



Delegation of the European Union to Vietnam



DIGITAL ECONOMY AND DIGITAL TRANSFORMATION IN VIETNAM

A Reader Prepared for Roundtable Series on EVFTA, EVIPA and Post-COVID-19
Economic Recovery in Vietnam

Hanoi, November 2020

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Le Duy Binh
Tran Thi Phuong

Hanoi, November 2020

This report has been produced with the assistance of the European Union.
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ABBREVIATIONS

3D	Three dimensions
AI	Artificial intelligence
ASEAN	Association of South East Asian Nations
CISL	Cyber-information Security Law
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSL	Cybersecurity Law
DT	Digital transformation
EGDI	E-Government Development Index
ERP	Enterprise resource planning
eTS	electronic Trust Services
EU	European Union
EVFTA	EU-Vietnam Free Trade Agreement
EVIPA	EU-Vietnam Investment Protection Agreement
GDP	Gross Domestic Product
GDPR	European Union's General Data Protection Regulation
HCI	Human Capital Index
ICT	information and communications technology
IMF	International Monetary Fund
IoT	Internet of Things
ISP	Internet Service Provider
IT	information technology
MIC	Ministry of Information and Communication
MSME	micro, small and medium-sized enterprises
OECD	Organisation for Economic Co-operation and Development
OSI	Online Service Index
RPA	Robotic process automation
SDG	Sustainable Development Goal
SMAC	Social, Mobile, Analytics, and Cloud
SMACIT	social, mobile, analytics, cloud, and Internet of Things
SME	small and medium-sized enterprises
TII	Telecommunications Infrastructure Index
UNCTAD	United Nations Conference on Trade and Development
VCCI	Vietnam Chamber of Commerce and Industry
VECITA	Vietnam E-commerce and Information Technology Agency
VNNIC	Vietnam Internet Network Information Centre

INTRODUCTION

Vietnam's digital economy has been booming and is the second fastest-growing market in Southeast Asia after Indonesia. The internet economy of Vietnam has reached a value of US\$ 12 billion in 2019, with an annual growth rate of 38 percent since 2015 and is expected to surge to US\$ 43 billion by 2025. With the gross merchandise value traded over the internet in Vietnam set to account for over five percent of the country's GDP in 2019¹. In 2019, an estimated 61 million Vietnamese went online and the average Vietnamese person spends three hours and 12 minutes each day using the Internet on mobile devices like smartphones. Vietnam is also committed to expanding its digital economy, aiming at accounting for 20 percent of its GDP by 2025². Social distancing and lockdown during COVID-19 have further accelerated the use of digital technologies to mitigate the impacts on business and social life disruptions.

Digital transformation is an indispensable factor to help businesses gradually get used to the new normal after the COVID-19 pandemic. For Vietnam, 61 percent of business leaders surveyed have already seen changes in customers' purchasing behaviour and motivations since the start of 2020, while 22 per cent of businesses have not seen any changes in their customer's needs and 16 per cent remained unsure. Prior to the COVID-19 crisis, the drivers of technology were focused on cost reduction and productivity. The goal was to make well-run businesses run better. As we adapt to the new realities caused by COVID-19, the roles of technology will have to evolve to achieve resiliency, deliver profitability and act sustainably³.

In its digital strategy, the EU acknowledges that everyone is experiencing the digital transformation in their life. The EU digital strategy is to make it work for people, businesses and the planet, in line with other EU values. The EU aims to use technology to help Europe become climate-neutral by 2050. The EU is also committed to support developing economies in going digital.

The EU is well positioned to be Vietnam's global partner on digital economy. The EVFTA is expected to be an important contributor to cement this position. The trade agreement offers the motivation and incentives to push businesses and the public sector to accelerate digital transformation. The agreement will contribute to improve Vietnam's regulatory framework for digital transformation in a way that promotes the development of electronic commerce between EU and Vietnam. The EVFTA is expected to contribute an increase in European investment into Vietnam, especially in high-tech industry which is highly favourable for digital transformation. Supported by the FTA, there is a higher opportunity for Vietnam to gain further access to European know-how, technology and expertise.

