

- Internal audit must add value to the business (benefits of performing internal audit must outweigh the costs of implementing it) and improve business operations (effectiveness and efficiency)

- Internal audit is highly systematic and principled. The internal audit work processes, programs, assessments and conclusions should all be closely and logically linked.

Although it does not give the definition of Internal Audit like IIA, Article 4 of Decree 05/2019/ND-CP has stated the objectives of Internal Audit as follows: "Through inspection, evaluation and consulting and audit activities, internally provides independent, objective assurances and recommendations regarding the following:

- The entity's internal control system has been properly established and operated to prevent, detect and handle risks of the entity.
- The entity's governance and risk management processes ensure efficiency and high performance.
- Operational goals and strategic goals, plans and tasks achieved by the unit".

Therefore, it can be clearly seen that the concept

of internal audit in Vietnam is similar to the definition given by IIA.

Regarding regulated subjects: According to Article 10 of Decree 05/2019/ND-CP, the following units must perform internal audit:

- + Listed company;
- + Enterprises in which the State owns more than 50% of charter capital is a parent company operating under the model of parent company - subsidiary company;
- + State enterprise is a parent company operating under the model of parent company - subsidiary company.

Enterprises not falling into the above categories are encouraged to carry out internal audit work. Enterprises with the following signs should consider setting up an internal audit department if the overall benefits outweigh the costs:

- Enterprises have a multi-tiered governance structure.
- Enterprises operating in many industries/fields.
- The business is expanding in many aspects.
- The top leaders and executives of the enterprise themselves began to realize that their work became overloaded, grasping and directing the company's situation became more difficult than in the past. Risk signals began to appear more and more.
- The enterprise wants its stakeholders to appreciate and believe that it is implementing the best possible governance practices related to effective risk management and improved business performance.

Compulsory requirement for internal audit activities is an important step in the right direction to help strengthen and improve corporate governance systems and processes. When businesses are better managed, they will operate more efficiently, reduce risks, access more capital, and better protect the interests of stakeholders. Businesses will become more trustworthy and transparent to investors. Finally, in the long run, the economy will benefit more when businesses are better governed and run. From there, the economy will attract investment, create jobs, social security and the environment, especially effectively using national resources and minimizing risks. Because of these meanings of the Internal Audit, the implementation, which is

chaired by the Ministry of Finance, will contribute to the implementation of the orientation of the main targets of socio-economic development in the five years 2021-2025 of the General Resolution. Association XIII. Those orientations are:

“Economic: The average economic growth rate (GDP) in 5 years is about 6.5 - 7%/year. By 2025, GDP per capita is about 4,700 - 5,000 USD; the contribution of total factor productivity (TFP) to growth is about 45%; average growth rate of social labor productivity is over 6.5%/year; urbanization rate is about 45%; the proportion of processing and manufacturing industry in GDP reached over 25%; The digital economy accounts for about 20% of GDP.

Regarding society: By 2025, the proportion of agricultural workers in the total social labor will be about 25%; the rate of trained workers is 70%; unemployment rate in urban areas in 2025 is below 4%; the multi-dimensional poverty rate maintains a reduction of 1-1.5% annually; there are 10 doctors and 30 hospital beds per ten thousand people; health insurance participation rate reaches 95% of the population; average life expectancy is about 74.5 years; the rate of communes meeting the standards of new rural areas is at least 80%, of which at least 10% meet the standards of the model new rural areas.

Regarding the environment: By 2025, the rate of using clean water and hygienic water of urban population will be 95 - 100%, rural population is 93 - 95%; the rate of urban daily-life solid waste collection and treatment ensuring standards and regulations reaches 90%; the rate of industrial parks and export processing zones in operation with a centralized wastewater treatment system meeting environmental standards is 92%; the rate of establishments causing serious environmental pollution to be treated reaches 100%; keep the forest cover rate stable at 42%”.

Experience in organizing and operating internal audit in Malaysia, Indonesia

Internal audit in Malaysia has been required to perform since 2008. However, the success and effectiveness of internal audit activities depends a lot on the support from the top management and executive level of the business. “Tone-at-the-top”. It can be said that internal audit is the “ears and eyes” of the leaders and executives, helping to provide

assurance about the adequacy and effectiveness of control procedures in the enterprise for the leadership and executive levels able to fulfill the assigned responsibilities well. Businesses that do not have adequate control procedures are exposed to higher risks and more openings for inappropriate behavior and fraud to take place.

According to Decree 05, the subjects that have to carry out internal audit work include not only listed companies, but also state agencies and public non-business units. Malaysia is more separate, requirements on internal audit are mentioned separately in each law for each object instead of in a single document. For business entities, Malaysia also only requires mandatory requirements for listed companies. Decree 05 contains specific guidelines on the organization and operation of internal audit. In Malaysia, this is not the case, the law only requires listed companies to carry out internal audit activities without specific instructions such as Decree 05. The Board of Directors only needs to announce that the internal audit activities of enterprises are performed according to recognized standards.

In Malaysia, enterprises that do not comply with internal audit regulations will be publicly reprimanded and fined not exceeding RM 1 million (equivalent to about VND 5 billion).

Currently, Decree 05/2019/ND-CP does not have any specific provisions on this issue. However, for some specific industries, our country also has sanctioning sanctions such as: For banks and credit institutions, it is Article 8, Decree 88/2019/ND-CP effective from 31/03/05. December 2019; For the securities sector, according to Decree 145/2016/ND-CP, effective from December 15, 2016 in Articles 23, 26 and 35.

In Malaysia, businesses are allowed to outsource internal audit activities and this is completely in line with International Standards and practices, Decree 05 also allows this issue. However, Vietnam does not allow the public sector to hire internal auditors. Nowadays, there is no regulation on internal audit service providers in Malaysia, so almost any company can be allowed to provide internal audit services.

Enterprises should not simultaneously use an independent audit service and an internal audit service from the same supplier to avoid a conflict of interest. In addition, the simultaneous use of

internal audit services and consulting services related to governance, risk and internal control processes from the same service provider must also be considered in terms of nature and scope that not to have a conflict of interest that violates the objectivity of the internal audit. In addition, Malaysian businesses often choose suppliers who have appropriate experience and compliance with international standards and practices on internal audit, have a deep understanding of their business operations, and have can provide services that meet the specific requirements of the business. There are around 800 companies listed on the stock exchange in Malaysia and about more than 50% outsource their internal audit function. Common reasons for outsourcing are:

- Cost savings, compared to maintaining a separate internal audit department.
- Difficult to find qualified and experienced personnel, this is a fact because accepting the department also requires a high level of knowledge and skills and importantly, enough experience to handle situations complicated.

Regarding the experience of successfully implementing the internal audit function in the public sector in Indonesia, according to Ahmad Fuad - Director of Internal Audit of the Indonesian Financial Services Agency, IIA in Indonesia emphasized that the public sector is required to carry out internal audit. The inspector is the unit that performs the internal audit function according to regulations. The Indonesian government has its own internal audit department, which performs the function of developing strategies on internal audit, consulting on risk management, having dialogues, and providing technical support to ministries, branches and localities related to internal audit. This agency applies international standards on internal audit and periodically reviews and evaluates internal audit capacity to improve internal audit quality. Indonesia has always determined that internal audit work must respond appropriately to the flexible changes of operational practice; at the same time, towards conducting internal audit on both compliance and operation, etc.

Current status of internal audit activities in Vietnam

Vietnam is gradually legalizing internal audit activities at listed companies, instead of just

encouraging implementation as before. This will contribute to pressure and motivation for listed companies to improve their corporate governance systems, thereby helping to reduce risks and frauds, and bring more value to businesses industry in particular and the economy in general. Regarding listed companies, specific organizations such as the Ministry of National Defense, Social Insurance, and financial institutions have been operating the internal audit department. However, the role and meaning of the internal audit is still limited, mainly applying the regulations, guidelines and standards of the State Audit.

Decree 05 has very similar content to the 3 components of the International Professional Practices Framework (IPPF) issued by the IIA, which are: (1) Principles of professional ethics; (2) core requirements for professional practice of internal audit; (3) Attribute Standards. In addition to the above 3 components, the IPPF also has other components which are: (4) Definition of Internal Audit; (5) Performance Standards; (6) Recommended guidelines for the above components (including Implementation Guidance and Supplemental Guidance). Implementing the Resolution of the XIII Congress, Vietnam will be able to continue to issue similar documents in the near future.

The leadership level approves the professional contents of the internal audit (the Board): Decree 05 lists the leadership levels in the organization that have the authority to approve, but there is no general definition for this concept. According to international standards, the approval level for the professional content of the internal audit (the Board) must be the highest level of leadership of the organization and include members who are not involved in the management and administration enterprise.

Independence and Objectivity: Decree 05 seems to be defining in favor of auditors, while in IPPF it is clearly defined and distinguished as organizational independence of the internal audit department (Organizational Independence) and Objectivity is applicable to the auditors (Individual Objectivity).

Regarding the status of internal audit implementation in Vietnam, according to Pham Van Cung - Senior Expert of the World Bank, the

World Bank has issued a report on the national accountability assessment (PEFA) at the national level (in 2013) and at the provincial level (in 2013). 2020. The internal audit function has been officially established in a number of ministries and ministerial-level agencies; a number of tasks under the Internal Audit have been undertaken by other agencies. Up to now, although the legal framework for internal audit has been built, the practice of internal audit activities in the public sector has not been effective.

3.2. Recommendation

In the public sector

Decree 05/2019/ND-CP does not stipulate hard on the organizational model of internal audit, only stipulates the principle of ensuring independence. Based on the operational characteristics, organizational structure, expectations of internal audit activities of the Board of Management, refer to the internal audit organization model of previous units to organize an appropriate operating model for the unit make sure you follow the rules.

Regarding personnel to perform internal audit work, the Ministry of Finance is promoting the development of short-term or long-term training and retraining programs suitable for participants, but not yet mandatory. In the long term, in order to approach international practices and ensure specialization and professional requirements, the internal audit department must have specific certificates and qualifications to ensure its effectiveness. of this work.

Different with the business sector, according to the provisions of Decree 05/2019/ND-CP, the public sector is not allowed to hire internal audit services, only hire consultants to develop regulations, processes, and train personnel, training on internal audit. Every year, the unit must develop regulations, plans and make internal audit reports. Within 60 days from the end of the fiscal year, the person in charge of internal audit must send the annual audit report to the Minister/Chairman of the Provincial People's Committee/Head of the public non-business unit and other departments according to regulations internal audit regime.

In order to build an effective internal audit function in the public sector in Vietnam, it is necessary to establish and operate the internal audit function in relation to the State Audit and Inspection

system. However, to do this, first of all, it is necessary to build a public governance framework/internal control framework in the public sector. In fact, these two contents have not been implemented in the public sector, so the implementation of internal audit has not been effective.

In the private sector

Initially, businesses should focus on the following orientations:

- Promulgating Internal Audit Regulations (Charter): This is the most important document as the basis for internal audit activities in enterprises, it stipulates core contents such as: definition, rights, and responsibilities of the operation on internal audit, core principles, etc. This document should comply with the guidelines of Decree 05, and Circular 66/2020/TT-BTC, as well as international practices to ensure relevance from the outset. This document needs to be approved by top management (including independent and non-executive members).

- Must ensure the organizational independence of the Internal Audit department, professionally under the top management level (including independent and non-executive members).

- Select and appoint the person in charge of the Internal Audit Department (Chief Audit Executive). This is the most important position with overall responsibility for internal audit activities, so it is important to ensure ethical qualities and professional competence, as well as to ensure independence and objectivity.

- For other details of independent audit activities, enterprises can outsource to receive timely and appropriate support in the first time, then gradually build up the process and staff themselves from time to time.

- Regarding internal communication: Enterprises need to promote propaganda on the meaning of internal audit activities so that everyone in the enterprise understands and cooperates to aim at the highest goal of jointly helping the business achieve its goals. your goals and minimize your risk. The fact that many people (including those in senior positions) often misunderstand internal audit, leading to the following situations: (1) management uses the internal audit department as their operating tool instead of is an independent division; (2) or personnel do not cooperate because they think the

internal audit department is a “policeman”, catching errors and obstructing the operation of the enterprise. Businesses that disregard this propaganda will face a lot of difficulties in implementing it in practice (even being distorted), because changing people’s perceptions and attitudes is a very difficult job, if the perception and attitude are not right from the beginning, even a simple job can be difficult to do.

4. Conclusion

The leading and directing role of the Communist Party of Vietnam is increasingly important and supported by all strata of society. The successful organization of the XIII Congress and the issuance of the Resolution on socio-economic development in the period of 2021-2025 have become the guideline for economic, social and environmental activities. In that context, the acquisition of foreign internal audit experience and application to the specific conditions of Vietnam represents the creative application and right direction of our Party.

The author believes that, 3 factors that help establish and maintain a successful internal audit function are the support of the leaders of the units, leaders of related ministries, departments and agencies; competent and independent auditors; standards system, training, knowledge update and support of professional associations.

Internal audit activity is a process and it takes time to gradually adjust the factors of awareness, management culture, processes, policies, and people.

References:

- Resolution of the XIII Congress;*
- Decree 05/2019/ND-CP of the Government and related documents on Internal Audit;*
- Currency 66/2020/TT-BTC on July 10, 2020issuance of the sample regulation for internal auditing for business*
- Currency 08/2021/TT-BTC promulgating professional standards for internal audit.*
- Expert experience by interviewing in Workshop organized by the Ministry of Finance, ST and IIA on July 21, 2021)*
- <http://thoibaotaichinhvietnam.vn/pages/nhip-song-tai-chinh/2021-07-21/nang-cao-nang-luc-trien-khai-chuc-nang-kiem-toan-noi-bo-in-enterprise-enterprise-107788.aspx>
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THE CURRENT SITUATION AND SOLUTIONS TO PROMOTE VIETNAM'S LEATHER AND FOOTWEAR EXPORT TO THE EU MARKET WHEN IMPLEMENTING THE EVFTA

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Abstract: The EU-Viet Nam Free Trade Agreement (EVFTA) officially taken effect from August 1st, 2020, has opened up many opportunities to boost exports of Vietnamese leather and footwear products to this market. After nearly 2 years since the EVFTA took effect, Vietnam's leather and footwear exports to the EU have been experiencing positive changes as Vietnamese businesses actively promote the export of products with preferential treatment from the EU meanwhile the EU partners also prioritizes products from Vietnam due to its more competitive price. This paper analyzes the situation of Vietnam's leather and footwear exports to the EU market over the past time, evaluates the achieved results and identifies the causes of limitations, thereby offers some solutions to promote Vietnam's leather and footwear exports in the context of the EVFTA taking effect.

• Keywords: leather industry, footwear export, EVFTA, tax incentives.

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Tóm tắt: Hiệp định Thương mại tự do Việt Nam - EU (EVFTA) chính thức có hiệu lực từ ngày 1/8/2020 đã mở ra nhiều cơ hội để xuất khẩu hàng da giày Việt Nam vào thị trường này. Sau gần 2 năm kể từ khi EVFTA có hiệu lực, da giày Việt Nam Xuất khẩu sang EU đang có những chuyển biến tích cực do các doanh nghiệp Việt Nam tích cực đẩy mạnh xuất khẩu các sản phẩm được ưu đãi từ EU, đồng thời các đối tác EU cũng ưu tiên các sản phẩm từ Việt Nam do giá cả cạnh tranh hơn. xuất khẩu sang thị trường EU thời gian qua, đánh giá những kết quả đạt được và xác định nguyên nhân hạn chế, từ đó đưa ra một số giải pháp thúc đẩy xuất khẩu da giày của Việt Nam trong bối cảnh EVFTA có hiệu lực.

• Từ khóa: ngành thuộc da, xuất khẩu da giày, EVFTA, ưu đãi thuế.

increased from USD 26.14 billion in 2015 to USD 35.07 billion in 2020. Not only the export turnover continuously but also the import turnover of goods to EU has continuously increased from USD 9.59 billion in 2015 to USD 14.65 billion in 2020. In the period 2015-2020, the trade surplus between the two sides increased continuously. Accordingly, if the trade surplus was USD 16.54 billion in 2015, this figure has reached USD 20.42 billion by 2020.

