







# THE SECOND INTERNATIONAL CONFERENCE ON SCIENTIFIC, ECONOMIC AND SOCIAL ISSUES

# DIGITAL TRANSFORMATION, COOPERATION AND GLOBAL INTEGRATION IN THE NEW NORMAL



### TABLE OF CONTENT

# APPLICATION OF TECHNOLOGY AND BIG DATA IN THE FIELDS OF FINANCE, ACCOUNTING AND AUDITING IN THE CONTEXT OF GLOBALIZATION

BANK RUN AND SILICON VALLEY BANK	1
Lam Dang Xuan Hoa, Ho Minh Khoa, Huynh Vo Nhat Linh	1
BIG DATA AND INTELLECTUAL PROPERTY RIGHTS	14
Le Thi Minh, Vo Trung Hau	14
THE EFFICIENCY OF THE INTERNAL CONTROL SYSTEM IN RISK MANAGEMENTHE NAM A COMMERCIAL JOINT STOCK BANK	
Truong Thanh Loc, Tran Ngoc Thanh	23
VIETNAM - AUSTRALIA ECONOMIC AND TRADE COOPERATION IN THE NORMAL: OPPORTUNITIES AND CHALLENGES FOR VIETNAMESE INVESTORS	
Nhu Nguyen Phuc Quynh*, Anh Nguyen Thi Nguyet, Duy Nguyen Anh	30
IMPACTS OF CREDIT GROWTH AND CREDIT RISK ON THE PROFIT OF VIETNA STOCK COMMERCIAL BANKS	
Dao Le Kieu Oanh*, Tran Thi Huong Ngan	43
FACTORS AFFECTING CUSTOMERS' DECISIONS TO USE E-BANKING AT JOIN' COMMERCIAL BANKS IN HO CHI MINH CITY	
Nguyen Duy Khanh <sup>1</sup> , Pham Quoc Tham <sup>2</sup>	57
HOW CHINA_USA POLITICAL TENSIONS AFFECT STOCK MARKET RETURN O AND THE USA? A QUANTILE VAR CONNECTEDNESS APPROACH	
Hao Wen Chang <sup>1</sup> , Tsangyao Chang <sup>2</sup> and Mei-Chih Wang <sup>3</sup>	70
BANKING HUMAN RESOURCES BEFORE THE DEVELOPMENT OF ARTINTELLIGENCE AI	
Nguyen Huynh Chi	92
IMPROVE THE QUALITY OF TRAINING THROUGH IMPROVEMENT OF ST TESTING AND ASSESSMENT – CASE IN ACCOUNTING BRANCH, UNIVERSE ECONOMICS AND FINANCE	SITY OF
Thuy Thi Ha	102
ACTIVITIES OF DIGITAL TRANSFORMATION IN VIETNAMESE COMMERCIAL AN OVERVIEW DURING THE COVID-19 RECOVERY PERIOD	
Nguyễn Thị Quỳnh Châu, Đào Lê Kiều Oanh	109
OPPORTUNITIES AND CHALLENGES FOR VIETNAM IN ATTRACTIVE FDI IN MINIMUM CORPORATE TAX IMPLEMENTATION	
Ngo Hoang Thong	117

IMPACTS OF STAT	E OWNERSHIP	AND	BUSINESS	CHARACTERIST	ICS ON	TAX
AVOIDANCE: EVIDENCE	N VIETNAM					128
Huyen Ngoc Nguyen, Than	h Dan Bui					128
RUSSIA'S IMPACTS	AND SCENES ON	BEING	G BANNED F	ROM SWIFT		143
Lam Dang Xuan Hoa 1, Ph	an Ngoc Anh <sup>2</sup>					143
THE ROLE OF ACC YOUNGERS IN THE SOUT						
Vu Truc Phuc*, Nguyen Da	ng Hat, Nguyen Ai	n Phu, I	) Dao Le Kieu (	Oanh		151

## DIGITAL ECONOMY IN VIETNAM, TRENDS AND POTENTIABILITY

DEVELOPING SMART HOME MODEL FOR APARTMENTS IN HO CHI MINH CITY BASI ON INTERNET OF THINGS (IoT) TECHNOLOGY1	
Dang Thanh Thuy <sup>1</sup> , Nguyen Thanh Dien <sup>2</sup> 1	
TRANSPARENCY OF ACCOUNTING INFORMATION OF CONSTRUCTION ENTERPRIS IN HO CHI MINH CITY – CASE STUDY OF APPLICATION OF ACCRUAL ACCOUNTING1  Truong Thanh Loc <sup>1*</sup> , Pham Thi Yen Nhi <sup>2</sup>	193
FACTORS AFFECTING THE QUALITY OF FINANCIAL STATEMENTS OF MANUFACTURING ENTERPRISES IN HO CHI MINH CITY	
Truong Thanh Loc*, Dang Nguyen Tuong Han, Nguyen Ngoc Mai Phuong, Nguyen Thi Quy	
Huong2	20 /
THE CRITICAL FACTORS OF COLLEGE STUDENTS' INTENTION TO USE METAVER TECHNOLOGY FOR SUBJECTS RELATED TO IMPORT-EXPORT LEARNING2	
Van Thuy Nguyen Ho, Chau The Huu, Luan Thanh Nguyen*2	221
CONSUMER PERCEPTION ABOUT THE SUSTAINABILITY COMMITMENT OF LUXUI BRANDS IN VIETNAM AND CHINA MARKETS2	
Tran Minh Tu <sup>1</sup> 2	233
INFLUENCE OF WOM AND EWOM IN MAKING DECISION BUYING GOODS2	247
Doan Anh Tu <sup>1</sup> , Kim Phi Rum <sup>2</sup> , Nguyen Pham Hai Ha <sup>3</sup> 2	
DIGITAL ECONOMY AND DEVELOPMENT POTENTIAL IN VIETNAM2  Hoang Thi Chinh, Nguyen Hoang Phan2	
noang Thi Chinii, Nguyen noang rhan	23 /
BLOCKCHAIN APPLICATION IN MODERN LOGISTICS: INTERNATIONAL EXPERIENCE AND SOME RECOMMENDATIONS FOR VIETNAM	
Nguyen Nu Tuong Vi2	266
FACTORS AFFECTING THE DEVELOPMENT OF THE DIGITAL ECONOMY IN VIETNAL	
Vo Tien Si2	272
LEGAL FRAME FOR THE OPERATION OF THE REAL ESTATE BUSINESS UTILIZING TO BLOCKCHAIN PLATFORM IN VIETNAM	
La Thi Khanh Linh	20/