¹ e-Economy Southeast Asia Report 2019 by Google, Temasek and Bain

² Resolution No. 52-NQ/TW by the Politburo on Industry 4.0.

³ <https://vietnamnews.vn/economy/769758/firms-urged-to-promote-digital-transformation-post-covid-19.html>

Driven by market opportunities brought about by the EVFTA, Vietnamese companies will upgrade and transform digitally to reach the standards and norms of the European market. This will help to boost the productivity and performance of Vietnamese enterprises. It is likely that the EVFTA will boost digital transformation not only in the business sector but also in the public sector through e-government initiatives. Especially, it will have an impact on the innovation and creativity of the business community in Vietnam, both by offering new opportunities in European Market and by stronger enforcement of intellectual property right requirements.

In such a context, the EU Delegation to Vietnam organizes a series of roundtables on economic and business development in the context of a post Covid-19 world and of the EVFTA. This is the second of the series of three roundtables with the theme “Digital Economy, Digital Transformation in Vietnam and the EVFTA”. The roundtables are implemented by EU Delegation in Vietnam under the framework of the EU-Vietnam Partnership Facility (VPF). This reader, which is prepared by Dr. Le Duy Binh and Dr. Tran Thi Phuong under an agreement between Economica Vietnam and GOPA, is to provide comprehensive background information for the roundtable.

1. Digital Economy and Digital Transformation: Key Concepts and Definition

There is no common agreed definitions of digital sector, products, or transactions, let alone the digital economy (IMF, 2018)⁴. The “digital economy” is sometimes defined narrowly as online platforms, and activities that owe their existence to such platforms, yet, in a broad sense, all activities that use digitized data are part of the digital economy: in modern economies, the entire economy. As highlighted by UNCTAD (2017a), the evolving digital economy can be associated with an increased use of advanced robotics, AI, the Internet of Things (IoT), cloud computing, big data analytics and three-dimensional (3D) printing.

“*Digitalization*” is defined as a process that digital technologies, services, products, techniques, and skills are diffusing across economies, and businesses make use of these factors (Brennen and Kreiss, 2014).

Under the study entitled “Vietnam Today: The First Report of Vietnam’s Future Digital Economy Project” implemented under the partnership of the Ministry of Science and Technology and the Australian Government, the following broad definition is used:

[Digital economy are] All businesses and services that have a business model based primarily on selling or servicing digital goods and services or their supporting equipment and infrastructure.

In the EU, the Strategic plan 2016-2020 – Communications Networks, Content and Technology of the DG Connect articulates the aims of “creating a Digital Single Market for more growth and jobs, where citizens, businesses, and public administrations can seamlessly and fairly access and provide digital goods, content and services”⁵.

Digital transformation is defined as “a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies” (Vial, Gregory, 2019).⁶ Digital transformation is essential to all businesses, regardless of size and industry. Digital transformation describes the practice of business organizations using technology to optimize their current processes and enhancing customer experience - in order to stay competitive and relevant in the new customer-centric economy.

Yet, digital transformation is more than just simply installing new software or moving to the cloud - digital transformation, at its core, is all about business, and requires business expertise and

⁴ IMF. 2018. Measuring the Digital Economy

⁵ https://ec.europa.eu/info/publications/strategic-plan-2016-2020-communications-networks-content-and-technology_en

⁶ Vial, Gregory. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems. 28. 10.1016/j.jsis.2019.01.003.

involvement from business users. Even though digital transformation is driven by an ever-changing customer expectations in a new business landscape that is highly connected and digital savvy, simply executing transformation with just technology alone is inadequate. Digital transformation requires the right mix of business and digital expertise to make the whole endeavour a success.