Table 1.1: Import and export turnover of goods of Vietnam and the EU in the period 2015-2020 (Million USD)

Year	2015	2016	2017	2018	2019	2020
Export	26.142	29.130	32.898	36.132	35.732	35.075
Import	9.597	10.434	11.455	12.924	14.071	14.652
Trade balance	16.545	18.696	21.443	23.208	21.661	20.423
Total Import-Export	35.740	39.565	44.353	49.056	49.803	49.727

Source: ITC (2021)

1. Overview of trade between Vietnam - EU

For many years, the EU has always been a major import partner and a key market for Vietnam's import and export. According to International Trade Center (ITC) statistics, bilateral trade turnover between Vietnam and the EU has increased from USD 35.74 billion in 2015 to USD 49.72 billion in 2020. In which, Vietnam's export turnover to the EU market

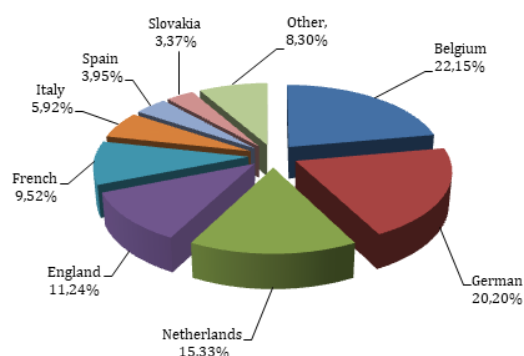
Over the past time, the COVID-19 pandemic and market fluctuations have significantly impacted the EU's import and export activities to trading partners, including Vietnam. Vietnam's goods exports to the EU is expected to grow positively in the context that the COVID-19 epidemic situation will be better controlled meanwhile restrictive measures are gradually eased and the EU economy is likely to recover. This will

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be an important basis for Vietnamese businesses to take advantage of commitments in the EVFTA more effectively.

Vietnam's main export markets to the EU are mainly to traditional markets such as the Netherlands, Germany, France, Italy, Austria, Belgium, Spain, Finland, Slovakia and Sweden. In 2020, the Netherlands is Vietnam's largest export market with the export turnover of USD 6.99 billion, accounting for 19.94% of total export turnover to the EU market. Followed by the German market with an export turnover of USD 6.63 billion, accounting for 18.92%; the French market with an export turnover of USD 3.26 billion, accounting for 9.3%; the Italian market with an export turnover of USD 3.10 billion, accounting for 8.84%...

Figure 1: Vietnam's main export markets to the EU in 2020



Source: ITC (2021)

The main export products to the EU are phones and components, computers, electronic products and components, footwear, textiles, vegetables, seafood, rice, coffee... meanwhile Vietnam's main imports from the EU are components, auto parts, fragrances, cosmetics, hygiene products...

According to ITC statistics, in 2020, the export of electrical machines and equipment and their parts (HS 85) will reach USD 14.79 billion, accounting for 42.18% of the Vietnam's total export turnover to EU. The second is the group of shoes, sandals, boots and similar products (HS 64) with export turnover of USD 3.95 billion, accounting for 11.28%; followed by nuclear reactors, boilers, machinery and mechanical equipment (HS84) with export turnover of USD 3.06 billion, reaching 8.74%...

From August 2020 to now, the EVFTA officially took effect, opening up great export opportunities for Vietnamese goods to the EU market with a GDP of up to USD 18 trillion. After 7 years from the effective date of the EVFTA, by August 2027, EU

will eliminate import taxes on 99.2% of tariff lines, equivalent to 99.7% of Vietnam's export turnover. For the remaining 0.3% of export turnover, EU committed to give Vietnam a tariff quota with an import tax of 0%. Thus, nearly 100% of Vietnam's export turnover to the EU market will be eliminated after a short roadmap. This is the highest level of commitment for one country like Vietnam in the FTAs. This benefit is especially meaningful when the EU is one of the three largest export markets of Vietnam today.

In Asian, Vietnam is one of the few countries signing a FTA with the EU (after Korea, Japan and Singapore). Therefore, the EVFTA officially taking effect from August 1st, 2020 will open up special import and export opportunities and advantages for Vietnamese goods as well as mark an important moment of the comprehensive cooperative partnership between Vietnam - EU. This is the result of the efforts of the whole political system during a decade since Vietnam and the EU conducted FTA negotiations. At the same time, the EVFTA also creates an attraction for Vietnam in attracting investment from a leading FDI partner in the world, with the most advanced capital, technology and management.

2. Assessment of the current situation of Vietnam's footwear exports to the EU market

2.1. Overview of Vietnam's leather and footwear exports

Footwear is one of Vietnam's key export industries (accounting for about 6.1% of Vietnam's total export turnover). Over the years, Vietnam's leather and footwear exports have achieved quite impressive results. In 2015, leather and footwear turnover reached a value of USD 12.43 billion and continuously grew in the period 2015-2020, reaching a growth rate of 6.76%/year. In 2019, leather and footwear export turnover reached USD 18.98 billion. In 2020, leather and footwear export turnover decrease to USD 17.25 billion (down 9.1% compared to 2019) due to the impact of the COVID-19 pandemic. The open-door and integration policy into the regional and world economies have been bringing positive impacts to Vietnam's footwear export industry. Thanks to participating in many FTAs and expanding markets, Vietnam's export footwear industry is experiencing a fairly good growth period.

2.2. The results of Vietnam's footwear exports to the EU

EU is one of the two main export markets of Vietnam's leather and footwear. Footwear exports to this market continuously increased with an average

growth rate of 2.78%/year in the period 2015-2020. According to ITC statistics, in 2015 Vietnam's leather and footwear exports to the EU reached USD 3.44 billion, in 2019 increased to USD 4.6 billion. In 2020, leather and footwear export turnover reached USD 3.95 billion, down 14.02% compared to 2019, due to the impact of the COVID-19 pandemic, causing the decrease of footwear export turnover to all markets. However, the EVFTA is considered the biggest driving force for the growth of the footwear industry in recent years.

In the EU market, Vietnam leather and footwear products are mainly exported to Belgium, Germany, the Netherlands and France. These 4 markets accounted for 75.7% of Vietnam's total footwear exports to the EU in 2020. In 2020, export turnover to Belgium reached USD 987 million, accounting for 24.95% of Vietnam's total export turnover of leather and footwear to the EU, followed by the German market with an export turnover of USD 900 million, accounting for 22.77%; the Netherlands ranked third with a turnover of USD 683 million, accounting for 17.27%... However, the export turnover of leather and footwear products to these markets all decreased compared to 2019. The reason is due to the impact of the COVID-19 pandemic leading to a breakdown in the global supply chain. The EU countries increased imports strongly from the internal markets.

Table 2.1: Vietnam's leather and footwear export turnover to the EU in the period 2015-2020 (Million USD)

	2015	2016	2017	2018	2019	2020
Total exports of leather and footwear (HS64)	12.438	13.476	15.217	16.813	18.989	17.253
Export of leather and footwear to the EU	3.449	3.723	4.080	4.213	4.600	3.955
Proportion (%)	27,73	27,63	26,81	25,06	24,23	22,92

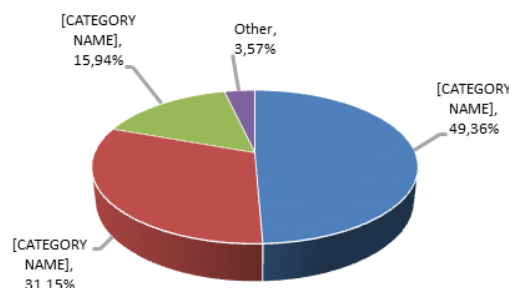
Source: ITC (2021)

According to ITC, Vietnam mainly exports leather and footwear products with HS 6404, HS 6403 and HS 6402 codes to the EU market. These three groups account for 96.43% of the total export turnover of leather and footwear in 2020. Specifically, in 2020, for HS code 64043, export turnover reach USD 1.95 billion, accounting for 49.36% of the total export turnover of leather and footwear to the EU market; followed by HS code 6403 with export turnover of

USD 1.23 billion, accounting for 31.15%; HS code 6402 with export turnover of USD 630 million, accounting for 15.93%.

The EVFTA has brought many advantages to Vietnam's footwear industry, creating opportunities for export growth and increasing competitiveness in the EU market. Before the EVFTA took effect, Vietnam enjoyed preferential tariff status (GSP) status for footwear with a tax rate 3.5% lower than the base tax rate (12.5%). The effective EVFTA creates opportunities for export growth to EU countries. In the long term, Vietnamese enterprises will benefit significantly because the tariff preferences under EVFTA are stable, independent of the proportion of total imports into the EU and gradually decrease to 0%. Besides, the applied rules of origin are almost unchanged, which is a great advantage for Vietnamese footwear businesses. Therefore, footwear is always a commodity with export turnover of high C/O level and preferential C/O usage when exporting to the EU market. In addition, Vietnam's footwear industry also has an advantage when most of the countries exporting footwear to the EU currently do not have an FTA with the EU.

Figure 2. Structure of Vietnam's leather and footwear exports to the EU in 2020



Source: ITC (2021)

Although from 2020 until now, the leather and footwear industry has faced many difficulties due to the global COVID-19 epidemic, but thanks to the Government's epidemic control measures and taking advantage of signing the new generation FTAs..., the leather and footwear industry has gradually recovered. During the pandemic, Vietnam's leather and footwear businesses have proven their ability to do R&D (research and development) and sample design which bring about a large added value in the leather and footwear industry.

According to the Vietnam Leather, Footwear and Handbag Association (Lefaso), in the past, leading brands had to send design experts to Vietnam to

sample products, but due to the epidemic, firms were forced Vietnamese businesses to proactively do it themselves in both product and design. As a result, most supply chains and leading brands trust the R&D and design capabilities of Vietnamese enterprises. It is expected to be a good sign that Vietnam products of the leather and footwear is penetrating deeper into the global supply chain instead of our sourcing according to the models of previous brands.

2.3. Limitations and causes

*** Limitations**

In general, the export capacity of Vietnam's leather and footwear products to the EU market is still low, as shown by the low export results, especially in terms of the modest export market share in this market. By the end of 2019, Vietnam's footwear export market share in the EU only reached 1.07% of the EU's total footwear imports.

Vietnam's leather and footwear products exported to the EU are still limited in quality and competitiveness, as well as have not built a brand name. Exported products must go through intermediaries. Although there have been many efforts in developing and diversifying export markets, Vietnam's leather and footwear exports to the EU still cannot avoid over-concentration in a few key markets.

Meanwhile, it is not easy to expand new markets and penetrate other potential export markets for each type of export products. This, on the one hand, has potential risks and instability when there are adverse fluctuations in the export market, on the other hand, negatively affects the quality and efficiency of Vietnam's exports to the EU with the nature of being a unified market area, as well as affects the proactive supply of goods, raw materials, machinery and equipment for domestic production and consumption.

The ability to meet import regulations for Vietnamese leather and footwear exports on the EU market is limited. There are many problems to overcome, especially in meeting quality and hygiene standards, safety, internal rules of origin and environmental and social regulations of the EU market become more strict. Currently, the EU accounts for about 30% of the export market from Vietnam. Leather and footwear products are being granted GSP by the EU with the tax rate fluctuating below 8%, but as soon as the EVFTA is signed and has an effect, GSP will be dropped immediately.

Only exporting enterprises meeting the requirements under the provisions of EVFTA will

enjoy low tax rates and vice versa, will be subject to high tax rates. However, having too much dependence on imported raw materials and not improving their scale and internal production capacity, they will not be able to take advantage of this opportunity.

Although Vietnam's leather and footwear products have joined the global value chain through FDI enterprises, there is a lack of technology spillover as well as labor productivity from FDI enterprises to domestic enterprises. For the whole country, the majority of export value is generated by FDI enterprises, showing that the role of domestic capital enterprises is insignificant, especially small and medium enterprises.

*** Causes of restriction**

- Vietnam's legal institutions and corridors for export activities are not yet completed and appropriate. They have not yet ensured compatibility with the legal system and regulations of the EU market. This is one of the important reasons limiting Vietnam's ability to export goods to this market in recent times.

- Although the investment and production environment of Vietnam has been continuously improved over the past time, there are still limitations, incompleteness, and not really favorable conditions for production and business activities of enterprises. Thereby, affecting the competitiveness of products and enterprises, limiting the growth of goods exports.

- The supporting industry for Vietnam's leather and footwear export is still slow to develop, unable to meet the requirements of raw materials for production and export activities. The majority of footwear production and export activities still depend on imported raw materials, so it is unstable and increase production costs and time.

- Changes and adjustments in import management policies, protection of domestic production and protection of consumers, especially strict import regulations and standards of the EU market's on quality, safety, rules of origin, environmental protection, social responsibility and workers' rights have been changed and caused challenges and obstacles for the development of Vietnam's leather and footwear exports. Meanwhile, the ability of Vietnamese exporters to cope with and overcome these barriers is still limited.

- The EU is a diverse market, consisting of many different countries, so the trends, consumption styles, languages, and business cultures of each country and region are different. Therefore, it is very difficult to

create and bring the product into one country and to adapt to the other countries. Vietnamese exporters still face many difficulties in expanding export markets due to competition from other major exporters in the world.

3. Solutions to promote Vietnam's footwear exports to the EU market when implementing the EVFTA

On April 19th, 2022, the Government issued Decision No. 493/QĐ-TTg approving the Import-Export Strategy to 2030 with the overall goal of sustainable import-export development with a balanced and harmonious structure, promoting competitive advantages and comparative advantages, developing brand names of Vietnamese goods, improving the country's position in the global value chain, becoming the driving force of rapid and sustainable economic growth. In order to achieve the goals set out in the Strategy in general and promote Vietnam's footwear exports to the EU market when implementing the EVFTA in particular, in the coming time, it is necessary to focus on solutions as follows:

- To remove the bottlenecks in the rules of origin in the EVFTA, localities need to attract investment in supporting industries and encourage the development of raw material supply centers in order to be proactive for clear - origin input materials.

- Currently, the EU is tightening standards on environmental protection in the production process, controlling the source of raw materials and harmful substances to the environment arising from the production of fabrics, raw leather, fabrics processing, footwear processing... In order to meet the regulations, it is necessary to develop the combined dyeing and tanning industrial zones. Therefore, localities should build a modern general specialized waste treatment system, including the treatment of both solid waste and waste. Moreover, localities can collect fees from businesses that need to treat waste as required.

- Attracting investment and promoting the development of the field of logistics services for leather and footwear exports such as the development of logistics services; Improving the capacity and linkages of domestic logistics enterprises; Improving logistics infrastructure associated with e-commerce, combining logistics with e-commerce according to current development trends in the world and in the region.

- Continuing to simplify and modernize the issuance of Certificates of Origin (C/O); organizing

and monitoring the implementation of the enterprise streamlining in the process of granting preferential C/O; promoting online issuance of C/O. Supporting Vietnamese enterprises in handling, implementing and reviewing technically when there is a request for inspecting and verifying the origin from the EU to protect the legitimate interests of Vietnamese enterprises.

- Continuing to deploy online trade promotion forms; innovating and applying new trade promotion activities to the textile, garment and footwear industry in the context that traditional trade promotion activities are not implemented due to the Covid-19 pandemic.

- Vietnamese enterprises need to improve production capacity, deep processing, find raw material sources in the region or develop domestic raw material sources because the rules of origin in the EVFTA require large participation of raw materials in the FTA area.

- Businesses need to understand the needs of each market in each specific situation to develop and produce suitable products. Paying attention to update information on technical barriers in trade and new requirements on the quality of EU's textile and footwear products.

- Improving product quality is a key factor to ensure sustainable growth of exports. To do this, businesses need to invest for innovation in production activities and improvement of human resource quality.

- Concentrating resources on innovating technology, cutting production costs, improving models, diversifying products due to personal tastes.

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THE RELATIONSHIP BETWEEN ENVIRONMENTAL RESPONSIBILITY AND FIRM'S FINANCIAL PERFORMANCE

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Abstract: Profit maximization accompanied by Environmental Sustainability is the need of the hour. Sustainable development can put a significant impact on the profitability of an organization. Therefore, organizations should have responsibilities for the influences of their operations on the environment and then disclose them in their annual sustainability reports. The paper mainly analyzes the relationship between financial performance of a firm and its environmental responsibility based on extant literature review, in order to clarify 'whether achieving environmental sustainability brings more profit for a firm or not'. Despite the conduction of various collaborative researches in the previous years about this relationship, their results are inconsistent and contradictory; including both positive and negative findings. In Vietnam, this topic has not been investigated deeply. This study aims to examine critically previous researches to build up better background for more studies in the future, thus likely to reach better results. In addition, the paper clarifies challenges and opportunities for the development of this research topic in Vietnam.

• Keywords: environment responsibility, social responsibility, financial performances, sustainability reports.