# DIGITAL TRANSFORMATION – COOPERATION – GLOBAL INTEGRATION IN BUSINESS

FACTORS INFLUENCING BUSINESS ACCEPTANCE OF INDUSTRY 4.0 TECHN APPLICATIONS IN DONG NAI PROVINCE	
Thanh-Thu Vo*, Minh-Huong Tang	291
DIGITAL ORIENTATION, INNOVATION CAPABILITY AND FIRM PERFORMATION PROPOSAL RESEARCH MODEL	
Nguyen Van Hau	298
PREDICTION OF STUDENT'S BEHAVIORAL INTENTION TO USE SMART LE. ENVIRONMENT: A COMBINED MODEL OF SELF-DETERMINATION THEOR TECHNOLOGY ACCEPTANCE	Y AND
Nguyen Thi Hai Binh <sup>1</sup> , Dao Y Nhi <sup>2</sup> , Nguyen Thanh Luan <sup>3</sup> , Dang Quan Tri <sup>4</sup>	309
THE PEDAGOGICAL IMPACT OF GRAMMARLY ON EFL WRITING COMPETEN EMPIRICAL INVESTIGATION IN HIGHER EDUCATION CONTEXT.  Nguyen Thi Hong Lien <sup>1</sup> , Nguyen Truong Gia Minh <sup>2</sup> , Nguyen Ngoc Vu <sup>3*</sup>	323
FACTORS AFFECTING PURCHASING DECISION OF THE YOUTH ON TIKTOK	
Ngoc Pham <sup>1</sup> , Thanh Cong Tran*	
FACTORS AFFECTING OCCUPATIONAL SAFETY BEHAVIORS OF WORKERS PRODUCTION AT CU CHI POWER COMPANY	
Minh Luan Le, Thi Trang Tran	345
CORPORATE SOCIAL RESPONSIBILITY AND EMPLOYEES' ORGANIZA CITIZENSHOP BEHAVIOUR	
Nguyen Xuan Hung <sup>1</sup> , Ha Le Thu Hoai <sup>1</sup> , Nguyen Huu My Truc <sup>2&amp;3</sup> , Pham Tan Nhat <sup>2&amp;3</sup>	355
THE INNOVATION CAPACITY - THE ROLE OF LEADERS OF SMALL AND MENTERPRISES IN HO CHI MINH CITY, VIETNAM	
Huynh Nhut Nghia	365
PEOPLE'S THOUGHTS ON THE IMPACT OF ARTIFICIAL INTELLIGENCE ON BU	
Ton Nguyen Trong Hien, Bui Tuyet Anh	
FACTORS AFFECTING BRAND SWITCHING INTENTION IN THE CONTEXT OF EDUCATION IN VIETNAM	
Ly Dan Thanh, Nguyen Phu Quoi, Tran Hoang Nam, Vo Hong Son, Nguyen Ngoc Thuy Tien	382
ENHANCE THE DIGITAL COMPETITIVENESS	398
Tran Quang Canh, Hoang Thi Chinh	398

ASSESSING PATIENT SATISFACTION (BRAND) AFTER THE COVID-19 ITHU DUC CITY HOSPITAL	
Nguyen Hoang Dung 1*, Nguyen Huynh Bao An 2, Van Phuong Trang 2	408
INDUSTRIAL AND HUMAN RESOURCES FORM THE FOUNDATION FOR IS SUSTAINABLE ECONOMIC DEVELOPMENT	
Hoang-An Nguyen	417
IMPACT OF ORGANIZATIONAL FAIRNESS ON THE EMPLOYEES' SHARING IN TRAVEL AND TOURISM ENTERPRISES IN HO CHI MINH CITY	
Le Thi Nhu Quynh <sup>1,2</sup> , Le Thi Giang <sup>2</sup> , Truong Quang Dung <sup>1</sup>	426
THE EFFECT OF PERSONAL MOTIVATION ON THE TACIT KNOWLEI BEHAVIOR OF 5-STAR HOTELS' EMPLOYEES IN HO CHI MINH CITY	
Le Thi Giang, Nguyen Bach Hoang Phung	440
DIGITAL COMPETITIVENESS AND OPERATIONAL EFFICIENCY OF ENTHE DIGITAL ERA: THE CASE OF VIETNAMESE ENTERPRISES	
Diep Nguyen Thi Ngoc <sup>1*</sup> , Canh Quang Tran <sup>2</sup> , Anh Bach Hoang Ngoc <sup>1</sup>	453
FACTORS INFLUENCING PARENTS' SELECTION OF PRIVATE PRESCH	
Thi-Trang Tran <sup>1</sup> , Thi-My-Dung Pham <sup>2</sup> , Thi-Bich-Diep Le <sup>1*</sup>	466