2. Digital transformation status of Vietnamese Economy: digitalization in different industries

2.1. Overview of Vietnamese digital economy

Over the last four decades Vietnam has experienced rapid industrialization, modernization and international integration. In this new Vietnam, science, technology and innovation, have a critical role to play in furthering Vietnam's economic development. Digital development is transforming multiple economic sectors, from manufacturing and agriculture to trade, payment, transportation, finance and education (Cameron A. et al, 2019). Vietnam is one of the fastest growing digital economies in ASEAN at a rate of 38% per year. As a result, its digital sector is expected to contribute 30% to Vietnam's economy by 2030. Vietnam's digital economy in 2019 was valued at US\$ 12 billion, making up 5% of the nation's GDP, four times higher than 2015, according to the report "e-Conomy SEA 2019"⁷.

Vietnam's economy is changing dramatically through the application of new digital technologies. Some industries in Vietnam are digitalizing rapidly, including e-commerce, tourism, digital content and fintech. These industries show high potential for Vietnam's digital economy in the coming years. Results from case studies in the report named "Vietnam's future digital economy towards 2030 and 2045" show a moderate level of readiness for digital transformation. While firms in these sectors are well aware of the importance of digital technologies in production, they have trouble adopting these new technologies due to financial and technical issues. However, given Vietnam's context and position in 2019, there remains a high potential return for Vietnam's digital economy – both in traditional and emerging industries. The consumer survey results suggest that, as industries transform, Vietnamese consumers are adapting quickly and adopting new products and services of the digital economy. This is beneficial for attracting investment and growing Vietnam's digital economy (Cameron A et al, 2019).

2.2. ICT industry – the main actor of digital transformation of Vietnamese businesses

Industries including finance technology (fintech), telecommunications, electronics and computer manufacturing, and information and communication technology (ICT) services are bases for the booming of Vietnam's digital economy. According to the Ministry of Information and

⁷ By Google, Temasek and Bain (October 2019), available at:
https://www.blog.google/documents/47/SEA_Internet_Economy_Report_2019.pdf

Communications' 2019 summary and 2020 orientation report, total ICT industry revenue in 2019 is estimated at US\$ 112,350 billion, including 81.5% for ICT export.

Also, the Ministry of Information and Communications announced that software industry revenue reached \$5 billion, up \$500 million compared to 2018. Total ICT industry value for the State budget in 2019 is VND 54,000 billion, an increase of VND 2000 billion comparing to 2018. However, the digital industry's revenue only makes up a minor part in IT industry revenue (accounting for 0.76% of the IT industry's revenue). The telecommunications industry grew by nearly 19% with the contribution of 50,000 technology enterprises. The IT industry maintained its growth rate of 10%⁸. As of mid-2018, Vietnam had about 30,000 enterprises operating in the fields of hardware, software, digital content, and ICT services. In which, about 9,500 enterprise was working on digital software development for the finance, telecommunications, smart agriculture and government sectors.

2.3. Digital transformation in different industries in Vietnam

E-commerce

E-commerce is one of the fastest-growing segments of Vietnam's digital economy. E-commerce is an inevitable business and consumption trend which is associated with the development of technology and the service response from businesses to the needs of consumers. According to the Vietnam E-commerce and Information Technology Agency (VECITA), the nation's e-commerce market is growing by 35% per year – 2.5 times faster, for example, than Japan. Vietnam's online retail revenue reached US\$6.2 billion in 2017, over double that of 2014⁹. Currently, the number of people participating in online shopping in Vietnam has increased steadily and reached 40 million people. This means 1 in 2 people participate in cyber purchase. However, the proportion of revenue from this sector compared to the retail level across the country was only 4.2%. Most Vietnamese enterprises continue to underperform compared with global online providers as Vietnamese consumers.

Social media is growing fast in Vietnam with support of a strong increase in the number of mobile device ownerships. There are 240 social networking sites and 63 integrated digital news outlets in Vietnam¹⁰. Facebook Vietnam ranks Facebook's 7th largest user base with an estimated 58 million active users¹¹. Vietnam's online ad industry is developing rapidly, reaching US\$ 390 million in revenue in 2016, and is expected to triple by 2020¹². Apart from enterprises, most ad patrons are

⁸ TOPDev. 2020. Vietnam IT Market Report 2020

⁹ Vietnam e-Commerce and Digital Economy Agency. 2019. E-commerce white book 2018. Vietnam.