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Tóm tắt: Tối đa hóa lợi nhuận đi kèm với Bền vững Môi trường là nhu cầu hàng ngày. Phát triển bền vững có thể tác động đáng kể đến lợi nhuận của tổ chức. Do đó, các tổ chức phải có trách nhiệm đối với những ảnh hưởng của hoạt động của họ đối với môi trường và sau đó công bố chúng trong các báo cáo phát triển bền vững hàng năm của họ. Bài báo chủ yếu phân tích mối quan hệ giữa hoạt động tài chính của một công ty và trách nhiệm với môi trường của nó dựa trên đánh giá tài liệu hiện có, để làm rõ "việc đạt được tính bền vững về môi trường có mang lại nhiều lợi nhuận hơn cho một công ty hay không". Mặc dù đã tiến hành nhiều nghiên cứu hợp tác khác nhau trong những năm trước về mối quan hệ này, nhưng kết quả của chúng không nhất quán và mâu thuẫn nhau; bao gồm cả phát hiện tích cực và tiêu cực. Ở Việt Nam, chủ đề này chưa được tìm hiểu sâu. Nghiên cứu này nhằm mục đích xem xét các nghiên cứu trước đó một cách nghiêm túc để xây dựng nền tảng tốt hơn cho các nghiên cứu khác trong tương lai, do đó có khả năng đạt được kết quả tốt hơn. Ngoài ra, bài báo làm rõ những thách thức và cơ hội cho sự phát triển của chủ đề nghiên cứu này ở Việt Nam.

• Từ khóa: trách nhiệm môi trường, trách nhiệm xã hội, hoạt động tài chính, báo cáo bền vững.

The sustainability of environment has been increasingly become an urgent global issue. According to Gray (2006), the necessity for environmental sustainability was measured by the estimation of ecological footprints human have made, which gradually shows that the available planetary resources have been over-exploited by human-being. The environmental degradation in today's era, which implies the continuously depleting ozone layer resulting global warming and climate change, is the warning for firms to change their business operation. The organizations should take high responsibilities and disclose a variety of positive and negative influences of their operations on environment and society where they exist. Therefore, the firms' sustainability development is considered of great importance that can become a competitive advantage for them. The Corporate Sustainability is defined in the World Business Council for Sustainable Development (2002) as their commitment to make contribution to sustainable development of economic, and also the improvement of life quality for their employees as well as families and local community in general. In the past, a variety of studies about the examination of how a firm's environmental performance links to financial performance were conducted. However,

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the findings are not consistent and indicate some contradictions. The paper is going to focus on the analysis of previous researches about this topic, then organize them based on the relationship that previous researchers have found such as the positive and negative in order to produce a clear insight and future scope for other researches.

The Corporate Social Responsibility (CSR) had its appearance in the 1950s, but not until early 1970s it became more significant and concerned. Choi (2008) stated in his study that social sustainability of a firm was evaluated by the impact it put on the welfare of employees, local community and environment. The ISO 26000 was published as an international standard for CSR in November 2010. Environmental Responsibility is considered accountable, which indicates the effects of a corporation's activities on air, water, land or even noise pollution. According to Eccles and Krzus (2010), a global worry for negative effects on environment by industrial activities in the long run has emerged, which seems to mitigate the financial development of a firm in particular and a country in general. The impacts on the environment consist of toxic and ozone-depleting substances, greenhouse gas emissions, solid waste generation and common pollutants and the firm is required to publish such information as it implies their commitment to environmental development. Based on Brundtland (1987), sustainability was believed to meet the requirement of the present generation but not affecting the ability to meet future generations' needs. Meanwhile, according to Elkington (1998), sustainability appears to be the combination of three key factors: profits (economic), planet (environmental) and people (social). Sustainability Reports (SR) are the indication of a firm's responsibility and disclosure of their activities' impacts on environment and society with the aim of sustainable development. Corporations build up and publish their SR, also disclose their social and environmental impacts. At the same time, the information of their financial performance and capital management is also published as usual. SR appears to be the new way for firms to measure their corporation value. SR is used to organize and disclose sustainability information of firms in the same way that financial reports show their financial performance. Based on the transparent and explanatory reports, the firms can improve the trust of relevant department on their operations. In the meantime, report process motivates the business

activities to enhance financial results. From the basic level, SR is the tool for the corporations to improve their ability to identify risks and opportunities. Therefore, the firms are prepared for the new trend of development, responsibility classification and management improvement in order to enhance business effectiveness.

The link of corporate profit maximization and environmental responsibility has been examined by the combination of various qualitative and quantitative researches over the past few decades. The results of previous findings insist of the positive, negative or even no link. Moneva & Cuellar (2009) indicated that the inconsistency in those researches was the result of different study methodologies and performance standards for environmental responsibilities and disclosures. Spicer (1978) was one of the pioneers in researching this relationship and he undertook the research in environmental sensitivity and pollution prone industries. Significant relationship between them was identified statistically. A few researchers believed that those with large scale, or financial support from capital markets, or positive environmental responsibilities, seem to publish more comprehensive environmental information than their competitors. As Holm & Rikhardsson (2008) indicated in their study, the publish of environmental performance are valuable to both financial analysts and investors as this disclosure affects a firm's market value and stock market price at large. Nevertheless, the influence of this publish get diminished when it comes to corporations with environmental sensitivity and high appreciation from analysts.

Past researches highlighted two ways to approach the correlation between financial effectiveness and environmental responsibilities. The first one is the 'cost-related approach' that indicates that significant environmental responsibilities require a substantial costly investments and hence, result in the decline in revenue and market value. The second one is the 'value-adding approach' that assumes environmental (green) initiatives a corporation takes can offer them a competitive advantage compared to their competitors. Therefore, profit maximization of a firm seems to be more achievable. In the next paragraphs, the paper shows the segregation of numerous researches in this topic and then organized them according to the results of this relationship found out.

Positive relationship**Table 1: Positive relationship between environmental responsibility and financial performance of firm**

Study	Measure of environmental responsibility	Measure of financial performance	Key findings and conclusions	Research area
Nakao et al (2007)	Environmental Performance Score	ROA, ROE, EPS	Study suggests that firm's environmental disclosure has positive impact on its financial performance and vice versa. They also observed that this trend is not limited to top-scoring firms in terms of both financial and environmental performance.	Japan
Cormier et al (2011)	Environmental and Social Disclosure Score	Firm Value	The study found positive association between environmental and social disclosure and overall firm value.	
Saleh et al (2011)	Environmental Performance Score	Financial Performance	Study concluded to have interaction between firm's environmental performance disclosure and financial performance	Malaysia
Guenster et al (2011)	Environmental Performance Score	Market Value, Operating Performance	Results suggest positive link between market valuation and environmental performance.	USA
Oba et al (2012)	Environmental Disclosure Score	ROCE	The research found the positive relationship between environmental disclosure and ROCE	Nigeria

Some researchers believe that a firm without environmental sustainability in its operation seems to create negative impacts on its reputation with stakeholders & clients and demotivate current and potential staff. At the same time, the firm may face a significant increase in a variety of regulation costs such as penalties or litigation. The competitiveness and stock market value of the firm, therefore, is negatively affected. Regarding future financial perception by investors and stakeholders, those with high environmental responsibility appear to be more credible, transparent, attractive and less risky. According to Cormier & Magnan (2007), these positive reputations stand a high chance to increase the value of stock market and also decrease cost of capital. It was concluded by previous researches that

stock price of those who commit their environmental responsibility and even go beyond regulatory requirements stay higher than those with negative impacts on environment such as oil spills or harmful substance releases. The positive correlation between financial and environmental performance found by some studies have been analyzed and summarized below in Table 1.

Negative relationship**Table 2: Negative relationship between environmental responsibility and financial performance of firm**

Study	Objectives	Research area
Hassel et al (2005)	To examine the relationship between environmental disclosure and profitability, market value	Sweden
Roy and Ghosh (2011)	To examine the relationship between environmental disclosure and operating performance	India
Nor et al (2016)	To examine the relationship between environmental disclosure and financial performance	Malaysia

Some researchers believed in the negative association of a firm's environmental responsibility with its financial performance. Hassel et al. (2005) examined corporations from the list of Stockholm Stock Exchange over a period of 9 quarters from June 30, 1998 to September 30, 2000 to evaluate the correlation between their environmental and financial performance, using Residual Income Valuation Model. Cum-Dividend Market Value of Equity was used to evaluate the financial status of a firm and Environmental Performance Ratings were utilized to reveal its environmental performance. They collected stock prices from Trust Database of Bonnier-Findata and accounting information from financial statements. From that, the researchers identified that there was a negative link between environmental evaluation and market value of equity. The result can be explained by the cost-related factor. The following arguments were raised to strengthen the opinion of negative relationship. It is not uncommon that the costs involved to ensure high environmental responsibilities of a corporation are substantial, which can diminish its profit-making activities. Furthermore, investors and shareholders seem to be attracted by short-term returns while environmental performance produces long-term results. The examination of the negative relationship have been analyzed and summarized below in Table 2.

No significant relationship

A variety of previous researches have used different factors to measure the correlation between environmental disclosure and financial performance but there have been no significant link identified. Some studies, which disclosed no noticeable relationship between environmental information and financial performance, have been analyzed and summarized below in Table 3.

Table 3: No significant relationship between environmental responsibility and financial performance of firm

Study	Objectives	Research area
Cormier and Magnan (2007)	To examine the relationship between environmental disclosure and market value of firm	Canada
Connelly and Limpaphayom (2004)	To examine the relationship between environmental disclosure and operating performance	Thailand
Haslinda et al (2002)	To examine the relationship between environmental disclosure and profitability	Malaysia

Challenges and opportunities for the study of this topic in Vietnam

Based on the existence of different studies about the association between environmental responsibility and financial performance of firms, the writer believes that even though there are a wide range of quantitative and qualitative researches conducted in many countries in general and Southeast Asia in particular, this topic in Vietnam is still lack of deep researches. Regarding the green economy, sustainable economic development is an urgent issue that causes considerable concern to Vietnam Authorities and Government. This means there are still many opportunities for those who would like to study this issue in Vietnam although they may face difficulty accessing the data for research. One of the challenges that researchers are dealing with is that the environmental disclosure provided by firms based on annual reports or sustainability reports are still limited and incomplete. Only a small number of large companies and organizations have provided this information in their annual reports. In addition, environmental performance is assessed and evaluated without following common standard and measurement, which seems to trigger inaccurate results. Finally, the actual financial information of Vietnamese firms is still not fully accessible so it may lead to the research results that may lack scientific significance. Despite of many challenges, this topic

will certainly show practical significance when financial information becomes more transparent and environmental disclosure becomes one of the criteria for a business evaluation.

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FDI, SPILLOVER EFFECTS AND FIRM PRODUCTIVITY - THE CASE OF MANUFACTURING SECTOR

PhD. Nguyen Van Chien*

Abstract: *The purpose of the study is to evaluate the impact of foreign direct investment, spillover effects on the productivity of the manufacturing industry in Vietnam. Using 34,838 manufacturing enterprises in the period 2002 to 2012, the research results show that the firm with a higher foreign ownership is consistent with the higher productivity. There exists a positive effect of foreign firms on the productivity of domestic firms in the same industry. Simultaneously, foreign customers have able to enhance the productivity of domestic suppliers. Finally, the productivity of local firms may be reduced in the short term.*

• Keywords: *firm, productivity, foreign, domestic, interaction.*

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Tóm tắt: *Mục tiêu của nghiên cứu nhằm đánh giá tác động của vốn đầu tư trực tiếp nước ngoài, tác động lan tỏa lên năng suất ngành sản xuất tại Việt Nam. Sử dụng 34,838 doanh nghiệp ngành sản xuất trong giai đoạn 2002 đến 2012, kết quả nghiên cứu cho rằng tỷ lệ sở hữu nước ngoài trong doanh nghiệp càng lớn càng làm cho doanh nghiệp có năng suất cao hơn. Tồn tại tác động tích cực các doanh nghiệp nước ngoài có tác động thúc đẩy năng suất doanh nghiệp nội địa trong cùng ngành. Đồng thời, doanh nghiệp mua hàng nước ngoài có tác động làm gia tăng năng suất đối với doanh nghiệp cung ứng trong nước. Cuối cùng, năng suất doanh nghiệp mua hàng trong nước có thể bị giảm trong ngắn hạn.*

• Từ khóa: *doanh nghiệp, năng suất, nước ngoài, trong nước, tương tác.*

upgrading of technologies and modern management skills in various sectors of the industry and also in the overall economy in the host countries (Javorcik, 2004; Wei and Liu, 2006). Given that, FDI firms have not only entered into a country to seek profits, they have also spread the spillover effects to the productivity of local firms (Javorcik, 2004; Wei and Liu, 2006; Lin et al., 2009). Numerous previous studies note that there may be an increase in export participation when a productivity enhancement exists. The products exported from the home country must engage in competition in the global market enabling customers to purchase low-cost and better-quality products. Therefore, it is evident that foreign-invested firms are essential for productivity enhancement. As suggested in Aitken et al. (1997), the spillover effects also depend on a number of industries, firm-level characteristics, export orientation and firm size.

1. Background of the study

In the context of global economic integration, the receipt of international capital flows in the form of FDI is of greater importance for economic growth of a country (Borensztein et al., 1998). Yet, most of the less-developed countries lack the investment to achieve a high economic growth toward minimizing the existing gap between the developed and the developing countries. Inward FDI supplementing the international capital flows to the host countries is considered as the engine of job creation as well as economic growth (OECD, 2002).

As presented in some recent papers, the attraction of FDI inflows has played a significant role in

In order to grasp these opportunities, the host countries could liberalize their FDIs regime and pursue the relevant other policies to attract more foreign investment (OECD, 2002), and as a result, the host countries have thus been able to enhance the productivity and the production efficiency of local firms in line with the global value chains. However, the spillover effects may be negative (Lin et al., 2009; Vuong and Do, 2015). Another possibility, domestic-invested firms may also impact on the productivity of foreign-invested firms (Wei et al., 2008). In the case of China, a reverse spillover can occur when some positive externalities generated by the domestic sector spills over to multinational firms (MNCs). In agreement with a rising level of

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the economy in recent years, lots of local Chinese firms have become the high-technology MNCs (Wei et al., 2008).

In a recent contribution, OECD (2002) said that developing countries, emerging countries and countries in transition have adapted to domestic policies to a great extent to maximize the benefits of FDI in domestic economy as a sufficient amount of foreign capital has been a requirement to lift-up the economy. Many previous literatures have also focused on the foreign presence and its impact on exports. First, most of the less-developed countries gain FDI not only to solve employment in the highly labor intensive industries, e.g. food, clothing and textiles for instance in manufacturing (Tybout, 2000) also supply goods in the host countries and expand trade to the foreign markets. Further, FDI offers potential for raising the value and the volume of exports. The strategy behind China's export led policy is that a country has been able to attract a large proportion of direct investment in among developing countries (OECD, 2002).

The inflows of FDI to the host countries have positively improved exports (Sultan, 2013). At the macro level data analysis, a positive impact from inward FDI on exports is also found in the case of Vietnam (Anwar and Nguyen, 2011). Aitken et al. (1997) in the case of Mexico, a higher level of foreign participation is expected to have a significantly and positively consistent with the probability of exporting in the firm-level data. Additionally, the number of plausible explanation for this phenomenon has been discussed that FDI has been considered as an important source to achieve a higher rate of economic growth and therefore MNCs capital contribution can indirectly reduce poverty and improve social conditions (OECD, 2002).

The higher income in developing countries brings benefits in general to the higher income relating to the poorest segments of the population. As in China, quite a large number of young people enter the labor force emphasizing that attracting FDI is actually a leading priority. China has been extremely successful in drawing inward FDI since economic reforms implemented by the end of 1970s (Halle and Long, 2007). Further, FDI inflows have a positive effect on host country economic and employment growth. FDI presence has also played a crucial role in creating lots training opportunities to the workforce and learning technical and managerial skills, especially in promoting the productivity of domestic firms (Wei et al., 2008).

2. Methodology

To examine the contact between firm productivity and FDI spillovers in the same industry (intra-industry or horizontal spillovers) and other sectors (inter-industry or vertical spillovers), an econometric model that is employed by Aitken and Harrison (1999), Javorcik (2004), Lin et al. (2009), here is the following equation for the tentative estimation:

$$\ln Y_{it} = \beta_0 + \beta_1 \ln L_{it} + \beta_2 \ln K_{it} + \beta_3 \ln M_{it} + \beta_4 \text{Foreign Share}_{it} + \gamma_1 \text{Horizontal}_{jt} + \gamma_2 \text{Backward}_{jt} + \gamma_3 \text{Forward}_{jt} + \varepsilon_{it}$$

Where Y_{it} stands for the real output of firm (quantities x prices) i at time t and this indicator is deflated by the official manufacturing output price indices and adjusted by changes in inventories of finished goods. L_{it} is the number of employees. As suggested in Javorcik (2004), labor is represented in terms of efficiency units due to difference in the quality of skilled and unskilled workers. This indicator is computed by dividing total wage and social insurance premiums by the minimum wage. The minimum wage is yearly adjusted by the Government and ensuring that the labor may restore their health after working days through a minimum income necessary for a labor to meet their basic needs.