# RECOVERY COMMUNICATIONS IN THE TOURISM AND HOSPITALITY INDUSTRY AFTER THE COVID-19 PANDEMIC

DEVELOPING A SPIRITUAL TOURISM DESTINATION IMAGE MEASUREMENT SCALI
OF AN GIANG474
Nguyen Vuong Hoai Thao <sup>1</sup> , Nguyen Quyet Thang <sup>2</sup>
PROSPECTS OF VIRTUAL REALITY TOURISM APPLICATION IN VIETNAM TOURISM PROMOTION
Nguyen Thi Hong Ha, Pham Thi Huong Giang
PERSONALIZATION TRAVEL TRENDING IN HO CHI MINH CITY IN THE CONTEXT OF POST COVID-19
Duong Bao Trung
IMPACTS OF MEDIA ON CUSTOMERS' DECISION TO CHOOSE FOOD AND BEVERAGI SERVICES POST THE COVID-19 PANDEMIC51
Nguyen Thi Bich Van51
DIGITAL TRANSFORMATION APPLICATION TO PROMOTE THE RECOVERY AND DEVELOPMENT OF INBOUND TOURISM IN HO CHI MINH CITY52
Tran Trong Thanh
VIETNAM TOURISM AFTER COVID-19 PANDEMIC52
Nguyen Hoang Phan <sup>1</sup> , Hoang Thi Chinh <sup>2</sup> 52
NAVIGATING THE EVOLVING LANDSCAPE OF SOCIAL MEDIA DATA MINING ANI PRIVACY53
Pham Thai Hien53
THE CORRELATION BETWEEN STUDENT SELF-REPORTED GENERAL WELL-BEING AND PERCEIVED SUPPORT FROM FRIENDS, TEACHERS, AND UNIVERSITY54:
Virginia Kelsey <sup>1</sup> , Đăng Thi Mai Ly <sup>2*</sup> , Nguyễn Anh Khoa <sup>2</sup> , Nguyễn Văn Tường <sup>2</sup>

## DIGITAL VERSUS NON- DIGITAL

١:
6
6
G 4
4
A
0
0
S
7
7

## CHALLENGES FACED BY TEACHERS IN NON-TRADITIONAL EDUCATION

COMPETENCE SCALE FOR UNIVERSITY LECTURERS	PROPOSE AN ONLINE TEACHING O
596	
en596	Duong Thi Kim Oanh*, Dang Thi Dieu Hier
G MANAGEMENT SYSTEMS (LMSS) BY FACULTY	EXAMINE USAGE OF LEARNING
OMICS (UEF) AND FINANCE WITH EXPANDED	STAFF AT UNIVERSITY OF ECONO
TAM)608	TECHNOLOGY ACCEPTANCE MODEL (T
ach Tran Huy608	Ha Truong Minh Hieu, Ngo Minh Hai*, Ma

# DIGITAL TRANSFORMATION AN INDISPENSABLE EVOLUTION FOR SUSTAINABLE CORPORATES

FACTORS AFFECTING THE APPLICATION OF STRATEGIC MANAGEMENT ACCOUNTING AT MANUFACTURING ENTERPRISES IN BINH DUONG PROVINCE
Truong Thanh Loc <sup>1</sup> *, Nguyen Thi Thanh Truc <sup>2</sup> 618
HRM DIGITAL TRANSFORMATION: TAKING A ROAD OF SUCCESSION PLANNING629
Trương Phan Hoàng Anh, Giang Ngọc Anh629
THE IMPLICATION OF CONTACLESS SERVICE AS A TOOL TO IMPROVE CUSTOMER
REVISIT INTENTION
Linh, Nguyen Duy Yen*640
TOURISM BRAND LOVE IN THE DIGITAL AGE: THE ROLE OF ONLINE TOURIST EXPERIENCES, TOURIST-BRAND RELATIONSHIP QUALITY AND SUSTAINABILITY651
Thanh Nguyen Ngoc Le651
CONDUCTING FOCUS GROUPS IN CROSS-CULTURAL SCHOLARSHIP OF TEACHING AND LEARNING (SoTL): A COMPARATIVE CASE STUDY662
Punithan Moganathas <sup>1</sup> , Jenny Hill <sup>2</sup> , Andy VM. Kok <sup>2</sup> , Matt Barr <sup>2</sup> , Ruffin Relja <sup>2*</sup> , Philippa Ward <sup>2</sup> , Duong Tran Quang Hoang <sup>3</sup> , Quynh Phuong Tran <sup>3</sup>
LEVERAGING DIGITAL TRANSFORMATION FOR SUSTAINABLE CORPORATE EVOLUTION IN VIETNAM
Nguyen, Tan Dat <sup>1</sup> , Le, Dinh Thang <sup>2</sup>

## INFORMATION TECHNOLOGY AND APPLICATIONS

FB-PROPHET MODEL FOR TIME SERIES FORECASTING IN SALES	691
Thanh Cong Tran	691
USING AI CODE IN C# PROGRAMMING	698
Nguyen Ha Giang	698
DETERMINANTS OF CONTINUANCE USAGE INTENTION OF MOBILE FOOD ORDERING APPLICATIONS (MFOAS) AMONG VIETNAMESE USERS: THE MEDIATING ROLE OF SATISFACTION	E-
Lam Hoang Phuong <sup>1*</sup> , Nguyen Thi Kim Lien <sup>2</sup> , Tien Hung Nguyen <sup>3</sup> , Vinh Long Nguyen <sup>4</sup>	705
DECODING MARKETING INSIGHT: INSIGHT FROM OUTSIDE	718
Hoàng Thị Hằng, Trần Thành Công*	718
DIGITAL DISRUPTION AND DATA SECURITY: HOW FINTECH IS RESHAPING BANKING	r724
Hoàng Văn Hiếu, Trần Ngọc Thiên Ngân	724