¹⁰ Ministry of Information and Communications of Vietnam. 2017. Report on the National Industry Strategy 2016-2025 and Vision by 2035. Hanoi, Vietnam.

¹¹ Kepios. 2018. 2018 Q2 global digital statshot. Kepios: Singapore.

¹² Vietnam E-Commerce Association. 2017. Vietnam e-commerce index (EBI) 2017. VECOM: Hanoi, Vietnam.

household businesses and individuals selling goods and services online. These groups have contributed the most to the growth of advertising on social networks.

Manufacturing and agriculture

Manufacturing is a critical business sector in Vietnam and represents 16.49% of the country's GDP (data for year 2019, according to World Bank¹³). It is one key industry that is ready and prime for transformation. According to a survey conducted by CSIRO (2019), the majority of businesses surveyed in the manufacturing and agriculture sectors have applied information and technologies in their production. The main applications include everyday business management as well as customer and supplier contact through email and websites. However, the adoption rate is much lower for agriculture households. Only one in every five agriculture households have access to digital technologies, compared to around 70% for agriculture enterprises and 85% for manufacturing enterprises.

The main reasons for Vietnamese enterprises to invest in digital technology is to reduce costs, increase productivity and enhance business management. Small businesses in agriculture, especially in agriculture households, are not motivated to adopt digital technologies for environmental protection and risk management. However, the figure for environmental protection and risk management increases considerably for enterprises that deal with foreign partners. In manufacturing, since the majority of enterprises are engaged in the assembling and outsourcing stages, technologies directly related to production are the most appreciated. Technologies associated with research and development, analysis and marketing have received much less attention. Only around 7% and 6% of manufacturing firms appreciate the roles of simulation technology and big data technology, respectively.

Most businesses in the two sectors are relatively new to the concept of Industry 4.0. Formal businesses (as opposed to many household enterprises) appear to be better at planning for digital investment. Approximately 35% of formalized agriculture enterprises and about a quarter of manufacturing enterprises plan to invest in Industry 4.0 technologies in the coming year, compared with less than 15% of household businesses (Cameron A et al, 2019).

Banking and insurance

There is an increasing in the acceptance of the new culture of digital banking and fintech in Vietnam, especially among the young and more tech-savvy people. A large percentage of Vietnam's population frequently open their account and make transactions with online banking through their mobile apps, and thus, making banking and insurance in Vietnam prime for digital transformation.

Many banking and insurance manual processes can now be optimized and automated by leveraging technologies, including:

¹³ <https://data.worldbank.org/indicator/NV.IND.MANF.ZS?locations=VN>

- Acquiring new customers and opening banking and insurance products through the mobile market.
- Automate a wide variety of tasks such as Know Your Customer (KYC) checks, Anti Money Laundering (AML), and ID verifications by using advanced technologies such as Robotic Process Automation (RPA) and Artificial Intelligence.
- Gain hidden insights through advanced data analytics
- Improve frauds checking with machine learning.

The advent of FinTech in the country can be attributed to the country's high internet penetration, high rate of smartphone users and the rapidly growing e-commerce. The percentage of unbanked population is high – only 59% of Vietnam's population have a formal bank account, while the rest do not have access to banking services. Furthermore, the number of non-cash transactions in Vietnam is the lowest among South East Asia nations. According to a World Bank survey, the number of non-cash transactions in Vietnam is 4.9 per capita compared to 59.7 in Thailand, 89 in Malaysia and 26.1 in China respectively. This creates a tremendous opportunity for fintechs.