K_{it} is the net value of fixed assets at the beginning of the year, and deflated by price indices. M_{it} stands for the immediate inputs that are purchased by firm and use for production of final products and adjusted for changes in material inventories. This indicator is deflated by price indices. Finally, Foreign Share_{it} represents for the share of the firm's total equity owned by foreign investment and this variable has a range from 0 to 1.

For FDI spillovers, the study classified horizontal (Horizontal_{jt}) and vertical spillovers. In which, vertical spillovers are also divided into backward spillovers (Backward_{jt}) and forward spillovers (Forward_{jt}). Firstly, inter-industry consist of (1) forward linkages, is the aftermath of the direct interactions between foreign suppliers of intermediate inputs in downstream sectors with their domestic customers, (2) backward linkages, is the aftermath of the interactions between foreign affiliates with their local suppliers in upstream sectors. To express variable spillovers, the study applies an approach of Javorcik (2004), Aitken and Harrison (2009), Lin et al. (2009) and Du et al. (2011).

Firstly, $Horizontal_{jt}$ stands for the foreign presence of the firm's own industry j at time t . $Horizontal_{jt}$ is written by the following equation:

$$Horizontal_{jt} = \frac{\sum_{i \in j} ForeignShare_{it} Y_{it}}{\sum_{i \in j} Y_{it}}$$

Secondly, $Backward_{jt}$ represents for the foreign presence in the industries that are supplied by industry j . Thus, $Backward_{jt}$ is a measure for foreign equity participation in the downstream industries of industry j . We have:

$$Backward_{jt} = \sum_{k \neq j} \alpha_{jk} Horizontal_{kt}$$

α_{jk} is extracted from the 2007 input-output table and standing for the proportion of industry j 's production supplied to industry k .

Thirdly, $forward_{jt}$ is represented for the weighted share of output in upstream sectors produced by firms with foreign equity participation. α_{jm} is also extracted from the 2000 IO table, the 2007 IO table as well as the 2012 IO table and explaining for the share of input purchased by industry j from industry m in total input sourced by sector j .

$$Forward_{jt} = \sum_{m \neq j} \alpha_{jm} \left[\frac{\sum_{i \in m} ForeignShare_{it} (Y_{it} - X_{it})}{\sum_{i \in m} (Y_{it} - X_{it})} \right]$$

X_i represents for goods produced by foreign affiliates for exports and this factor is excluded in the calculation.

The best statistical model can be selected among the ordinary least squares (OLS) model with White's correction for heteroskedasticity, the fixed effects model (FEM) and the random effects model (REM) mentioned in the study of Liu et al. (2000). These models mostly differ in the intercept and error terms. On the other hand, it has been mentioned that the use of OLS is inappropriate (Jarvocik, 2004). The study continues to be estimated by FEM and REM as the main tools used in the estimation. As suggested in Vuong and Do (2015), FEM and REM are also the most important ways to analyze in the case of evaluation of inward FDI's spillover effects to local firms in Nghe An province, Vietnam. In addition to Lin et al. (2009) the study constitutes of an unbalanced panel collected during regular surveys between 1998 and 2005 covering China's manufacturing firms, by using FEM and REM for the estimation in order to investigate the relationship FDI inflows and the productivity of domestic firms based on a production function. Findings were strong and robust vertical effects on both state-owned and non-state-owned firms. Vertical effects from export-oriented FDI were weaker than those

from domestic-market-oriented FDI. In addition to horizontal effects, Hong Kong, Macao and Taiwan invested firms may cause negative horizontal spillover effects while non-HTM foreign invested firms have positively accelerated productivity on local invested firms.

3. Data

The econometric study is based on a panel data set conducted by Vietnam's General Statistics Office during the period of 2002-2012, and sample size is approximately 34,838 observations. The data set contains foreign ownership, sales, inventories, employment (foreign and local employees), assets, input costs, investment, location and other details

4. Estimated results

In statistics, Fixed Effects Model (FEM) is a statistical model containing fixed parameters or non-random quantities. In contrast to FEM, Random Effects Model (REM) is also used for estimation where all or some model parameters are known as random variables. Either FEM or REM is more appropriate, Hausman Test is also examined. The results are written as follows:

Table 1. Estimated results

Dependent Variable: Firm Productivity			
Independent Variable	OLS	FEM	REM
	(1)	(2)	(3)
Ln Kit	0.07 (15.18)*	0.10 (11.11)*	0.09 (11.2)*
Ln Lit	0.36 (75.50)*	0.36 (36.75)*	0.36 (42.8)*
Ln Mit	0.67 (115.9)*	0.63 (64.11)*	0.64 (71.9)*
Foreign Shareit	0.88 (11.43)*	0.90 (6.26)*	0.88 (8.01)*
Horizontal Spillover	0.92 (9.28)*	0.72 (4.54)*	0.76 (5.06)*
Backward Spillover	0.06 (9.16)*	0.04 (3.45)*	0.04 (4.05)*
Forward Spillover	-0.10 (-9.32)*	-0.10 (-5.57)*	-0.10 (-6.1)*
C	0.56 (8.36)*	0.63 (5.57)*	0.62 (6.52)*
n	25645	25645	25645
F	9707	3305	3305
Prob	0.00	0.00	0.00

Source: Author's analysis, (z values in parentheses, * significant at 1% level, ** significant at 5% level)

5. Discussion

Followed by the previous literatures about the impact of FDI and FDI spillover effects through vertical linkages and horizontal linkages related to Aitken and Harrison (1999), Javorcik (2004). Using ordinary least squares (OLS) for estimating with

White's correction for heteroskedasticity besides Fixed Effects Model (FEM) and Random Effects Model (REM) in the estimation. Across a variety of specification related to the results appearing in the Table 1, the studies point out major factors as follows:

Firstly, the results indicate that the foreign share shows a significantly positive impact on firm productivity. It is therefore clear that foreign equity at the firm level is correlated with higher productivity of individual firms in the host country. It looks like the firms with fully owned foreign affiliates tend to be more productive than partially owned foreign affiliates as well as purely owned domestic firms operating in Vietnam. Using FEM and REM, similar results are also found but the coefficients of the estimations are smaller related to a weaker impact from foreign presence to firm productivity. This result is consistent with the existing literature on this subject that is found by Aitken and Harrison (1999), Liu et al. (2000) in UK manufacturers, Du et al. (2011) in China. In the early period since economic reform, Vietnam started integrating at an average level. In fact, during the financial crisis of 1997 in Southeast Asia, Vietnam was not affected. In particular, WTO's accession and some recent FTAs grasp more international flows to the country. FDI's exports to total national exports have been steadily increased since 2007 up to the present, from a third in 2007 to two-thirds during 2014-2016.

According to the results of the enterprise survey conducted by the GSO, Vietnam had attracted more foreign investment during 2002-2009 but most SMEs are less able to absorb new technology and knowledge from multinational firms especially the period before WTO. As Liu et al. (2000) said that spillover effect is negatively related to the technology gap. In a short time, productivity of domestic firms may reduce if FDI with lower marginal costs and owning a huge technology and knowledge has come, FDI firms may get demands from domestic firms in the host countries. In addition, Vuong and Do (2015) also conducted a survey in Vietnam's provincial area of Nghe An, through fixed effects model (FEM), random effects model (REM) covering the period 2011 - 2015, the coefficient of foreign share is also negative. The studies have attempted to explain such as ineffectiveness in investment incentives/supporting program in the province, hard to access administrative procedures as well as unskilled labor problems which couldn't attract more high-end technology from foreign investors.

Secondly, as far as horizontal spillovers are

concerned, consistent with previous literatures, the results show that there are significantly positive horizontal spillovers from foreign investment related to the specifications in Table 1. The finding suggests that multinational firms investing in the country do boost local firm productivity in the same industry. In addition, according to the results presented in Table 1, a significantly positive effect estimated by FEM or REM can be also found and it is in line with the result based on OLS method. In particular, this effect through FEM and REM slightly smaller than through OLS method.

Indeed, horizontal spillovers from foreign investment are represented for the interaction between domestic-invested firms and foreign-invested firms in the same industry. FDI inflows into the country are through multinational corporations or joint ventures with domestic units. In the early stage of economic reforms, FDI inflows had mostly concentrated on sectors Vietnam demanded, in particular, in consumption instead of importing from international markets (so-called import substitution industrialization). As shown by Vuong and Do (2015), a negative and insignificant coefficient in horizontal spillover effects can be found, besides this study was conducted in Nghe An, a less-developed province than Hanoi and Ho Chi Minh. In a note on Phan et al. (2014) there is no effect to the productivity of local firms from foreign investment through horizontal spillover effects conducted in a given year of 2011.

As far as the integration process has been viewed, positive externalities from FDI inflows to local firms occasionally occur in the light of economic reforms. Existing FDI firms have expanded their production related to economic reform process through FTAs besides new high-technology FDI's that have started business. In particular, joint ventures between foreign and domestic investment may positively enhance the productivity of domestic firms because of the learning process from each other. Regarding association with Javorcik (2004), productivity spillovers are happening to firms with partially but not fully-owned foreign investments.

In terms of backward spillovers, the study implies that a positive and significant coefficient on the proxy of spillover effects through backward linkages can be found. However, the coefficient related to OLS method is higher if using FEM or REM. In fact, Fixed Effects Model (FEM) is a statistical model containing fixed parameters or non-random quantities. In contrast to FEM, Random Effects Model (REM) is also used for estimation

and where all or some model parameters are known as random variables. Using OLS may be biased and could affect estimation quality.

As a result of that, backward linkages do have a positive significant impact on productivity. Through this relationship, externalities are generated when Vietnamese suppliers are connected with foreign buyers, therefore lead to higher productivity for Vietnamese suppliers. Consistent with FDI inflows to the country, under demand in the industrial inputs, FDI firms tend to use local suppliers besides other suppliers elsewhere in the region. It is a really good chance for local suppliers, e.g. at least 97 Vietnamese suppliers are assigned in the manufacturing of parts and accessories to Samsung and this participation has been continuously expanded (UNCTAD, 2016). Like other emerging countries, Vietnam has quickly shifted from very simple production to more sophisticated production, e.g. electronics and IT through giant multinationals that largely spread productivity to local business as local suppliers in order to replace importing of industrial inputs to support its expansion of manufacturing.

Regarding forward spillovers, it is evident that a negative and significant coefficient on the proxy of spillovers through forward linkages can be found, e.g. OLS, FEM and REM in the period of 2002-2012. It suggests that enterprises benefit from externalities through foreign enterprises that are upstream in their operations. Therefore, productivity of individual customers are not improved by FDI spillovers through forward linkages, even a negative effect occurred in the period of 2002-2012. The finding implies that the productivity of local customers may be reduced, in particular, in the short run. To describe this relationship, the technology gap between local and foreign firms has not been much reduced and need much time to narrow this gap. Consistent with many empirical evidence, Aitken and Harrison (1999) suggested that foreign investment may reduce local firm productivity in the short run due to a foreign firm having lower marginal costs compared to a local firm. This conclusion is significantly associated with the result of Wei et al. (2008) and Lin et al. (2009). In fact, local firms may learn from multinationals by various channels, e.g. (1) demonstration and competition, (2) imitation (3) contagion or labor turnover and finally foreign firms bring technical and managerial assistance to local suppliers. As Graham et al. (1999) also discussed that multinationals can dominate negotiating contracts against their counterparts what are local firms. Thus, the relationship between foreign suppliers of

intermediate inputs and their local customers in the downstream sectors are opposite.

6. Conclusion

In common with the previous literature which focused on foreign presence, the correlation between FDI spillovers and firm productivity in the same industry. According to the results, foreign share has a significantly positive impact on firm productivity. It indicated that multinational firms tend to be more productive than domestic firms. In addition, multinational firms do boost local firm's productivity in the same industry. A positive and significant coefficient on the proxy of spillover effects through backward linkages can be found. The result is in line with externalities that are generated when Vietnamese suppliers are connected with foreign buyers. In line with many empirical studies, a negative and significant coefficient on the proxy of spillovers through forward linkages can be found. It means that productivity of local customers are not improved by FDI spillovers through forward linkages.

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THE IMPACT OF INCOME TAX ON CAPITAL STRUCTURE OF JOINT STOCK COMPANIES IN OIL AND GAS INDUSTRY IN VIETNAM

PhD. Le Ha Trang* - Tran Thi Thuy Linh** - Phan Thu Hue** - Doan Thi Ha Anh**

Abstract: *Businesses are the cell of the economy. Depending on the type, characteristics and nature of the industry, each enterprise considers planning its capital structure effectively to realize the ultimate goal of maximizing enterprise value. There are many factors that affect capital structure. In which, the tax factor - including company income tax and personal income tax has been confirmed by financial theories and empirical studies in the world to have a significant impact on the choice of funding source of companies. This study analyzes the impact of Income tax on capital structure in the specific context of Vietnam's economy using secondary data of 12 Petroleum industry joint stock companies listed on the stock exchange Vietnamese securities. Conducting the study using the method of quantitative regression of panel data, the research results show that company income tax has a negative impact on the ratio of long-term debt and the ratio of total debt to total assets, but the level of impact is not much. Personal Income Tax has no impact on capital structure regardless of short-term debt or long-term debt.*

• **Keywords:** *capital structure, company income tax, personal income tax.*

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Tóm tắt: Doanh nghiệp là tế bào của nền kinh tế, tùy theo loại hình, đặc điểm và tính chất của ngành mà mỗi doanh nghiệp cân nhắc việc hoạch định cơ cấu vốn một cách hiệu quả nhằm thực hiện mục tiêu cuối cùng là tối đa hóa giá trị doanh nghiệp. Có nhiều yếu tố ảnh hưởng đến cấu trúc vốn. Trong đó, yếu tố thuế - bao gồm thuế thu nhập doanh nghiệp và thuế thu nhập cá nhân đã được các lý thuyết tài chính và các nghiên cứu thực nghiệm trên thế giới khẳng định là có tác động đáng kể đến việc lựa chọn nguồn tài trợ của doanh nghiệp. Nghiên cứu này phân tích tác động của thuế Thu nhập đối với cơ cấu vốn trong bối cảnh cụ thể của nền kinh tế Việt Nam bằng cách sử dụng dữ liệu thứ cấp của 12 công ty cổ phần ngành Dầu khí niêm yết trên sàn giao dịch chứng khoán Việt Nam. Thực hiện nghiên cứu theo phương pháp hồi quy định lượng dữ liệu bảng, kết quả nghiên cứu cho thấy thuế thu nhập doanh nghiệp có tác động tiêu cực đến tỷ lệ nợ dài hạn và tỷ lệ tổng nợ trên tổng tài sản, nhưng mức độ ảnh hưởng thì không, nhiều. Thuế thu nhập cá nhân không ảnh hưởng đến cấu trúc vốn bất kể nợ ngắn hạn hay nợ dài hạn.

• Từ khóa: cơ cấu vốn, thuế thu nhập công ty, thuế thu nhập cá nhân.

1. Introduction

Capital structure planning is one of the important financial decisions and also a big challenge for business managers. Planning a solid capital structure, building an effective financial leverage will create a safe pillar for businesses in the process of doing business. Among the factors affecting the capital structure of enterprises, income tax has been shown by financial theories and many empirical studies around the world to have a significant impact on the choice of funding sources of businesses in general. Therefore, analyzing the impact of taxes on the use of equity and debt in the process of business activities to generate profits is an important issue for business managers.

Over the past years, the constantly growing oil and gas industry poses many opportunities but also challenges in the context of epidemics and the ongoing energy crisis in the world. This requires joint stock companies. The oil and gas industry needs to improve its financial capacity and effectively manage its capital structure to maximize corporate value. However, to analyze the impact of income tax on the capital structure

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of joint stock companies in the oil and gas industry in Vietnam is still limited, the planning is still highly spontaneity, unprofessional, with little consideration for other issues. influencing factor.