## TRENDS AND ISSUES IN ENGLISH LANGUAGE EDUCATION AND RESEARCH

EFL LEARNERS' ATTITUDES AND LEARNING ENGAGEMENT IN COMMUNIC GAME-BASED GRAMMAR TEACHING	
Nguyen Thi Thanh Huyen <sup>1</sup> , Tran Quoc Thao <sup>2</sup>	
APPROACHES TO TEACHING L2 LISTENING:	749
CLOSING THE GAP BETWEEN REAL-LIFE AND CLASSROOM-BASED LISTENING .	
DEFINING ROLES OF STUDENT ENGAGEMENT IN THE 21ST CENTURY LANCED CLASSROOM	
Ho Xuan Tien, Duong My Tham	755
EFL STUDENTS' ATTITUDES AND LEARNING INVESTMENT IN PORTFOLIO - I ENGLISH WRITING LEARNING: A LITERATURE REVIEW	
Ly Gia Huy <sup>1</sup> , Tran Quoc Thao <sup>2</sup>	763
EXPLORING EFL LEARNER IDENTITIES IN PROJECT-BASED LANGUAGE LEARNI A HIGH SCHOOL IN AN GIANG PROVINCE	
Nguyen Hong Thien <sup>1</sup> , Tran Quoc Thao <sup>2</sup>	774
THE VALUES OF SYNTACTIC COMPLEXITY IN ACADEMIC WRITING: A LITERAREVIEW	
THE ISSUE OF AMBIGUITY IN THE ENGLISH LANGUAGE  Nguyen Dinh Tuan	
RESEARCH PERSPECTIVES ON JUNIOR HIGH SCHOOL EFL STUDENTS' MOTIVAT ENGLISH LANGUAGE LEARNING	
Huynh Thanh Nhon <sup>1</sup> , Tran Quoc Thao <sup>2</sup>	812
EXPLORING THE INFLUENCE OF WRITING ANXIETY ON VIETNAMESI UNDERGRADUATES' WRITING PERFORMANCE: A QUANTITATIVE STUDY	
Nguyen Ngoc Nguyen, Nguyen Hoang Phan	821
THE APPLICATION OF THE "FLIPPED CLASSROOM" MODEL IN TEACHING ENGLE THE VIETNAMESE UNIVIVERSITY EDUCATION ENVIRONMENT	
THE USE OF RESOURCE MANAGEMENT STRATEGIES IN EFLFLIPPED CLASSR	
Nguyen Quynh Thao Vy <sup>1,*</sup> , Duong My Tham <sup>2</sup>	
INSIGHTS INTO ENGLISH MAJOR STUDENTS' USE OF PHRASAL VERBS IN ACAI WRITING	
Do Thi Thanh Thuy Tran Quoc Thao	860

## LAW IN THE CONTEXT OF INTERNATIONAL INTEGRATION

LEGALISING INTELLECTUAL PROPERTY INFRINGEMENTS IN RUSSIA – A WAR TACTIC IN THE CONTEXT OF RUSSIA'S INVASION OF UKRAINE869
Bui Thi Hong Ninh*869
MODEL OF ASSET REGISTRATION WORLDWIDE AND LESSONS FOR VIETNAM IN IMPROVING ASSET REGISTRATION LAWS880
Vu Anh Sao <sup>1,2</sup> , Nguyen Thi Xuan Mai <sup>2</sup> 880
LEGAL ISSUES ARISING FROM THE DEVELOPMENT, IMPLEMENTATION, AND USE OF ARTIFICIAL INTELLIGENCE (AI) - INTERNATIONAL EXPERIENCES AND LESSONS FOR VIETNAM887
Le Hoang Minh Huy*, Nguyen Thi Thu Ha, Dao Trong Duc, Ky Dieu Linh, Bui Thi Thuy Linh, Nguyen Nam Trung
SOUTH KOREA'S EXPERIENCES ON PROPERTY REGISTRATION LAW - LESSONS FOR VIETNAM896
Vu Anh Sao, Pham Huynh Bao Oanh896
THE RISE OF REMOTE WORK: LEGAL CHALLENGES AND IMPLICATIONS FOR EMPLOYMENT LAW IN VIETNAM903
Nguyen Thi Xuan Mai <sup>1</sup> , Nguyen Thi Ngoc Loan <sup>2</sup>
CHALLENGES AND RECOMMENDATIONS FOR THE LEGAL FRAMEWORK IN THE EMERGING AGE OF ARTIFICIAL INTELLIGENCE910
Nguyen Thi Thu Trang910
THE IMPACTS OF GLOBAL MINIMUM TAX ON FOREIGN DIRECT INVESTMENT (FDI) CORPORATIONS IN VIETNAM921
Trần Ngọc Thanh <sup>1</sup> 921
CROSS-BORDER E-COMMERCE ACTIVITIES AND TAX MANAGEMENT ISSUES933
Le Huynh Phuong Chinh, Ngo Thi Khanh Linh, Pham Ngoc Lan Anh
EXPERIENCE IN KOREA AND CHINA ON TAX MANAGEMENT FOR CROSS-BORDER E-COMMERCE ACTIVITIES941
Duong Anh Son <sup>1</sup> , Tran Vang Phu <sup>2</sup> 941
LEGAL PERSPECTIVE ON REGULATIONS RALATED TO PERSONAL INCOME TAX WHEN EARNING INCOME THROUGH E-COMMERCE PLATFORMS IN VIETNAM, TAKING THE CASE OF INDIVIDUALS DOING BUSINESS THROUGH TIKTOK APPLICATION946
Nguyen Duc Tri <sup>1</sup> , Hoang Minh Châu <sup>2</sup> 946
THE COMPATIBILITY ON THE SCOPE OF MUTUAL LEGAL ASSISTANCE (MLA) IN CRIMINAL MATTERS AND THE CONDITIONS OF REFUSAL MLA IN CRIMINAL MATTERS BETWEEN VIETNAMESE LAW AND INTERNATIONAL TREATIES WHICH VIETNAM HAS SIGNED.