Other industries

The logistics sector has grown rapidly along with the e-commerce boom. In recent years logistics enterprises grew on average by 14-16% (US\$40-42 billion) per year¹⁴. Enterprises operating in the field are transforming from traditional logistics companies to e-commerce logistics companies to cope with competition and new markets. According to data from the Vietnam Logistics Business Association, the number of enterprises applying technology in their operations increased from 15-20% to 40-50% in recent years. However, more than half of these businesses have not taken on significant technology adoption¹⁵.

Under Industry 4.0, Vietnam's tourism sector has rapidly changed and increased service quality using the smart tourism model. According to a survey by the Vietnam National Administration of Tourism, 71% of international tourists to Vietnam in 2017 used online sources to determine their travel destination¹⁶. In addition, 64% of international tourists booked their trip to Vietnam online. Nearly 100% of Vietnamese enterprises in the tourism sector used websites to introduce their products to consumers, however, only 50% of domestic enterprises successfully applied online sales and payment methods.

Vietnam's health sector has been digitalized widely with goals to develop the smart health system by adopting digital technologies in three main pillars: smart disease prevention, smart examination and treatment, and smart medical administration¹⁷. The online portal Medihub.vn provides official information on each hospital's services, procedures, regulations, as well as

¹⁴ Ministry of Industry and Trade of Vietnam. 2017. Vietnam logistics report. MIT: Hanoi, Vietnam.

¹⁵ Vietnam Logistics Business Association. Proceedings of the "Logistics and ecommerce: Developing together" workshop.

¹⁶ "Smart Tourism - an Inevitable Model", Giang T. (January 2019).

¹⁷ "Towards a Smart Healthcare System", the Nhan Dan. 31 January 2019.

information on diseases and new treatments. Major hospitals in Vietnam have begun to build and implement a model of Smart Medical Clinics, such as Thu Duc District Hospital in Ho Chi Minh City. People visiting the hospital can now register their medical appointments through a central system that is connected to overall hospital management software. Visitors receive automated ticket numbers and can wait for their appointment with greater comfort and convenience, with several screens around the hospital displaying the order of ticket numbers.

2.4. Digital transformation of the Government agencies

Vietnam is a lower-middle-income country in ASEAN. However, the index of E-Government Development Index (EGDI) in 2020 is 0.6667 which is considered as high EGDI in the ranking of United Nations in the report of E-government Survey 2020, Online Service Index (OSI) is 0.6529 and HCI index is 0.6779. The index is calculated taking into account the weighted average of three indices, which cover the primary dimensions of e-governance, namely: Online Service Index (OSI), Telecommunications Infrastructure Index (TII), and Human Capital Index (HCI). With such high EGDI level, Vietnam, with the rate at class of H3, ranks 6th in Southeast Asian, after Singapore, Malaysia, Thailand, Brunei, and the Philippines. Vietnam also ranks 86 in 193 UN member states, with telecommunications Infrastructure index (TII) is 0.6694. This year, Vietnam made significant improvements in the telecommunication infrastructure index, jumping 31 spots to 69th (0.6694 points) while its human capital index ranks 117th (0.6779 points), up 3 places from the 2018 version of the EGDI. The country's online service index, however, decreases by 22 places to 81st (0.6529 points), according to the survey. To build up Telecommunications Infrastructure Index, Vietnam has 120 mobile cellular telephone subscriptions per 100 inhabitants, percentage of individuals using the internet is 70.35%, Fixed (wired) broadband subscriptions per 100 inhabitants are 13.6, and active mobile-broadband subscriptions per 100 inhabitants are 71.89. A strong increase in TII suggests that Vietnam has achieved progress in e-government development especially digital infrastructure in the national digital transformation strategy. The tax authority in Vietnam has implemented e-filing, e-payment and e-customs initiatives that have helped to improve tax collection and management and have lowered taxpayers' compliance costs¹⁸. Prime Minister Nguyen Xuan Phuc signed Decision No.749/QĐ-TTg approving the National Digital Transformation program until 2025, with a vision to 2030, which targets to make Vietnam among the world's top 50 countries in terms of the E-Government Development Index (EGDI)¹⁹. Under this program, Vietnam also plans to universalise broadband internet and 5G services, have 80% of its population using e-payment and become one of the 30 leading countries in the Global Cybersecurity Index.