Stemming from the above situation, the author establishes a quantitative model to determine the degree of influence and direction of the impact of taxes on the capital structure of joint stock companies in the oil and gas industry by means of data regression panel data with two models: fixed effects model (FEM) and random effects model (REM). Testing with the expectation of determining the specific impact of the income tax policy factor on the capital structure of the oil and gas joint stock companies in Vietnam, thereby proposing solutions in planning the capital structure below income tax impact.

2. Overview of studies on the impact of income tax on corporate capital structure

Capital structure planning is one of the important financial decisions and also a big challenge for companying managers. A number of financial theories and empirical studies in the country as well as in the world confirmed that there is a significant impact on the choice of funding sources of enterprises. Specifically:

Overesch, M. and D. Voeller (2008), "The Impact of Personal and Corporate Taxation on Capital Structure Choices" uses panel data regression research with a study area of 23 countries in Europe over the period. The period 2000 - 2005. The factors affecting the employee's shareholders are included in the research model: (1) Marginal CIT rate, (2) Tax rate on dividends, (3) Enterprise size, (4) Inflation, (5) Fixed assets, (6) Profit. The results show that the marginal corporate income tax rate and the dividend tax rate have a positive impact on the company's employees. In addition, factors such as enterprise size and fixed assets also have a positive impact on corporate shareholders.

Ramesh P.Rao & Mounther H. Barakat (2012), "The role of taxes in capital structure: evidence from taxed and non-taxed Arab economies" studied 1,576 companies in Saudi Arabia for the period 1996 - 2001. The research methods used are cross-sectional regression and time series data. The factors affecting CTV included in the research model are: (1) Collateral, (2) Non-debt tax shield, (3) Enterprise growth rate, (4) Size business, (5)

Business risk, (6) Profit, (7) CIT marginal tax rate, (8) Dividend payout ratio (representing the impact of PIT on dividends). The results show that the marginal CIT rate has a positive effect on employees while the dividend payout ratio (PIT on dividends) has a negative or no impact on the capital structure of the firm.

Nadeem Ahmed Sheikha & Muhammad Azeem Qureshi (2014), "Crowding-out or shying-away: Impact of corporate income tax on capital structure choice of firms in Pakistan" argues that corporate income tax has an effect on the equity capital of non-financial companies. Was listed on the Karachi Stock Exchange of Pakistan in the period 1972-2010. The author gives 5 factors affecting corporate shareholders as a premise to build the variables in the research model as follows: (1) Taxes, (2) Zero-debt tax shield, (3) Profit margin, (4) Collateral value, (5) Company size. After testing by the above research model, the experimental results show that tax has a positive relationship with total debt and short-term debt ratio, whereas tax is negatively related to long-term debt ratio. The negative relationship between tax and long-term debt ratio does not seem reasonable considering the tax advantage of debt in the presence of CIT, in addition, the author finds that other specific variables have significant effects. To the selection of collaborators of companies are profitability, value of collateral and company size.

Akram Temimi1, Rami Zeitun, Karim Mimouni (2016), "How does the tax status of a country impact capital structure? Evidence from the GCC region" studied 1,317 companies listed on the stock exchanges of Thailand, Malaysia and six GCC countries during the period 2003 - 2013. The paper uses a multivariate regression model and is authored. provides the factors affecting corporate employees as a premise to build the variables in the research model as follows: (1) Growth opportunity, (2) Tangibility, (3) Profitability, (4) Liquidity, (5) Taxes, (6) Firm size, (7) Inflation, (8) Stock market, (9) GDP growth. The results confirm that tax has a direct effect as well as an indirect and significant influence on the employees of enterprises. Meanwhile, liquidity and profitability have a significantly lower influence on leverage ratios in tax-paying countries. In addition, tangibility has a negative effect on leverage in non-tax countries and has a

positive effect on tax-paying countries. Only the relationship between GDP growth and leverage is affected by taxes while the effects of inflation and stock market development on leverage are not affected by taxes.

In addition to international studies, a number of domestic studies also show the impact of income tax on the capital structure of enterprises. Tran Tan Hung (2008) with the study “Impact of income tax on capital structure in listed joint stock companies in Vietnam” pointed out that when planning the optimal capital structure of enterprises, it is necessary to attach in relation to the income tax policy. Through analyzing the impact of corporate income tax and personal income tax policies on enterprise value, the author has also raised issues that need to be considered and researched and revised by the State when promulgating tax policies, determining tax regulations. guide enterprises in mobilizing and using limited capital in society.

Meanwhile, the empirical study of Assoc. Prof. Dr. Phan Thi Bich Nguyet (2011), “The impact of the income tax system on the capital structure of joint-stock companies in Vietnam” said that among the factors affecting the Capital structure, income tax - including CIT and CIT have been confirmed by financial theories and empirical studies in the world to have a significant impact on companies’ choice of funding sources. This article examines the impact of Income tax on capital structure in the specific context of Vietnam’s economy. The author gives 9 factors affecting the capital structure of enterprises as a premise to build the variables in the research model as follows: (1) Inflation, (2) Loan interest rates, (3) Growth rate GDP, (4) VN-Index, (5) CIT rate, (6) Profit, (7) Enterprise size, (8) Enterprise growth rate, (9) PIT policy dummy variable. Research results show that PIT actually has an effect on the debt ratio of Vietnamese companies, according to the negative correlation, CIT shows a positive correlation with both the long-term debt ratio and the debt ratio. total debt ratio.

In addition, the study of Nguyen Viet Hong Anh (2015), “Effect of income tax on capital structure of Vietnamese enterprises” also analyzed the current situation and found out the extent of tax influence. Regarding the capital structure of enterprises in Vietnam today, the scope of the

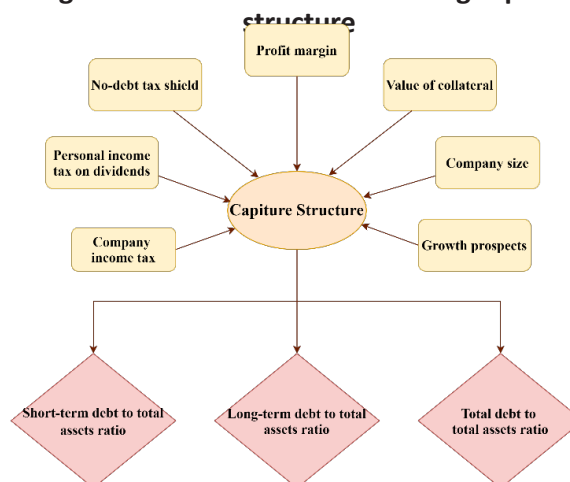
study revolves around 2 types of CIT and PIT on dividends paid, which have a relationship with corporate capital structure during the research period of 6 years. years from 2009 to 2014. The author gives 8 factors affecting corporate capital structure as a premise to build the variables in the research model as follows: (1) CIT, (2) PIT on dividends, (3) Non-debt tax shield, (4) Collateral, (5) Growth rate, (6) Firm size, (7) Business risk, (8) Profit. Research results show that taxes have an impact on employees of Vietnamese enterprises, but the level of influence is not high. Vietnamese enterprises tend to have more debt when the CIT payable increases and when the PIT on dividends increases, the enterprises will reduce their debt. The reality is that some enterprises still do not comply with the theory on the impact of taxes on capital structure. The conclusion about the level and direction of impact of the factors in the quantitative research model is the basis for proposing solutions that bring more benefits to the capital structure of Vietnamese enterprises under the influence of taxes.

In summary, after conducting an overview of the research situation related to the topic, it shows that the above academic scientific theoretical models are especially meaningful to the formation of the theoretical basis in building a theoretical framework. theory for research on the impact of income tax as well as other factors on the capital structure of enterprises.

3. Research methods

3.1. Models and hypotheses of research

Figure 1. Model of factors affecting capital



Source: Implementation team

Inheriting previous research models, the author applies a theoretical framework and research model to joint stock companies in the oil industry. The capital structure of companies in this industry includes: (1) Company income tax; (2) Personal income tax on dividends; (3) No-debt tax shield; (4) Profit margin; (5) Value of collateral; (6) Company size; (7) Growth prospects.

Dependent variables and independent variables included in the research model impact of income tax on capital structure of oil and gas industrial joint stock companies in Viet Nam are as follow:

Table 1. Dependent and independent variables in the research model

No.	Variable	Symbol	Define	Previous research
Dependent variable				
1	Short-term debt to total assets ratio	SDR_{it}	Short-term debt/ Total assets	Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2014), Nguyen Viet Hong Anh (2015),
2	Long-term debt to total assets ratio	LDR_{it}	Long-term debt/ Total assets	Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2014), Nguyen Viet Hong Anh (2015).
3	Total debt to total assets ratio	TDR_{it}	Total debt/Total assets	Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2014), Nguyen Viet Hong Anh (2015), Do Kim Du (2019), Tran Viet Dung & Bui Dan Thanh (2019).
Independent variables				
4	Company income tax	MTR_{it}	Company income tax payable/ Earnings before interest and taxes	Phan Thi Bich Nguyet (2011), Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2014), Nguyen Viet Hong Anh (2015), Tran Viet Dung & Bui Dan Thanh (2019).
5	Personal income tax on dividends	DIV_{it}	Dividends paid/ Net Profit After Taxes	Nguyen Viet Hong Anh (2015).
6	No-debt tax shield	$NDTS_{it}$	Depreciation/ Total assets	Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2014), Nguyen Viet Hong Anh (2015).

No.	Variable	Symbol	Define	Previous research
7	Profit margin	$PROFIT_{it}$	Net Profit After Taxes/Total assets	Phan Thi Bich Nguyet (2011), Nguyen Viet Hong Anh (2015), Tran Viet Dung & Bui Dan Thanh (2019).
8	Value of collateral	CVA_{it}	Fixed assets at cost/Total assets	Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2014).
9	Company size	$SIZE_{it}$	$\ln(\text{Total assets})$	Nadeem Ahmed Sheikh & Muhammad Azeem Qureshi (2014), Do Kim Du (2019), Tran Viet Dung & Bui Dan Thanh (2019).
10	Growth prospects	$GROW_{it}$	$(EPS_t - EPS_{t-1}) / EPS_{t-1}$	Phan Thi Bich Nguyet (2011).

Source: Compiled from the authors

Research hypotheses are built:

- Hypothesis H1: Company income tax has a positive impact on capital structure.
- Hypothesis H2: Personal income tax on dividends has a negative impact on capital structure.
- Hypothesis H3: The no-debt tax shield has a positive or negative impact on capital structure.
- Hypothesis H4: Profit margin has a positive or negative impact on capital structure.
- Hypothesis H5: Collateral value has a negative impact on capital structure.
- Hypothesis H6: Company size has a positive or negative impact on capital structure.
- Hypothesis H7: Growth prospects has a positive or negative impact on capital structure.

By the method of testing multivariable regression used to measure the impact of income tax on capital structure of oil and gas industrial joint stock companies in Vietnam, 3 multivariable regression models are determined as follows:

$$STDR_{it} = \beta_{0i} + \beta_1 MTR_{it} + \beta_2 DIV_{it} + \beta_3 NDTS_{it} + \beta_4 PROFIT_{it} + \beta_5 CVA_{it} + \beta_6 SIZE_{it} + \beta_7 GROW_{it} + \epsilon_{it} \quad (1)$$

$$TDR_{it} = \beta_{0i} + \beta_1 MTR_{it} + \beta_2 DIV_{it} + \beta_3 NDTS_{it} + \beta_4 PROFIT_{it} + \beta_5 CVA_{it} + \beta_6 SIZE_{it} + \beta_7 GROW_{it} + \epsilon_{it} \quad (2)$$

$$LTDR_{it} = \beta_{0i} + \beta_1 MTR_{it} + \beta_2 DIV_{it} + \beta_3 NDTS_{it} + \beta_4 PROFIT_{it} + \beta_5 CVA_{it} + \beta_6 SIZE_{it} + \beta_7 GROW_{it} + \epsilon_{it} \quad (3)$$

3.2. Data collection and processing

The study uses secondary data from the financial statements, annual reports, and resolutions of the audited General Meeting of Shareholders in the period 2013 - 2020 of 12 Oil and Gas industrial joint stock companies in Vietnam, listed in Vietnam Ho Chi Minh City Stock Exchange and Hanoi Stock Exchange. The data sources used to collect information of the Stock Exchanges and securities companies are the websites: CafeF, Vietstock, the homepage of the Oil and Gas industrial Joint Stock company.

Collected data will be aggregated in an excel file including 13 columns corresponding to the following criteria: (1) Company name; (2) Years; (3) Short-term debt; (4) Long-term debt; (5) Total debt; (6) Total assets; (7) Company income tax expenses; (8) Earnings before interest and taxes; (9) Dividends paid; (10) Net Profit After Taxes; (11) Depreciation; (12) Fixed assets at cost; (13) EPS. The research team manually reviewed and compared the data many times, then corrected and changed to complete the secondary data table in the most accurate and transparent way. The data after processing and cleaning will be included in the calculation and the final data is stored in an excel file consisting of 12 columns corresponding to the following criteria: Company name; Years; Short-term debt to total assets ratio (3/6); Long-term debt to total assets ratio (4/6); Total debt to total assets ratio (5/6); Company income tax (7/8); Personal income tax on dividends (9/10); No-debt tax shield (11/6); Profit margin (8/6); Value of collateral (12/6); Company size (ln(6)); Growth prospects ($13_t - 13_{t-1}/13_{t-1}$).

4. Research results

4.1. Descriptive statistics results

Figure 2 shows the results of the descriptive statistics with 96 observations, showing the minimum and maximum values along with the standard deviation and the mean of the dependent variables. Thereby, we can see that the ratio of long-term debt to total assets accounts for the smallest proportion in CTV with 9.65%. In which, the minimum value of LDRit is 0 and the maximum value is 0.345. While the ratio of short-term debt to total assets and the ratio of total debt

to total assets account for 44.08% and 53.35%, respectively. Short-term debt ratio reaches the minimum value of 0.07 and the maximum value of 0.81. The minimum and maximum values of the ratio of total debt to total assets are 0.08 and 0.81, respectively. Through descriptive statistics, it can be seen in the CTV of companies, the long-term ratio accounts for a very small proportion, which proves that the Oil and Gas Joint Stock Company is more inclined towards short-term debt ratio. This result is completely consistent with the current situation of debt use of oil and gas companies in Vietnam.

Figure 2: Descriptive statistics with variables in the model

Variable	Obs	Mean	Std. Dev.	Min	Max
SDRit	96	.4408202	.177479	.0672044	.8136638
LDRit	96	.096518	.1005983	0	.3454103
TDRit	96	.5334852	.1399412	.0779444	.8137415
MTRit	96	.2440396	.4450348	-.8302245	3.897376
DIVit	51	.5595918	1.533367	-2.537538	10.57996
NDTSit	96	.0349142	.0341078	0	.1492216
PROFITit	96	.0467567	.0514396	-.1216213	.1856511
CVAit	96	.5385274	.3660998	.0503499	1.365055
SIZEit	96	29.01785	2.002036	25.11634	32.14182
GROWit	73	.40707	4.275867	-8.735294	24.16667

Source: Stata15 software processing

The tax benefits of debt matter only to profitable companies. Companies with accumulated losses will receive little or no value from the interest tax shield. In order to better grasp the interplay of the interest rate tax shield and corporate debt decisions, oil and gas companies are being studied for profit as well as tax payment. Descriptive statistics results with independent variables show that corporate income tax and personal income tax on dividends with the average rate of 24.40% and 55.96%, respectively, are quite high rates. The Law on Income Tax in Vietnam is gradually stabilizing and plays a huge regulatory role in the production and business activities of enterprises in general and JSCs in the Oil and Gas industry in particular.

As for other relevant independent variables, we can see that the company size accounts for 29.02%, which is quite good value, this number indicates a significant increase in the expansion of production scale. current oil and gas industry. The average debt-free tax shield was 3.49%; profit margin was 4.67%; The average collateral value was 53.85%, while the average growth rate was 40.71%.