Pham Huynh Bao Oanh	956
TAX POLICY FOR E-COMMERCE OF COUNTRIES IN THE WORLD RECOMMENDATIONS TO VIETNAM	967
Tigayon Thaim Minn Chaim, Ta Tin Yan Tinn, Thain Bain Tuni Ma	
LEGAL REGULATIONS FOR ENTERPRISE OBLIGATIONS TO PROVIDE INFORM	<b>MATION</b>
ON E-COMMERCE PLATFORM	974
Truong Kim Phung*, Nguyen Hoang Chuong	974
"ROBOT TAX" – RECOMMENDATIONS FOR VIETNAM	981
Gian Thi Le Na, Pham Phuong Doanh	981
WTO APPELLATE BODY REFORM IN THE CONTEXT OF ESCALATING GEOPOI	ITICAL
TENSIONS	
Nguyen Nam Trung	988

# ACTIVITIES OF DIGITAL TRANSFORMATION IN VIETNAMESE COMMERCIAL BANKS: AN OVERVIEW DURING THE COVID-19 RECOVERY PERIOD

Nguyễn Thị Quỳnh Châu, Đào Lê Kiều Oanh

1 Van Lang University, Ho Chi Minh City 2 Ho Chi Minh City Banking University chau.ntq@ylu.edu.vn

#### Summary:

With the rapid penetration and global spread of digital money, along with the development of information and communication technology, Vietnam has also been developing its national digital currency in line with the global trend. As the global economy is recovering from the COVID-19 pandemic, digital transformation is playing an increasingly important role in the global economy. Implementing digital transformation in banks is no longer a matter of choice but will shape the future. This article provides recommendations to enhance the process of digital transformation in Vietnamese commercial banks.

**Keywords:** digital transformation, financial technology, Vietnamese commercial banks

#### 1. Introduction:

The role of technology and digital transformation in the development of organizations in all sectors, especially the banking sector, is essential. One of the most significant changes that technology has successfully utilized during the crisis is how society adapts and utilizes financial services and payments for goods and services. Digital transformation for businesses is a strategic change process for enterprises in general and for commercial banks in particular, creating new operating models and unprecedented values. However, digital transformation also poses challenges for businesses and banks. In line with the Party's and State's guidelines, Vietnam aims to have the digital economy account for 30% of GDP by 2030. Digital transformation is no longer just an idea or a vision for the future but a necessary step to adapt to the era of Industry 4.0, in which the banking industry has taken the lead in driving digital transformation. Digital transformation in the financial and banking sector is considered one of the government's priority directions.

According to the Southeast Asia Digital Economy Report 2021, it is forecasted that Vietnam's digital economy will reach \$50 billion by 2025. This further affirms that digital transformation is becoming an important resource to drive the country's socio-economic development. It opens up many opportunities and growth prospects for Vietnam in the near future. The issue of measuring the impact of technology investment on the effectiveness and stability of banking operations is receiving attention not only from researchers but also from regulatory agencies (Nguyen Duc Trung, Tran Viet Dung, Lu Huu Chi, 2022).

#### 2. Overview of recent studies

#### 2.1. Studies conducted abroad

In digital transformation activities, more emphasis needs to be placed on business, organizational, and technological factors. The author also addresses factors influencing the digital transformation process, including organizational culture change, customer engagement, and information security issues (Vial, 2019). Additionally, some important standards and factors for evaluating the success of digital transformation in the banking industry include considering technical processes, cultural change, vision, and strategy of the bank (Plekhanov, D., Franke, H., & Netland, T. H., 2022). The role of digital transformation in creating value for financial institutions has been demonstrated as many financial institutions have studied digital transformation, researchers and managers still face difficulties in assessing the impact of digital transformation on business performance (Do, T. D., Pham, H. A. T., Thalassinos, E. I., & Le, H. A., 2022). Digital transformation affects almost every aspect of society and has consequences for contemporary companies (Werth, O., Schwarzbach, C., Rodríguez Cardona, D., Breitner, M. H., & Graf von der Schulenburg, J. M., 2020). The digital transformation of Chinese financial institutions is based on their efficiency improvements. The COVID-19 pandemic has accelerated the spread of the digital economy throughout the Chinese economy, leading to a strong demand for "contactless" financial services. The author analyzes banks with superior effectiveness in science and technology investment and evaluates their digital maturity and digital transformation experience. The results show that digital investments have significantly improved production efficiency for financial institutions; however, there is heterogeneity among banks (Zuo, L., Strauss, J., & Zuo, L., 2021).

Measuring the impact of financial restructuring on the overall financial operations of banks in Vietnam is crucial. Restructuring liabilities and equity is necessary. Increasing equity and reducing liabilities will improve the overall financial performance, while restructuring bad debts to reduce non-performing loans will also enhance financial efficiency. Additionally, evaluating the financial effectiveness after restructuring of banks in Vietnam should be based on longer-term data. Furthermore, it is important to consider the differences among different groups of banks to draw accurate conclusions about financial operations (Duong, T. T. N., Phan, H. T., Hoang, T. N., & Vo, T. T. T., 2020) & (Werth, O., Schwarzbach, C., Rodríguez Cardona, D., Breitner, M. H., & Graf von der Schulenburg, J. M., 2020).