¹⁸ United Nations. 2020. E-government Survey 2020

¹⁹ Vietnam Strives to be among world's top 50 countries in e-government development by 2030.

<https://vietnamnet.vn/en/politics/vn-strives-to-rank-among-world-s-top-50-countries-in-e-government-development-by-2030-646752.html#inner-article>

3. Policies related to digital transformation in Vietnam

The Vietnam Government views digital transformation across the broader economy as critical to continued growth and prosperity. At the moment, multiple agencies are charged with supporting and regulating different aspects of the digital economy in Vietnam. The current regulatory framework consists of commercial regulations and decrees issued by various ministries. Currently, for telecommunications and ICT industry-related issues, the Ministry of Information and Communication is the main agency.

Vietnam's new Law on Cybersecurity (CSL) was ratified by the National Assembly on June 12, 2018, and came into effect on January 1, 2019. The law imposes obligations on domestic and foreign companies providing services to customers in Vietnam over telecom networks or the Internet. Under the law, both onshore and offshore online service providers are required to store Vietnamese users' information within Vietnam for a certain period of time. Vietnam's data-localization policies are part of a broad effort to control Internet-based activities, with the stated objectives including public security as well as commercial goals.

In order to improve the competitiveness of IT enterprises, to promote investment attraction for IT development, the Party and Government of Vietnam have paid special attention to formulating policies for IT development and innovation to create and apply advanced technology, taking advantage of the opportunity of Industry 4.0. This has been shown through legal documents, such as Resolution No.36a/NQ-CP dated October 14, 2015, of the Government on e-Government; Resolution No.23-NQ/TW dated 22 March 2018 of the Politburo on orientations for building a national industrial development policy toward 2030, with a vision to 2045.

On September 27, 2016, The Politburo also issued Resolution No.52-NQ/TW (Resolution 52) on a number of guidelines and policies to actively participate in Industry 4.0. At the beginning of 2020, Prime Minister Nguyen Xuan Phuc signed to issue the Directive No.01/CT-TTg on promoting the development of Vietnamese digital technology enterprises²⁰. As of July 2020, 16 provinces have issued this kind of plan to implement the Prime Minister's Directive No.01/CT-TTg on promoting the development of digital technology in Vietnam.

Decision No.749/QD-TTg dated 3 June 2020 approved National Digital Transformation Programme by 2025, orientation to 2030. The National Digital Transformation Program to 2025, with a vision to 2030, has also identified tasks and solutions, in which, focusing on the application of new technologies, especially AI technology, to promote the development of e-government, digital economy and society in Vietnam, contributing to a comprehensive renovation of the public management and administration activities, enterprises' production and business activities, and ways of living and working of Vietnamese people.

²⁰ "Vietnam Information Technology Speeding Up", <https://www.qdnd.vn/khoa-hoc-cong-nghe/trong-nuoc/cong-nghe-thong-tin-viet-nam-tang-toc-609346>

As of the end of August 2020, the Ministry of Information and Communications has been drafting a decision of the Prime Minister, approving the National Strategy on Vietnam’s digital technology enterprise development up to 2030. The draft clearly focuses on developing 4 types of digital technologies in Vietnam, including: Group 1 - Enterprises developing core technologies; Group 2 - Enterprises developing digital technology products; Group 3 - Enterprises implementing digital technology solutions; Group 4 - Digital technology start-ups.

4. Opportunities and Challenges of Digital Transformation

4.1. Opportunities, Drivers and Enablers

The high economic growth over recent decades has helped to create a better environment for digital transformation. In particular, the middle class in Vietnam has been the fastest growing in Southeast Asia, which promises great potential for finance, banking, health care and insurance sectors.

Vietnam also has great advantages in human resources in technology. There are many schools offering training in IT, which is the source of high-quality labour force majoring in technology and data science.