4.2. Correlation analysis

Correlation analysis with variable SDR_{it}

Figure 3. Correlation coefficient matrix with variable SDR_{it}

	SDRit	MTRit	DIVit	NDTSit	PROFITit	CVAit	SIZEit
SDRit	1.0000						
MTRit	0.0722	1.0000					
DIVit	0.1730	0.7049*	1.0000				
NDTSit	0.3684*	-0.1608	0.0241	1.0000			
PROFITit	-0.3326*	-0.0740	-0.0762	0.4393*	1.0000		
CVAit	0.7879*	-0.1787	0.0098	0.6243*	0.1690	1.0000	
SIZEit	0.1190	-0.1217	0.2207	-0.0260	-0.1883	0.1561	1.0000
GROWit	-0.0704	-0.0018	-0.0428	-0.0225	0.0218	-0.0230	-0.0538
GROWit	1.0000						

Source: Stata15 software processing

Correlation analysis with variable LDR_{it}

Figure 4. Correlation coefficient matrix with variable LDR_{it}

	LDRit	MTRit	DIVit	NDTSit	PROFITit	CVAit	SIZEit
LDRit	1.0000						
MTRit	-0.1102	1.0000					
DIVit	0.0210	0.7049*	1.0000				
NDTSit	0.6373*	-0.1608	0.0241	1.0000			
PROFITit	-0.3782*	-0.0740	-0.0762	0.4393*	1.0000		
CVAit	0.6295*	-0.1787	0.0098	0.6243*	0.1690	1.0000	
SIZEit	0.3257*	-0.1217	0.2207	-0.0260	-0.1883	0.1561	1.0000
GROWit	0.0039	-0.0018	-0.0428	-0.0225	0.0218	-0.0230	-0.0538
GROWit	1.0000						

Source: Stata15 software processing

Correlation analysis with variable TDR_{it}

Figure 5. Correlation coefficient matrix with variable TDR_{it}

	TDRit	MTRit	DIVit	NDTSit	PROFITit	CVAit	SIZEit
TDRit	1.0000						
MTRit	-0.3020*	1.0000					
DIVit	0.2086	0.7049*	1.0000				
NDTSit	0.0359*	-0.1608	0.0241	1.0000			
PROFITit	-0.0259	-0.0740	-0.0762	0.4393*	1.0000		
CVAit	0.5400*	-0.1787	0.0098	0.6243*	0.1690	1.0000	
SIZEit	0.3031*	-0.1217	0.2207	-0.0260	-0.1883	0.1561	1.0000
GROWit	-0.1632	-0.0018	-0.0428	-0.0225	0.0218	-0.0230	-0.0538
GROWit	1.0000						

Source: Stata15 software processing

In the above correlation analysis, we all have the correlation coefficient varying from -1 to +1, which is satisfactory. Through the individual correlation coefficient between the above variables, it can be seen that the model does not have multicollinearity because the coefficients r are all less than 0.8.

4.3. Empirical Results

Estimation results of the regression model for the variable SDR_{it}

It can be seen that, in the FGLS model (4), CIT MIRit, PIT on dividends DIVit and growth

prospects GROWit have no impact on the ratio of short-term debt to total assets SDRit, the remaining independent variables both have an impact on the dependent variable with a confidence level of 99%. The regression model between the dependent variable SDR and the independent variables is selected as:

$$SDR_{it} = 1,23428 + 1,114359 NDTS_{it} - 1,055901 PROFIT_{it} - 0,4215003 CVA_{it} - 0,0205912 SIZE_{it}$$

Figure 6. Synthesis of POOL (1), FEM (2), REM (3), FGLS (4) models

	(1) SDRit	(2) SDRit	(3) SDRit	(4) SDRit
MTRit	0.00326 (0.02)	-0.371** (-2.04)	0.00326 (0.02)	0.0654 (0.55)
DIVit	0.0312 (0.53)	-0.112** (-2.03)	0.0312 (0.53)	-0.00840 (-0.16)
NDTSit	0.921* (1.82)	0.283 (0.55)	0.921* (1.82)	1.114*** (2.58)
PROFITit	-0.995*** (-3.75)	-0.528* (-2.02)	-0.995*** (-3.75)	-1.056*** (-4.70)
CVAit	-0.423*** (-9.51)	-0.497*** (-6.06)	-0.423*** (-9.51)	-0.422*** (-10.74)
SIZEit	-0.0155** (-2.11)	0.0632** (2.31)	-0.0155** (-2.11)	-0.0206*** (-3.06)
GROWit	-0.00264 (-0.55)	0.00128 (0.31)	-0.00264 (-0.55)	-0.00194 (-0.58)
_cons	1.096*** (5.05)	-1.000 (-1.31)	1.096*** (5.05)	1.234*** (6.20)
N	55	55	55	55
R-sq	0.740	0.592		

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Source: Stata15 software processing

Estimation results of the regression model with the variable LDR_{it}

Figure 7. Synthesis of POOL (1), FEM (2), REM (3), FGLS (4) models

	(1) LDRit	(2) LDRit	(3) LDRit	(4) LDRit
MTRit	-0.232* (-1.86)	0.130 (0.96)	-0.232* (-1.86)	-0.156* (-1.88)
DIVit	-0.00913 (-0.18)	-0.0409 (-0.99)	-0.00913 (-0.18)	-0.00521 (-0.15)
NDTSit	1.190*** (2.79)	0.973** (2.51)	1.190*** (2.79)	1.409*** (3.89)
PROFITit	0.0337 (0.15)	-0.195 (-1.00)	0.0337 (0.15)	-0.0302 (-0.20)
CVAit	0.00516 (0.14)	-0.0952 (-1.56)	0.00516 (0.14)	-0.00466 (-0.16)
SIZEit	0.0429*** (6.90)	-0.0261 (-1.28)	0.0429*** (6.90)	0.0346*** (6.66)
GROWit	-0.00281 (-0.69)	-0.0000968 (-0.03)	-0.00281 (-0.69)	-0.00379* (-1.86)
_cons	-1.112*** (-6.07)	0.875 (1.53)	-1.112*** (-6.07)	-0.896*** (-5.92)
N	55	55	55	55
R-sq	0.633	0.267		

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Source: Stata15 software processing

In the FGLS model (4), corporate income tax MIRit and growth outlook GROWit have a negative impact on the ratio of long-term debt to total assets with 90% confidence, the debt-free tax shield NDTSit and the size of the company.

SIZE_{it} companies have 99% confidence, PIT on dividends DIV_{it}, PROFIT_{it} and CVA_{it} have no impact on the dependent variable. The regression model between the dependent variable LDR and the independent variables is selected as:

$$LDR_{it} = -0,8956187 - 0,1560037 MTR_{it} + 1,40942 NDTs_{it} + 0,0345619 SIZE_{it} - 0,0037859 GROW_{it}$$

Estimation results of the regression model for the variable TDR_{it}

Figure 8. Synthesis of POOL (1), FEM (2), REM (3), FGLS (4) models

	(1) TDR _{it}	(2) TDR _{it}	(3) TDR _{it}	(4) TDR _{it}
MTR _{it}	-0.229 (-1.35)	-0.241 (-1.12)	-0.229 (-1.35)	-0.258* (-1.83)
DIV _{it}	0.0220 (0.33)	-0.152** (-2.33)	0.0220 (0.33)	0.0263 (0.61)
NDTS _{it}	2.111*** (3.65)	1.256** (2.03)	2.111*** (3.65)	2.281*** (4.17)
PROFIT _{it}	-0.961*** (-3.16)	-0.723** (-2.32)	-0.961*** (-3.16)	-1.064*** (-3.85)
CVA _{it}	-0.418*** (-8.19)	-0.592*** (-6.07)	-0.418*** (-8.19)	-0.435*** (-9.24)
SIZE _{it}	0.0274*** (3.25)	0.0371 (1.14)	0.0274*** (3.25)	0.0252*** (4.61)
GROW _{it}	-0.00545 (-0.99)	0.00118 (0.24)	-0.00545 (-0.99)	-0.00584 (-1.19)
_cons	-0.0166 (-0.07)	-0.125 (-0.14)	-0.0166 (-0.07)	0.0574 (0.38)
N	55	55	55	55
R-sq	0.642	0.621		

t statistics in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Source: Stata15 software processing

It can be seen that, in the FGLS model (4), corporate income tax MIR_{it} has a negative effect on the debt-to-total assets ratio with the significance level of 90%, the debt-free tax shield NDTs_{it}, the profit ratio PROFIT_{it}, the asset value. CVA_{it} and firm size SIZE_{it} affect with 99% significance, PIT on dividends DIV_{it} and growth prospect GROW_{it} have no impact on the dependent variable. The regression model between the dependent variable TDR_{it} and the independent variables is selected as:

$$TDR_{it} = 0,0574475 - 0,2579395 MTR_{it} + 2,281063 NDTs_{it} - 1,064448 PROFIT_{it} - 0,4347669 CVA_{it} + 0,0251739 SIZE_{it}$$

Through the results of running the regression model with 3 cases of 3 dependent variables SDR_{it}, LDR_{it}, TDR_{it} by the regression method of FEM and REM panel data. For each case, the study ran the final FGLS model to overcome the defects of the selected FEM model after Hausman determination. Finally, 3 suitable models were selected as follows:

$$(1) SDR_{it} = 1,23428 + 1,114359 NDTs_{it} - 1,055901 PROFIT_{it} - 0,4215003 CVA_{it} - 0,0205912 SIZE_{it}$$

$$(2) LDR_{it} = -0,8956187 - 0,1560037 MTR_{it} + 1,40942 NDTs_{it} + 0,0345619 SIZE_{it} - 0,0037859 GROW_{it}$$

$$(3) TDR_{it} = 0,0574475 - 0,2579395 MTR_{it} + 2,281063 NDTs_{it} - 1,064448 PROFIT_{it} - 0,4347669 CVA_{it} + 0,0251739 SIZE_{it}$$

In all three models above, the sig values are all less than 10%, so the independent variables are all statistically significant, the relevance of the 3 models is quite high at 90% and 99%. Therefore, the quantitative model results will be the basis to analyze the level and direction of the impact of each independent variable on the dependent variable and conclude the research hypotheses.

Table 2. Summary of direction of impact of independent variables on CTV

Independent variables	Research hypothesis	Research results			
		Direction of impact	SDR _{it}	LDR _{it}	TDR _{it}
MTR _{it}	(+)	(-)		(*)	(*)
DIV _{it}	(-)				
NDTS _{it}	(+)/(-)	(+)	(***)	(***)	(***)
PROFIT _{it}	(+)/(-)	(-)	(***)		(***)
CVA _{it}	(-)	(-)	(***)		(***)
SIZE _{it}	(+)/(-)	(+)/(-)	(-) (***)	(+) (***)	(+) (***)
GROW _{it}	(+)/(-)	(-)		(*)	

Source: Compiled from research results

Note:

(+/-): The independent variable acts in the same/opposite direction as the dependent variable.

(-): The independent variable has no effect on the dependent variable.

(*), (**), (***) : The independent variable affects the dependent variable with significance level 10%, 5%, 1%

5. Conclusions and recommendations

5.1. Conclusions and findings from the study

Through the summary of the above research results, it can be seen that company income tax has a negative impact on the ratio of long-term debt and total debt to total assets; does not affect the short-term debt ratio. Besides, the company income tax on dividends does not affect all three indicators of financial leverage of joint stock companies in the oil and gas industry in Vietnam. Other independent variables that have a positive/negative correlation for debt ratios are different in each model.

- **Correlation between corporate income tax (MTR_{it}) and capital structure:** Company income tax has a negative relationship with both dependent variables LDR_{it} and TDR_{it} in 2 regression models with 90% confidence. For the dependent variable SDR_{it} , the company income tax has no impact. In regression model (2), the regression coefficient of MTR_{it} shows that the impact of company income tax on the long-term debt ratio is -0.1560037. When the company income tax increases by 1%, the ratio of long-term debt to total capital decreases by 0.1560037%. In regression model (3), the regression coefficient of MTR_{it} is -0.2579395, showing that company income tax has a negative impact on the total debt of joint stock companies in the Oil and Gas industry in Vietnam, regardless of long term or short term. When the company income tax increases by 1%, the debt-to-equity ratio decreases by 0.2579395%.

- **Correlation between personal income tax on dividends (DIV_{it}) and capital structure:** The research shows that Personal income Tax has no impact on the employees of joint stock companies in the Oil and Gas industry in Vietnam. According to the characteristics of the Oil and Gas industry, the time to list on the stock exchange is later than other production and business sectors. Besides, from the payment of dividends in the company to the current personal income tax law, the research results show that there is no impact of personal income tax on employees during the research period. .

- In addition to focusing on analyzing the impact of income tax on the capital structure of joint stock companies in the oil and gas industry, the study also shows the degree of correlation between other independent variables in the model such as:

+ **No-debt tax shield $NDTS_{it}$:** There is a positive correlation to all 3 indicators of employee engagement in companies, namely the short-term ratio, the long-term debt ratio and the ratio of total debt to total assets. This means that as companies in the Oil and Gas industry use more debt, the greater the tax shield benefit will be due to the deduction when paying company income tax, the higher the tax benefits. the larger the net cash flow from business profits to shareholders.

+ **Profit ratio $PROFIT_{it}$:** Research results show that profitability ratio has a negative impact on the ratio of short-term debt and total debt in capital structure, with no impact on the ratio of long-

term debt with the degree of profitability. 99% confidence.

+ **Value of collateral CVA_{it} :** Similar to the rate of return, the value of collateral also has no impact on the long-term debt ratio, but only negatively correlates with the ratio of short-term debt and total debt with 99% confidence, coefficients in model (1) and (3) are -0.4215003 and -0.4347669, respectively. In the current situation, joint stock companies in the Oil and Gas industry in Vietnam mostly use short-term debt more in capital structure planning.

+ **Company size $SIZE_{it}$:** Firm size has a negative relationship with the ratio of short-term debt and a positive relationship with the ratio of long-term debt and total debt at the 99% confidence level. The level of impact of company size on capital structure is shown in the regression coefficients in each case SDR_{it} , LDR_{it} , TDR_{it} , respectively: - 0.0205912; 0.0345619; 0.0251739. This is consistent with the trade-off theory and logic with the current situation because joint stock companies in the Oil and Gas industry are more likely to borrow long-term loans. Furthermore, commercial banks feel safe in extending loans to large firms because such firms have less information asymmetry and are able to diversify risks.

+ **Growth prospect of $GROW_{it}$:** Growth prospects are negatively related to long-term debt ratio with 99% confidence. The impact of growth rate on capital structure is shown in the regression coefficient in the case of LDR_{it} - 0.0037859. The research results are suitable when the Oil and Gas Joint Stock Company in Vietnam has a high growth rate, it will reduce long-term debt.

5.2. Recommendations

5.2.1. Recommendations for joint stock companies in the Oil and Gas industry

Firstly, companies in the Oil and Gas sector should aim to adjust the debt ratio to market value in the medium term on the basis of the optimal debt ratio to suit the characteristics of each company.

Second, in the capital structure planning, it is necessary to study the impact of factors in general and especially to be more careful in taking advantage of the tax shield, especially to implement synchronous solutions to raise the tax rate. improve the credit rating, raise awareness and efficiency of financial management of the company, focus on building and enhancing the role of financial

managers in the company to achieve the goal of maximizing value the company.

Thirdly, in order to prevent and limit bad debts arising from credits granted to the company, because companies want to exploit this capital, the company itself must assert its position in the financial sector. from an investor's perspective, flexibly applying the ratio and form of dividend payment on charter capital.

5.2.2. Recommendations for State management agencies

- For Company income tax:

Firstly, the promulgated company income tax policy must ensure the social balance and support the development of the capital market.

Secondly, the government needs to continue to have effective policies to create conditions for companies to take the initiative in issuing corporate bonds and preferred shares, specifically non-refundable preferred shares.

Thirdly, the Government needs to continue to have effective policies to create conditions for companies to take the initiative in issuing corporate bonds and preference shares, specifically non-refundable preferred shares.

- For Personal income tax:

Firstly, the government should adjust the personal income tax policy in the direction of increasing the deduction for family circumstances for themselves and their dependents according to the increase of inflation, the gap between tax levels by increasing the level of taxable income tax of each silver, remove the silver le chi, keep the rank...

Secondly, the government needs to study and develop a tax schedule and tax calculation method in a scientific way, so that the PIT policy can become a tool of macro regulation in economic development, orientation for policy companies' finances towards an optimal capital structure.

Thirdly, the CIT policy needs to be developed in connection with the PIT policy aimed at creating accumulations for both the company and its shareholders, creating favorable conditions for companies to prioritize the use of financial resources. retained earnings as per the pecking order theory. In order for the Income tax system to bring harmony between the interests of taxpayers and the State, there should be specific scientific research to give an appropriate PIT rate.

5.2.3. Recommendations for Commercial Banks

Firstly, Commercial Banks need to increase the proportion of medium and long-term credit capital in investment activities, pay attention to and create conditions for small-scale companies to access loans as easily as expanding the portfolio of usable assets. Using mortgage, more preferential interest rate policy, using assessment and appraisal method suitable for small-sized companies to extend long-term loans to the company.