Digitalization methods enhance the efficiency of operations for banks. Banks in Kenya need to focus more on digitizing banking services to meet customer needs. If the process of digitizing banking services is improved, the issue of customers coming to the bank and waiting in long queues for minor issues will be a thing of the past. The essence of digitizing banking service processes is to reduce waiting time, break bottlenecks, and facilitate faster transactions. If this is fully and accurately implemented, the digitalization process will have a significantly greater positive relationship with the operational efficiency of banks (Maina, 2021).

#### 2.2. Domestic Studies

In a different approach, digital transformation in Vietnamese commercial banks is happening strongly through investment in technological innovation, collaboration with fintech companies to automate processes, provide new products and services, and enhance customer experience... Digital transformation also brings benefits and advantages to banks in competition (Hai, L. V., & Lan, N. T. H., 2022). The impact of Fintech companies on the operational efficiency of domestic commercial banks and quantifying the impact of the emergence of Fintech companies on the operational efficiency of domestic commercial banks in the Vietnamese market (Dinh Thi Thu Hong and Nguyen Huu Tuan, 2021). Digital transformation is also understood as a shift from traditional business models to digital business models by applying new technologies such as Big Data, Internet of Things (IoT), Cloud Computing... to change management methods, leadership, work processes, and corporate culture (Van, 2021). Recent studies have explored

digital technology in the banking service sector, including topics such as mobile payments, e-wallets, mobile banking, internet banking, electronic banking, digital currency, and electronic payments. Another area of research is digital transformation in financial technology and banking, focusing on regulations, collaboration, and challenges. Data management and information governance in banking are also discussed, particularly in relation to technology interactions in banks, such as automated interactions, mobile device applications, and virtual advisory services. Despite efforts to adopt technology in their operations, Vietnamese banks still face challenges in implementing digital technology due to technological limitations and resource constraints. Therefore, research on digital technology in the banking industry in Vietnam continues to attract both domestic and international researchers (Thao, 2022).

#### 3. Theoretical Foundation

#### 3.1. Concept of Digital Transformation in Banking

Digital transformation is not just about applying technology, but also about changing the organization, processes, and culture of a bank. The benefits of digital transformation in the banking industry include improving customer experience, enhancing efficiency, and increasing competitiveness. It also identifies challenges that may arise during the digital transformation process, such as information security, risk management, and organizational cultural change (Plekhanov, D., Franke, H., & Netland, T. H., 2022). Digital transformation in the banking sector is a complex process that requires proper investment, including steps such as structural changes, value creation, technology utilization, and financial considerations. Digital transformation is seen as a driver and provider of solutions to the challenges faced by the banking industry in the digital age (Matt, C., Hess, T., & Benlian, A., 2015), (Thu, 2022). Digital transformation in the banking industry can be understood as the integration of digitization and digital technology into all aspects of banking operations. This integration allows for the creation of new changes or adjustments to existing business processes, culture, and customer experience to meet the changing market demands and customer expectations.

#### 3.2. The steps of digital transformation in the banking industry

The steps of digital transformation in the banking industry can be described as follows



Diagram 1: Illustration of the digital transformation process in the banking industry.

Step 1: Define the strategy

The first step is to assess the current state of the bank and determine the objectives of digital transformation. The bank needs to evaluate the goals and needs of its customers and the market.

- Assess the goals and needs of customers and the market.
- Determine a digital transformation strategy that aligns with those goals and needs.

Step 2: Build the digital infrastructure

The bank needs to establish a robust digital infrastructure, including network infrastructure, databases, and software applications.

- Build network infrastructure and databases.
- Establish and implement software applications to create a solid digital foundation.
- Develop server systems, networks, software, and new technologies such as artificial intelligence, blockchain, and cloud computing.

#### Step 3: Implement digital services

- The bank needs to integrate existing and new systems into a single system. This helps optimize workflows and enhance information exchange between departments within the bank.
- The bank needs to find ways to leverage digital technology to create value for customers. This can involve providing online services, enhancing customer experience through mobile applications, or developing new products and services. The bank can implement digital services such as internet banking, mobile banking, electronic payments, and other financial services.

#### Step 4: Enhance information security

Enhancing information security is a crucial factor in the digital transformation process in the banking industry. To ensure the safety and security of customer information, the bank needs to implement the following measures:

- Identify and assess risks: The bank needs to identify and assess information security risks, including classifying and prioritizing risks based on severity.
- Establish policies and procedures: The bank needs to establish information security policies and procedures to ensure compliance with regulations and information security standards.
- Protect technology infrastructure: The bank needs to implement measures to protect its technology infrastructure, including using security technologies such as data encryption, firewalls, and anti-malware software.
- Train employees: The bank needs to train employees on information security principles, identifying threats and preventive measures, and provide guidance on protecting customers' personal information.
- Conduct testing and monitoring: The bank needs to perform regular testing and monitoring to identify information security vulnerabilities and apply remedial measures.
- Collaborate with partners: The bank needs to collaborate with partners and service providers to ensure that information security standards are adhered to throughout the system.

Enhancing information security is an ongoing process that requires attention and commitment from the bank. By implementing effective information security measures, the bank can protect customer information and maintain their trust during the digital transformation process.