Secondly, commercial Banks should monitor the performance of listed companies with fully and accurately audited information on the Vietnamese stock exchange, thereby calculating competitiveness based on the market from which to give reasonable lending policies to companies that are borrowing capital from their banks. To make decisions on lending credit to companies that need to borrow capital, commercial banks should support loan policies and incentives for companies when they realize that borrowing can bring benefits for commercial banks.

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FACTORS INFLUENCING TO CUSTOMER SATISFACTION OF ONLINE SHOPPING IN AEON MALL: A STUDY IN HAI PHONG

MA. Le Hong Nhung* - MA. Phan Thi Minh Chau**

Abstract: *The aim of the study is to identify the influencing factors and measure the extent of their impact on customer satisfaction about online shopping services at Aeon Hai Phong supermarket. With the conduct of an online survey of 150 respondents, authors applied Descriptive statistics, Frequency statistics, EFA discovery factor analysis on SPSS software. After conducting surveys and analysis, the results indicated that young people and women tend to purchase online more than other groups. In addition, the Factors includes of Assurance, Empathy and Tangibleness have a significant effect on customer satisfaction while not having the impact of Responsiveness and Reliability. Thus, some recommendations have been proposed to improve customer satisfaction.*

• Keywords: customer satisfaction, online shopping, e-commerce, super-markets, retailers.

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Tóm tắt: Mục đích của nghiên cứu này nhằm xác định các nhân tố ảnh hưởng và tiến hành đo lường mức độ của ảnh hưởng của nó đến sự hài lòng của khách hàng về dịch vụ mua sắm trực tuyến tại siêu thị Aeon Hải Phòng. Với việc tiến hành khảo sát trực tuyến 150 ứng viên, nhóm tác giả áp dụng thống kê mô tả, thống kê tần suất, phân tích nhân tố khám phá EFA trên phần mềm SPSS. Sau khi tiến hành khảo sát và phân tích, kết quả cho thấy người trẻ tuổi và nữ có xu hướng mua sắm trực tuyến nhiều hơn cả. Ngoài ra, các nhân tố Sự đảm bảo, Sự đồng cảm và Sự hữu hình có ảnh hưởng đáng kể đến sự hài lòng của khách hàng trong khi không có sự tác động của nhân tố Sự tin cậy và Sự phản hồi. Do đó, một vài khuyến nghị đã được đề xuất nhằm nâng cao sự hài lòng của khách hàng.

• Từ khóa: sự hài lòng của khách hàng, mua sắm trực tuyến, thương mại điện tử, siêu thị, nhà bán lẻ.

1. Introduction

Online shopping has become increasingly popular in recent decades and has had a positive impact on many domestically and foreign economic sectors. Before Covid-19 pandemic, the majority of people preferred traditional shopping channels such as markets, supermarkets, convenience

stores... However, because the impact of the Covid-19 pandemic leading to travel restrictions and tight spending, the number of people choosing to shop online is increasing considerably. Retail businesses also focus more on developing their own online shopping channels, both boosting sales and enabling customers to easily choose the right product. Customer satisfaction according to several previous studies by Ha & Jang (2010), Nicolaides (2008) argued that it is greatly influenced by the physical factors of service, quality and price of food.

As one of the largest retail trading groups in the world, Aeon owns over 179 joint ventures in Japanese as well as foreign markets. As of August 2019, Aeon Mall has built a system with 170 shopping centers in 5 countries around the world including Japan, Indonesia, China, Cambodia and Vietnam. Up to now, Aeon has 6 commercial centers, respectively in Hanoi, Binh Duong, Ho Chi Minh City, Hai Phong. For the people of Hai Phong city, Aeon Mall is considered as a shopping and entertainment destination with a great attraction. Moreover, the group is also running a full, professional online shopping system on many platforms, contributing to the shopping experience as its philosophy to put the customer first.

This study aims to identify the factors that

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affect the satisfaction of customers' satisfaction with the quality of online shopping services of Aeon supermarkets in Hai Phong and to measure the impact of such these factors. This contributes to helping the authors come up with a number of practical solutions to contribute to improving the quality of online shopping services of supermarkets.

2. Literature review

Customer satisfaction

Customer satisfaction is believed as a foundational factor for building and developing customer relationships. There are many different perspectives on customer satisfaction of some authors such as: Philip Kotler (2001) defines satisfaction as the degree of a human sensory state derived from comparing the results obtained from the consumption of a product with the expectations of the person. Satisfaction levels depend on the difference between the results received and the expectations. According to Vo Khanh Toan (2008), customer satisfaction is the evaluation, the customer's feeling of a product or service has met their needs and expectations.

Online shopping

Today, the field of e-commerce is growing rapidly in countries that have been developing. Using e-commerce allows businesses and business organizations to introduce information about products to different potential audiences in every part of the world that can connect to the Internet. According to Kotler (2012), online shopping (often referred to as online shopping) is the purchase through electronic connections between buyers and sellers - usually online. According to Bui Thanh Trang (2014) online shopping is a process by which a customer buys goods or services directly from a seller for a period of authentication through an access network, not through intermediary services, it is a form of e-commerce.

Satisfaction in online shopping

Shopping at an online software like shopping through an advertising publication, because shopping, delivery is all via email, and in both cases, customers cannot touch or feel items (Lighter and Easrman, 2002). So the prospects of e-commerce and online shopping depended greatly on the user interface and how people interact with computers

(Griffith et al., 2001). Hemon & Whitwan (2001) argued that online customer satisfaction was the customer response they receive when using online services. According to Myers and Mintu - Wimsatt (2012), satisfaction in online shopping originated from the satisfaction of online purchases and the customer experience.

On the other hand, many researchers recognize and accept that customer satisfaction is the logical measure of success in the exchange in the market.

Wang and Huarng (2002) as researching customer satisfaction about e-stores showed a homogeneous correlation relationship of 9 independent variables: web site design, competitive price, merchandise availability, merchandise condition, on-time delivery, return policy, alive consumer service, order confirmation, promotion activities with independent variable satisfaction when surveying 419 online stores. However, this study has not shown the extent of the impact of factors and proposes solutions to improve the quality of service. Maditinos and Theodoridis (2010) demonstrated the product information quality and user interface quality have a strongest effect, then service information quality, purchasing process; and there are the factors such as security perception, product attractiveness has a synchrony relationship with customer satisfaction. In addition, the authors also demonstrated that customer satisfaction has a great impact on post-purchase behavior. However, this study has some limitations due to the limited availability of the Internet and technology in Greece that greatly influenced the study results.

Similarly, Lin and Sun's (2009) study of customer satisfaction and loyalty across the online shopping space also pointed to a number of significant impact factors such as technology, web service quality. In addition, by using the structural equation modeling model (SEM), the authors also claimed that reasonable prices can directly impact customer loyalty but not necessarily affect their satisfaction. Vu Huy Thong and Tran Mai Trang (2013) conducted research on customer satisfaction online shopping in groups, the results of which indicated that the most important factors affecting the satisfaction of customers shopping online in groups include the price of the product, the richness of categories and brands, the quality of

information of the website, the quality of products and the delivery stage.

Currently, although there are many studies on customer satisfaction on online shopping, there has not been a single study conducted in the retail sector in Vietnam. On the other hand, there have been no studies that have measured the factors that affect the satisfaction of online shoppers in this area.

3. Research Methodologies

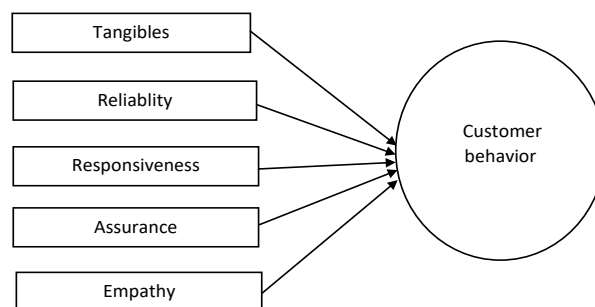
Research model

According to Parasuraman et al., (1985), there is a connection between customer perceptions and expectations and quality of service. From this point of view, his team built and developed a well-known scale, applied by many studies. It's a SERVEQUAL scale with 22 observed variables represented in five factors: tangibles, reliability, responsiveness, assurance and empathy, respectively. In it:

- Tangibles: Appearance of physical facilities, equipment, personnel and written materials.
- Reliability: Ability to perform the promised service dependably and accurately
- Responsiveness: Willingness to help customers and provide prompt service
- Assurance: Ability to perform the promised service dependably and accurately Ability to perform the promised service dependably and accurately
- Empathy: Caring, easy access, good / communication, customer understanding, and individualized attention given to customers

The SERVEQUAL scale is applied in many areas from medicine (*Babakus and Mangold, 1992*), schools (*Carman, 1990*), food (*Cronin and Taylor, 1992*), bank (*Ravichandran et al, 2010*), retailing (*Naik, 2010*). Therefore, in this study, the authors used the SERVEQUAL scale to measure the influence of factors on customer satisfaction in the online shopping industry.

This research model consists of one dependent variable is Customer Satisfaction, and five independent variables consist of tangibles, reliability, responsiveness, assurance and empathy, respectively.



Research Methodologies

Based on Bollen's study (1989) on a minimum sample size of 5 samples for an observational variable. With 27 observed variables in the study, the minimum sample size was $27 \times 5 = 135$. The number of votes collected was 171 votes, the valid number of responses was 150 votes ($n=150$) ensuring conditions on sample size. The method of data collection used is the method of interviewing to hand out online surveys. The respondents are randomly selected. The questionnaire includes of 2 parts: Part 1 about basic demographics such as gender, income and age; part 2 about measuring factors' influence to customer satisfaction. The research data was analyzed by using SPSS 20.0. The observed variables were measured on 5 point likert scale ranging from 1 = strongly disagree to 5 = strongly agree for assessing the marketing mix factor that affect the customer satisfaction.

4. Results and Discussion

Table 1. Respondents' demographics

		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Gender (People)	Male	50	33.3	33.3	33.3
	Female	100	66.7	66.7	100.0
	Total	150	100.0	100.0	
Age ((Years)	Under 18	14	9.3	9.3	9.3
	18-25	58	38.7	38.7	48.0
	25-35	41	27.3	27.3	75.3
	35-40	21	14.0	14.0	89.3
	40-50	9	6.0	6.0	95.3
	Above 50	7	4.7	4.7	100.0
	Total	150	100.0	100.0	

		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Income (Million VND)	Under 5 milion	47	31.3	31.3	31.3
	From 5-10 milion	46	30.7	30.7	62.0
	From 10-15 milion	29	19.3	19.3	81.3
	Over 15 milion	28	18.7	18.7	100.0
	Total	150	100.0	100.0	
	Under 5 milion	47	31.3	31.3	31.3

Source: The author's analysis

According to statistics from the survey, out of a total of 150 customers participating in the survey on online shopping satisfaction on Aeon Hai Phong app, the number of male customers is 50 people accounting for 33,3%, the number of female customers is 100 people accounting for 66,7%. The number of women who make up two-thirds of the total, there is such a disparity because women tend to shop more than men and are often responsible for spending in the family.

The age at which the largest proportion of the total number of customers participating in the survey was 18-25 years old accounting for 38.7% of 58 customers, next is the age of 25-35 accounting for 27,3%, the third is the age of 35-40 accounting for 14,0%, the fourth is the age under 18 accounted for 9,3%, followed by the age of 40-50 years accounted for 6.0% and the lowest rate is the age over 50 accounted for 4.7%. According to the above survey data, the majority of customers are mainly young people aged 18-35, because at this age most customers have a certain source of income and understanding of online shopping services, so the frequency of shopping is greater than other ages.

In addition, the income level of customers participating in the survey accounted for the majority at less than 5 million and from 5-10 million respectively with 31,3% and 30,7%. The income of 10-15 million accounted for 19,3% and the highest level of 15 million accounted for 18,7%. Therefore, the group of customers with incomes of less than 5 million participated in online shopping the most and the group of customers with income over 15 million participated in shopping the least.

The results measure the factors that affect customer satisfaction

In this study, the sample was 150 units in size. Therefore, during the examination of Cronbach's Alpha, the author retained a scale with a Cronbach's Alpha coefficient of $\geq 0,6$ and the correlation coefficient of the total variables $\geq 0,3$. The results of the analysis showed that the scales all had an even reliability of about 0,8-0,9, and that the correlation coefficient of the total variables was $\geq 0,3$. Therefore, the scale is reliable enough to perform further analyses.

Next, the author conducted KMO and Barlett's test to check if the data is sufficient to analyze the EFA discovery factor. Specifically: KMO coefficient = 0,931 > 0,5, sig Barlett's Test = 0,000 < 0,05 so factor analysis is accepted for a significant level. That eigenvalues value equal to 1,085 permitted 3 independent variables summarizing the information of 24 observational variables to put into EFA in the best way. The total variance these factors extracted was 63,937% > 50%. Thus, the three above factors explained 63,937% of the data variability of the 24 observed variables involved in EFA.

Table 2. Rotated component matrix

	Component		
	1	2	3
RL1	0,796		
RL2	0,783		
RS4	0,728		
RS3	0,716		
RL4	0,684		
AS1	0,671		
AS4	0,648		
AS2	0,625		
TA4	0,584		0,584
EM1	0,565	0,545	
EM2	0,527		
EM4		0,744	
AS3		0,680	
EM5		0,666	
TA5		0,627	
EM3		0,617	
RL5		0,615	
RS2	0,505	0,544	
RS1		0,523	
RL3	0,504	0,513	
TA1			0,822
TA2			0,815
TA3			0,728

Source: The author's analysis

In the rotation matrix table, there are 4 bad variables: TA4, EM1, RS2, RL3 to consider removing as below:

- TA4 variable uploaded in 2 factors, Component 1 and Component 3 with a load factor of 0,584. The gap between loading factors is $0 < 0,2$.

- EM1 variables uploaded in 2 factors: Component 1 and Component 2 with load factor of 0,565 and 0,545, respectively. The gap between loading factors is equal to $0,565 - 0,545 = 0,02 < 0,2$.

- The RS2 variable uploads in 2 factors, Component 1 and Component 2 with a load factor of 0,505 and 0,544, respectively. The gap between loading factors is equal to $0,544 - 0,505 = 0,039 < 0,2$.

- The RL3 variable uploads in 2 factors, Component 1 and Component 2 with a load factor of 0,504 and 0,513, respectively. The gap between loading factors is equal to $0,513 - 0,504 = 0,009 < 0,2$.

As a result, the team used this bad 4-variable type method in an EFA analysis. From the 24 variables observed at the first EFA analysis, remove TA4, EM1, RS2, RL3 and include the remaining 20 observational variables in the second EFA analysis. Similarly, the 2nd EFA analysis (table 3) and the 3rd EFA (table 4) of the research group type 2 bad variables are AS4 and RL5 (table 3) and 1 bad variable AS5 (table 4) respectively as below:

Table 3. Rotated component matrix

	Component		
	1	2	3
RL1	0,815		
RL2	0,792		
RS4	0,736		
AS1	0,702		
RL4	0,699		
RS3	0,696		
AS2	0,676		
AS4	0,636	0,510	
EM2	0,559		
RS1	0,524		
EM4		0,791	
EM5		0,730	
AS3		0,680	
TA5		0,592	
AS5		0,589	
RL5	0,503	0,575	
EM3		0,561	
TA2			0,867
TA1			0,740
TA3			0,641

Source: The author's analysis

In table 3, there are 2 bad variables, AS4 and RL5, which need considering be eliminated

- The AS4 variable uploads in 2 factors, Component 1 and Component 2 with a load factor of 0,636 and 0,510, respectively. The gap between loading factors is equal to $0,636 - 0,510 = 0,136 < 0,2$.

- The RL5 variable uploads in 2 factors, Component 1 and Component 2 with a load factor of 0,503 and 0,575, respectively. The load factor difference is equal to $0,575 - 0,503 = 0,074 < 0,2$.

Therefore, the team eliminated these 2 bad variables.

Table 4. Rotated component matrix

	Component	
	1	2
RL1	0,805	
RL2	0,794	
RS4	0,751	
RS3	0,747	
AS1	0,746	
RL4	0,743	
AS2	0,707	
EM2	0,618	
RS1	0,614	
AS5	0,587	0,521
AS3	0,536	
TA2		0,835
TA1		0,806
TA5		0,701
EM4		0,672
TA3		0,660
EM3		0,575
EM5		0,562

Source: The author's analysis

In table 4, there is a bad variable that AS5 needs to be considered for removal.

- The AS5 variable uploads in 2 factors: Component 1 and Component 2 with a load factor of 0,587 and 0,521, respectively. The gap between loading factors is equal to $0,587 - 0,521 = 0,066 < 0,2$. Therefore, the team eliminated this bad variable.