#### Step 5: Develop customer relationships

Developing customer relationships is a crucial factor in the digital transformation process in the banking industry. To develop and maintain good relationships with customers, the bank needs to do the following:

- Improve customer experience: The bank needs to create a good and convenient customer experience by providing online services, mobile applications, and fast transactions.

- Enhance digital interactions: The bank needs to enhance digital interactions with customers through channels such as email, messaging, websites, and social media. This helps create an efficient and convenient communication channel for customers.
- Provide personalized services: The bank needs to provide personalized services based on customer information and preferences. This helps enhance interaction and create enjoyment for customers.
- Develop new products and services: The bank needs to continuously research and develop new products and services to meet the needs of customers in the digital age. This helps create differentiation and attract new customers.
- Build long-term relationships: The bank needs to build long-term relationships with customers by providing quality services, support, and advice. This helps build trust and loyalty from customers.
- Utilize data analytics technology: The bank can use data analytics technology to understand and predict customer needs. This helps create effective marketing strategies and customer service.

Developing customer relationships is an ongoing process that requires attention and commitment from the bank. By creating a good customer experience and providing suitable services and products, the bank can enhance customer relationships and create sustainable business benefits. Step 6: Evaluate effectiveness

The bank evaluates the effectiveness of the digital transformation process by measuring key business metrics such as revenue, profitability, and customer satisfaction.

In summary, the steps of digital transformation in the banking industry include defining a strategy, building a digital infrastructure, implementing digital services, enhancing information security, developing customer relationships, and evaluating effectiveness.

# 4. The current situation of digital transformation activities in Vietnamese commercial banks is as follows.

#### 4.1. The benefits achieved are as follows

Nowadays, the rapid development of technology has led to quick changes, and customer demands have also evolved beyond basic products and services. To meet the customers' needs for making requests for goods and services with just a click on a mobile device, banks need to adapt faster to this new consumer behavior. Currently, many banks have recognized the long-term strategic importance of innovation, initiating digital transformation strategies, and adopting new business models.

- Internet Banking and Mobile Banking: Most Vietnamese commercial banks have implemented Internet Banking and Mobile Banking services for customers. These services allow customers to perform banking transactions conveniently through the internet or mobile phones (Son, T. H., Lý, H. T. N., & Ngọc, T. T. T, 2020).
- Online Payments: Banks actively participate in national online payment systems such as VNPay, Momo, ZaloPay, as well as international payment gateways like Visa and Mastercard. Customers can make online payments for services, online shopping, and transfer money through mobile applications (Linh, 2020).
- Other Online Services: In addition to Internet Banking and Mobile Banking, Vietnamese commercial banks are also developing other online services such as online account opening, online lending, online savings deposits, and other digital financial services.
- Artificial Intelligence (AI) and Chatbots: Some banks have utilized AI and chatbot technology to provide automated customer services. Chatbots can engage in conversations and answer customer queries,

saving time and enhancing convenience in communication with the bank (Håi, L. V., & Lan, N. T. H., 2022).

• Blockchain and Cryptocurrency: Vietnamese commercial banks are also showing interest in blockchain technology and cryptocurrencies. Several projects and experiments involving the use of blockchain and cryptocurrencies in payments and financial transactions are being conducted.

However, it is important to note that the digital transformation landscape may vary among banks and depends on the speed and development strategies of each organization. This means that some banks may be more advanced in their digital transformation efforts compared to others.

#### 4.2. Limitations:

Vietnamese commercial banks have made significant progress in their digital transformation journey. However, there are still some challenges that need to be addressed:

Digital infrastructure: Some banks still face difficulties in building and maintaining robust digital infrastructure. Issues such as unstable network systems, inefficient databases, and a lack of advanced software applications can impact the customer experience.

Information security: Despite enhanced information security measures, there are still risks associated with protecting customers' personal information. Data breaches and cyber attacks remain potential threats.

Online services: While some banks have implemented online services, there are still limitations in terms of features and customer experience. Features such as electronic payments, online money transfers, and mobile app transactions need improvement to meet the increasing customer demands.

Awareness of digital transformation: Some banks still lack awareness and high commitment to the digital transformation process. This may be due to a lack of understanding of the benefits and potential of digital transformation or difficulties in changing organizational culture.

However, there are also banks that have achieved significant success in digital transformation, providing convenient online services and enhancing information security. The development of emerging technologies such as artificial intelligence and blockchain is also creating new opportunities for banks to improve customer experience and enhance business efficiency.

#### 5. Recommendations:

In recent times, the race for digital transformation has not only been limited to private commercial banks but also extends to state-owned banks. Some banks have made significant progress in technology development and have entered the second phase of digital transformation, which is digital innovation. However, due to limited investment in technology and a lack of comprehensive digital transformation strategies in many banks, the majority of them are still in the early stages of the digital transformation process.

#### 5.1. For the Government and administrative agencies

First, improve the legal framework to regulate online business and digital banking activities. Legal documents from the Government and administrative agencies help establish limits, set standards, and create a fair business environment, facilitating the development of digital banking services. Relevant legal documents such as laws and decrees govern the process of online business, electronic documents, digital signatures, and electronic certifications.

Second, develop information technology infrastructure and internet connectivity. Information technology is essential for the growth of digital banking services. Currently, digital banking services are still relatively new in rural areas, which poses challenges in utilizing and benefiting from the advantages

they offer. Therefore, the Government aims to promote, enhance, and develop information technology and widespread internet access throughout the country, not only providing a useful tool for people's daily lives but also creating conditions for the development of digital banking services.

Third, promote the development of e-commerce, attract investors, and support banks in developing digital banking services. The Government and administrative agencies can boost e-commerce development, incentivize and support investors, businesses, financial institutions, and online trading enterprises, thereby generating business demand, payment transactions, and potential customers for digital banking services.