The team conducted an EFA analysis with 17 survey variable, respectively with a KMO coefficient = $0,921 > 0,5$, sig Barlett's Test = $0,000 < 0,05$ so the factor analysis is appropriate. On the other hand, there are 2 factors cited in the eigenvalue criterion greater than 1, so these two factors summarize the information of the 17 observational variables put into the EFA in the best

way. Thus, the two factors cited explain 61,490% of the data variability of the 17 observed variables involved in the EFA.

Table 5. Rotated component matrix

	Component	
	1	2
RL1	0,809	
RL2	0,793	
RS4	0,756	
RL4	0,748	
RS3	0,747	
AS1	0,744	
AS2	0,706	
EM2	0,620	
RS1	0,612	
AS3	0,534	
TA2		0,839
TA1		0,811
TA5		0,698
EM4		0,667
TA3		0,664
EM3		0,575
EM5		0,562

Source: The author's analysis

Table 5 shows that 17 variables have a greater factor of factor loading than 0.5 and no bad variables. So this time, this analysis we eliminated seven variables is TA4, EM1, RS2, RL3, AS4, RL5 and AS5. 17 observations of convergence and discrimination in two factors.

The study continues to carry out EFA analysis with a variable of 3 SA1, SA2 and SA3. In turn, $KMO = 0,758 > 0,5$, sig Barlett's test = $0.000 < 0.05$ should be parsed as appropriate. The analysis shows that there is a factor quoted in eigenvalue by $2,563 > 1$. The factor explains the 85,430% data variables of three observations involved in EFA.

The rotated component matrix will not appear but instead the report: Only one component was extracted. The solution cannot be rotated. Thus, that scale make sure the single direction, the observations of the variable dependency are quite good.

Table 6. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin - Watson
1	0,852 ^a	0,726	0,717	0,50930	1,854

Source: The author's analysis

In table 6, we see that the R coefficient has a value 0,852 which shows the relationship between variables in the model with a relatively tight correlation. The R^2 (R square) = 0,726

compatibility of the model is 72,6% or 72,6% variations of green consumption behavior are explained by 2 factors. The R^2 value adjusts (Adjusted R Square) more accurately reflects the relevance of the model versus 71,7%. In addition, Durbin - Watson = 1,854 regarding nearly 2, which means that there is no correlation between the remainder of the model. So, this research is statistically significant.

Pearson correlation results show that all independent variables are correlated with dependency variables at 1%, with 99% (Sig. = $0,000 < 0,05$). The dependent variable Assurance (AS) has the strongest correlation with the independent variable Satisfaction (SA) (Pearson coefficient = 0,798) and the weakest correlation with the independent variable Tangibility (TA) (coefficient of Pearson = 0,662).

When evaluating the regression coefficient, we see that there are 2 variables that do not have a significant level compared to customer satisfaction (SA), respectively, the variable Reliability, Responsiveness (RS) because the variables are not significant. This has a Sig. significance level. = 0,669 and $0,101 > 0,05$, so the regression equation cannot be accepted. There are 3 variables affecting customer satisfaction (SA) namely: Tangibility (TA), Assurance (AS) and Empathy (EM) because these variables have Sig significance level. < 0.05 . In addition, the Sig value. of constant $0.837 > 0.05$ should be excluded from the regression equation.

The relationship between the dependent variable (SA) and the three independent variables is shown in the following standardized regression equation:

*Customer Satisfaction (SA) = 0.396 * Assurance (SA) + 0.229 * Empathy (EM) + 0.159 * Tangibility (TA).* In there:

- Coefficient β of Assurance = 0.396 has a (+) sign, so the relationship between Assurance and Customer Satisfaction is in the same direction. The meaning is that when assessing Assurance increases/decreases by 1 point, Customer Satisfaction will increase/decrease by 0.396 points with other conditions unchanged.

- The coefficient β of Empathy = 0.229 has a (+) sign, so the relationship between Empathy and Customer Satisfaction is in the same direction. The meaning is that when assessing Empathy increase/

decrease by 1 point, Customer Satisfaction will increase/decrease by 0.229 points with other conditions unchanged.

- The coefficient β of Tangibility = 0.159 has a (+) sign, so the relationship between Assurance and Customer Satisfaction is in the same direction. The meaning is that when assessing Tangibility increase/decrease by 1 point, Customer Satisfaction will increase/decrease by 0.159 points with other conditions unchanged.

In addition, the order of influence on Customer Satisfaction is: Assurance, Empathy and Tangibility, respectively.

5. Conclusion

As the trend of online shopping becomes popular, customer expectations also change. Therefore, this study was carried out to measure and evaluate the influence of these factors on customer satisfaction in the retail sector, especially Aeon supermarket in Hai Phong. By surveying a sample size of 150 respondents of various ages, applying descriptive statistics, frequency statistics, and EFA exploratory factor analysis on SPSS software, the authors found that the factors are Assurance, Empathy and Tangibility have an impact on customer satisfaction. In which, the assurance factor has the strongest impact and the least influential factor is the tangible factor. Therefore, the research team proposes to increase the richness and diversity of goods with competitive prices, many special promotions for groups of customers, to satisfy their satisfaction, especially the group of customers. male customers, high-income customers and the elderly. Moreover, the customer care and delivery departments need to improve their capacity and responsibility in listening and solving arising problems quickly, politely and conscientiously. The reception department reflects random contact with some customers of the supermarket to quickly assess customer satisfaction on the last purchase. In addition, the analysis results show that there is a clear difference between men and women when female respondents tend to shop more online. There is a clear divergence in online consumption trends among age groups, with young people using this shopping channel more, especially the 18-25 age group.

In general, this study has systematized some theoretical bases of satisfaction, identified and

measured related influencing factors. It can be a premise for similar studies in the future.

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BAD DEBT MANAGEMENT OF COMMERCIAL BANKS IN THE COVID-19 PANDEMIC

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Abstract: *In recent years, commercial banks have had a strong development in terms of both size and quality. With an intermediary role in the economy, commercial banks have constantly improved their financial potential, expanded modern financial services, and developed according to the standards of international financial institutions. However, the Covid-19 pandemic taking place in Vietnam and around the world has significantly affected the business activities of commercial banks. The broken production chain coupled with social distancing has affected the repayment ability of many customers, putting pressure on bad debts for commercial banks. Within the framework of this research, the author will clarify this issue.*

• Keywords: commercial banks, bad debt, banking administration, liquidity...

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Tóm tắt: Trong những năm gần đây, các ngân hàng thương mại đã có sự phát triển mạnh mẽ cả về quy mô và chất lượng. Với vai trò trung gian của nền kinh tế, các ngân hàng thương mại đã không ngừng nâng cao tiềm lực tài chính, mở rộng các dịch vụ tài chính hiện đại, phát triển theo tiêu chuẩn của các tổ chức tài chính quốc tế. Tuy nhiên, đại dịch Covid-19 đang diễn ra tại Việt Nam và trên thế giới đã ảnh hưởng không nhỏ đến hoạt động kinh doanh của các ngân hàng thương mại. Chuỗi sản xuất bị phá vỡ cùng với sự xa rời xã hội đã ảnh hưởng đến khả năng trả nợ của nhiều khách hàng, gây áp lực nợ xấu cho các ngân hàng thương mại. Trong khuôn khổ nghiên cứu này, tác giả sẽ làm rõ vấn đề này.

• Từ khóa: ngân hàng thương mại, nợ xấu, quản trị ngân hàng, khả năng thanh khoản...

groups including: Group 1 (Standard debt), Group 2 (Debts needing attention), Group 3 (Debts that are qualified), Group 2 (Debts needing attention), Group 3 (Subprime debt); Group 4 (Doubtful debt) and Group 5 (potentially irrecoverable debt). This is the latest debt classification document used by credit institutions in Vietnam.

Table 1: Classifying debts

	Debt group	Time overdue	Loan review time
Group 1	Standard debt	Less than 10 days	Loan now
Group 2	Debts needing attention	From 10 days to less than 30 days	After 12 months
Group 3	Subprime debt	From 30 days to less than 90 days	After 5 years
Group 4	Doubtful debt	From 90 days to less than 180 days	After 5 years
Group 5	Potentially irrecoverable debt	Debt from 180 days or more	After 5 years

Following Circular 11/2021/TT-NHNN

Perspectives on bad debt:

Bad debt is often referred to with the terms “bad debt”, “non-performing loan” (NPL), “doubtful debt 1”, usually bad debt is understood as subprime, may be past due and impaired doubts about the debtor’s solvency and ability to recover capital, which often occurs when the borrower has declared bankruptcy or has dispersed assets

Article 10 of Circular 11/2021/TT-NHNN, credit institutions shall classify debts into 5

In which, on-balance sheet bad debts are considered as debt groups 3, 4 and 5 and credit institutions must make provision for 20% respectively; 50% and 100% to meet the requirements of Circular 11/2021/TT-NHNN on classification of assets, level of deduction, method of setting up risk provisions and use of provisions to deal with risks in the operation of credit institutions (credit institutions), foreign bank branches.

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Size and impact of bad debt on the economy

As of 2021, Vietnam's commercial banking system and credit institutions have developed with different types, of which 07 state-owned commercial banks; 41 private joint stock commercial banks; cooperative banks; 51 foreign bank branches, 100% foreign owned banks and joint venture banks; finance companies and finance leasing companies, over 1,182 grassroots people's credit funds, etc. Nowadays, Vietnamese credit institutions have not only focused on the traditional function of deposit mobilization and lending, but also focused on providing products and services. modern financial services to meet the increasing needs of customers.

Due to the impact of the Covid-19 pandemic and the internal causes of the economy, bad debts at commercial banks and credit institutions in Vietnam increased in both size and level of bad debt. This has significantly affected the resources and business results of credit institutions.

Table 2: Size and NPL ratio at some Vietnamese commercial banks

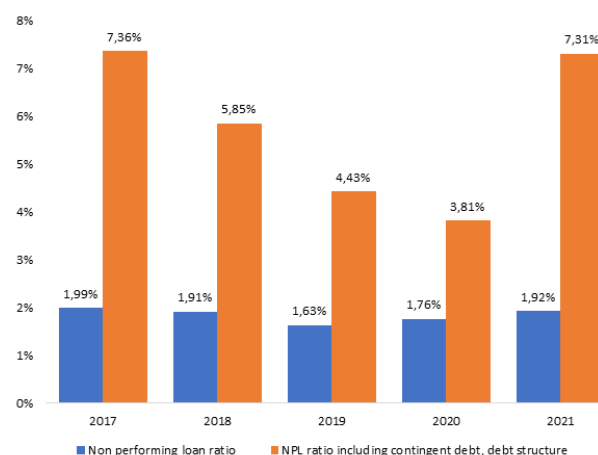
Bank	Bad debt balance (Billion VND)			NPL ratio	
	31/12/2021	31/12/2020	% change	31/12/2021	31/12/2020
VPBank	15,887	9,924	60%	4,47%	3,41%
VietinBank	14,300	9,597	49%	1,26%	0,95%
BIDV	13,245	21,369	-38%	0,98%	1,76%
Vietcombank	6,121	5,230	17%	0,64%	0,62%
Sacombank	5,721	5,780	-1%	1,47%	1,70%
VIB	4,670	2,957	58%	2,32%	1,74%
HDBank	3,360	2,357	43%	1,65%	1,32%
MB	3,268	3,248	1%	0,90%	1,09%
SHB	2,915	5,599	-48%	0,80%	1,83%
ACB	2,799	1,840	52%	0,77%	0,59%
LienVietPostBank	2,775	2,527	10%	1,33%	1,43%
Techcombank	2,294	1,295	77%	0,66%	0,47%
Eximbank	2,247	2,534	-11%	1,96%	2,52%
SeABank	2,105	2,022	4%	1,65%	1,86%
MSB	1,769	1,558	14%	1,74%	1,96%
Nam A Bank	1,613	744	117%	1,57%	0,83%
ABBank	1,423	1,324	7%	2,06%	2,09%
OCB	1,350	1,508	-11%	1,32%	1,69%
NCB	1,249	609	105%	3,00%	1,51%
Ban Viet	1,176	1,111	6%	2,53%	2,79%

Source: Synthesized from commercial banks

It can be seen that in 2021, the scale of bad debts at Vietnamese commercial banks has increased sharply. Of the 20 surveyed banks, there are 14 banks with an increase in the size of bad debts, only 06 banks with a decrease in the number of bad debts in 2021 compared to the previous year. At some commercial banks, the value of bad debts increased sharply such as VPBank increased by 60% compared to the previous year (the value of bad debt was 15,887 billion dong), causing the bad debt ratio to increase from 3.41% to 4.47 %; Nam A Bank's bad debt increased by 117% or NCB's bad debt value increased by 105% in 2021.

Even credit institutions with good business results such as ACB and Techcombank, bad debts have increased significantly in recent years. At ACB, the bank's bad debt in 2021 increased by 52.1% compared to 2020 to VND 2,799 billion. While Techcombank recorded a bad debt increase of 77%, to VND 2,294 billion. Debt restructuring under the customer support program affected by Covid-19 is 1,900 billion VND, equivalent to 0.5% of total outstanding loans.

Figure 1: NPL ratio of the whole banking industry over the years



In fact, the bad debt of the system of credit institutions is much higher than the reported figure because many bad debts have been restructured according to regulations that have not been classified, official data has not yet fully reflected in bad debts; credit institutions have not strictly complied with the provisions of the law on debt classification to limit the impact on financial statements, causing the situation that does not accurately reflect business results, and may even

lead to fake interest. Real loss due to not fully making provision for expenses.

Causes of bad debt in the past time

Firstly, in recent years, the world has witnessed a series of instability in the world economy, as well as changes in economic and trade policies of countries. In addition, the extremely complicated and prolonged developments of the Covid-19 pandemic have negatively affected and disturbed production and business activities. For a long time, the government implemented social isolation in economic centers to deal with the epidemic, which has seriously affected business operations and people's income. This has increased bad debt in 2021.

Secondly, the financial and business capacity of customers is still limited. Outstanding loans at credit institutions mainly focus on individual customers and small and medium enterprises. This group of subjects is still limited in the management and use of loans, which leads to losses and losses in production and business activities, and even leads to shutdown or bankruptcy, which has a serious impact. debt repayment capacity and increase bad debt in the economy. Under normal conditions, this group of customers brings regular revenue and profit to the bank, but during the Covid-19 pandemic, this group of customers is vulnerable.

Thirdly, the economy lacks credit rating agencies, so it is not possible to build a health database for businesses in the economy. Therefore, the lending of commercial banks still lacks information. In addition, the debt trading market in Vietnam has not yet developed, and market participants are few. The number of bad debts in Vietnam is increasing, but the number of debt trading companies is not much and growth is low.

Fourthly, the capacity of many Vietnamese credit institutions is still limited. Many credit institutions increased their bad debt due to poor risk management (credit assessment, loan risk level and lack of measures to prevent, detect and handle risks...); weak capacity in project appraisal or collateral valuation along with moral hazard of credit officers; loans to related persons; group interests, large customers beyond the limit; The business and investment strategies of the credit institutions are not suitable, investing in fields and investment channels with high risk.

Some solutions and recommendations

Firstly, perfecting the legal system on debt classification, setting up and use of risk provisions at credit institutions. Regulations on classification and provisioning are in line with international practices and regulations so that Vietnamese credit institutions can soon access the international financial market. The correct, complete and accurate implementation of debt classification is of great significance in bad debt management at commercial banks.

Secondly, improve regulations on credit management in the direction of diversifying risks and minimizing credit concentration; Limit lending to potentially risky sectors (trading in securities, real estate,...). The government's credit policy, especially the State Bank's lending orientation from time to time, needs to catch up with and match market fluctuations and be able to warn and limit risks for banks. credit institutions.

Thirdly, improve the credit risk management capacity of banks and at the same time improve the capacity, qualifications and professional ethics of bank staff. Only credit institutions can improve their own internal strength, apply new regulations and advanced processes on customer appraisal, can improve loan quality.

Fourthly, build a credit rating system for businesses in particular and the economy in general. In addition, it is necessary to strengthen inspection and supervision of credit activities to ensure strict implementation of regulations on credit extension, regulations on debt classification, setting up and use of risks. Inspection and supervision of commercial banks should be promoted in the current situation of increasing bad debts.

Bad debt not only directly affects the operations of banks and credit institutions, but also is a blood clot blocking the circulation of the economy. In case the bad debt is too high, the state bank has to implement special solutions such as buying a bank for 0 dong; forced mergers;... this not only costs the budget but also has long-term effects on the economy.

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