#### 5.2. For commercial banks

To further accelerate and enhance the digital transformation efforts in Vietnamese commercial banks, the following recommendations can be considered:

Increase investment in digital infrastructure: Banks should allocate sufficient resources to build and maintain robust digital infrastructure. This includes upgrading network systems, improving database efficiency, and adopting advanced software applications to ensure a seamless customer experience.

Strengthen information security measures: Banks need to continuously enhance their information security protocols to protect customer data from potential breaches and cyber attacks. This involves implementing robust security systems, conducting regular audits, and providing cybersecurity training to employees.

Enhance online services: Banks should focus on improving the functionality and user experience of their online services. This includes expanding electronic payment options, streamlining online money transfer processes, and developing user-friendly mobile applications.

Foster a culture of digital transformation: Banks should prioritize creating awareness and fostering a culture of digital transformation within their organizations. This involves providing training and education on the benefits and potential of digital transformation, encouraging innovation and collaboration among employees, and aligning the organization's goals with digital transformation objectives.

Collaborate with fintech companies: Banks can leverage partnerships with fintech companies to accelerate their digital transformation journey. Collaborations can involve sharing expertise, adopting innovative technologies, and exploring new business models to enhance customer experience and drive operational efficiency.

By implementing these recommendations, Vietnamese commercial banks can further advance their digital transformation efforts and stay competitive in the rapidly evolving digital landscape.

#### 6. Conclusion

In the era of the Fourth Industrial Revolution, digital transformation is inevitable for the economy, especially in the financial and banking sector. Digital transformation has brought numerous benefits to commercial banks, including increased security, enhanced customer experience and satisfaction, and achievements in payment systems. However, this article cannot quantify the impact of factors such as regulatory frameworks and the regulation of digital transformation activities on commercial banks due to limitations in knowledge and research methods. These limitations remain unresolved and may need to be expanded in future studies.

#### 7. Acknowledgments

The author would like to express sincere gratitude to Van Lang University (VLU) for their financial support in completing our research work.

#### Reference

- Đinh Thị Thu Hồng và Nguyễn Hữu Tuấn. (2021). Tác động của Fintech tới hiệu quả hoạt động của NHTM. *Tạp chí tài chính tiền tệ*, 1 2(562 563), pp. 51-58.
- Do, T. D., Pham, H. A. T., Thalassinos, E. I., & Le, H. A. (2022). The Impact of Digital Transformation on Performance: Evidence from Vietnamese Commercial Banks. *J. Risk Financial Manag*, 15(1), 21.
- Duong, T. T. N., Phan, H. T., Hoang, T. N., & Vo, T. T. T. (2020). The effect of financial restructuring on the overall financial performance of the commercial banks in Vietnam. *The Journal of Asian Finance, Economics and Business*, 7(9), 75-84.
- Hải, L. V., & Lan, N. T. H. . (2022). Chuyển đổi số ở các ngân hàng thương mại Việt Nam: thực trạng và giải pháp. *Tạp chí Khoa học Trường Đại học Mở Hà Nội*.
- Linh, T. (2020). Phát triển công nghệ số trong lĩnh vực ngân hàng, tài chính. *Chuyên đề tài chính ngân hàng, 3*.
- Maina, F. W. (2021). Implementing Digital Strategy for Attaining Competitive Advantage During Covid–19 Pandemic by International Tier 1 Banks in Kenya. *Doctoral dissertation, University of Nairobi*.
- Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business & information systems engineering*, 57(5), 339-343.
- Nguyễn Đức Trung, Trần Việt Dũng, Lữ Hữu Chí. (2022). Tác động của phát triển công nghệ đến hoạt động ngân hàng Việt Nam. *Tạp chí thị trường tài chính tiền tệ*.
- Plekhanov, D., Franke, H., & Netland, T. H. (2022). Digital transformation: A review and research agenda. *European Management Journal*.
- Sơn, T. H., Lý, H. T. N., & Ngọc, T. T. (2020). Chuyển đổi số của ngân hàng: từ thế giới đến thực tiễn ở Việt Nam. Kinh tế số: Tác động, cơ hội và khả năng tận dụng của Việt Nam.
- Thảo, T. P. (2022). Công nghệ số ngân hàng tại Việt Nam và các hướng nghiên cứu đề xuất. *Tạp chí Tài chính*.
- Thư, Đ. T. (2022). Chuyển đổi số ngành Ngân hàng Kinh nghiệm quốc tế và bài học đối với Việt Nam. *Tạp chí Ngân hàng*.
- Vân, L. T. (2021). Chuyển đổi số và những vấn đề đặt ra trong phát triển dịch vụ tài chính ngân hàng ở Việt Nam. *Tạp chí Tài chính*, 2/2021.
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The journal of strategic information systems*, 28(2), 118-144.
- Werth, O., Schwarzbach, C., Rodríguez Cardona, D., Breitner, M. H., & Graf von der Schulenburg, J. M. (2020). Influencing factors for the digital transformation in the financial services sector. *Zeitschrift für die gesamte Versicherungswissenschaft*, 109, 155-179.
- Zuo, L., Strauss, J., & Zuo, L. (2021). The digitalization transformation of commercial banks and its impact on sustainable efficiency improvements through investment in science and technology. *Sustainability*, 13(19), 11028.



## HO CHI MINH CITY UNIVERSITY OF ECONOMICS AND FINANCE

141 - 145 Dien Bien Phu, Ward 15, Binh Thanh District, HCM City Website: uef.edu.vn - Hotline: (028) 5422 6666 \* (028) 5422 5555