The foundation for digitalization in Vietnam has been developed significantly recently. High-speed Internet services, smart devices and mobile phones in Vietnam have become popular. As of January 2020, there were approximately 68.17 million people using internet services in Vietnam. One praiseworthy statistic is that the Internet usage in Vietnam in relation to the total Vietnamese population has been currently standing at 70% as of January 2020. Of the total Vietnamese population, there were 65 million people currently using social media for entertainment, to contact friends, share moments, search for life tips or even sell advertising, as of January 2020²¹. Vietnam has one of highest numbers of registered domains in the ASEAN region²². According to VNNIC Report, as of October 31, 2019, the number of domain names in Vietnam reached over 500,000. Domain name ".vn" is the national domain name with the largest number of registered users in ASEAN and top 10 in Asia Pacific. There were 145.8 million mobile connections in Vietnam in January 2020. The number of mobile connections in Vietnam in January 2020 was equivalent to 150% of the total population.

By the beginning of 2019, Vietnam has launched a number of satellites, including two that are manufactured in Vietnam. These satellites provide the Internet for remote areas as well as monitoring climate change, natural disasters, agriculture, sea area and urban development.

One of the key pillars of digital transformation must include cloud computing technology (cloud computing). Digital transformation by cloud computing platform helps build an ecosystem so that

²¹ Vietnam Internet Yearbook 2020, <https://vnetwork.vn/news/thong-ke-internet-viet-nam-2020>

²² “Vietnam Internet Resource Report”, Ministry of Information and Communication – Vietnam Internet Centre (2019).

Vietnamese cloud computing businesses can master technology, provide standard cloud computing infrastructure and services to support and promote Vietnamese businesses to digitally transform and recover better during the period of Covid-19²³.

5G mobile network is projected to be implemented firstly in four cities of Ho Chi Minh, Hanoi, Da Nang, and Hai Phong. State-run organization MobiFone has been able to implement 5G mobile network and applications for its customers. It has also installed the first 5G broadcast stations in the four aforementioned cities. Viettel (100% state owned company) has accompanied with Ericsson from Sweden in the implementation of a trial 5G mobile network. In January 2020, Viettel announced the successful test of the first video call using a 5G data transmission line on a transceiver, which was self-researched and produced by Viettel, marking a step in the commercialization of 5G by a Vietnamese telecommunications network. In the trend of development new generation mobile technology, since 2018, VNPT has in turn signed cooperation with two foreign partners, including Nokia Corporation (Finland), to prepare technical inputs for 5G network deployment.

Internet of Thing (IoT) helps Vietnamese farmers grow rice with less water. The IoT solution helped farmers implement alternate wetting and drying – an irrigation system where paddy fields are alternately watered and dried. 80 smallholder farmers and one farm enterprise used the IoT technology in three provinces in the Mekong Delta of Vietnam (Can Tho, Tra Vinh, and An Giang) under a project funded by the World Bank Partnership Facility²⁴.

In some areas relevant to the digital economy, Vietnam is performing relatively well:

- *5G networks* – Vietnam is one of the first countries in the world to trial 5G, with a commercial launch scheduled in 2020.
- *In Vietnam the fee of using internet is at a moderate level.* Fixed broadband internet service charges in Vietnam are among the lowest in Asia Pacific (converted to purchasing power parity).
- *High school students in Vietnam have a high performance* - On international rankings for science, reading and math, Vietnamese students rank at the same level or even higher than those in advanced countries²⁵.

Technology adoption and digital transformation are important contributors to Vietnam escaping from the middle-income trap. The economic strategy that led to Vietnam's success and high GDP growth over the last four decades will not continue to provide the same growth and prosperity into the future. To move from middle income status to high income status, Vietnam will need to

²³ <http://tapchitaichinh.vn/nguyen-cuu-trao-doi/chuyen-doi-so-giup-doanh-nghiep-viet-doi-van-323400.html>

²⁴ Technology helps rice farmers in Vietnam

<https://www.worldbank.org/en/news/video/2020/04/06/technology-helps-rice-farmers-in-vietnam>

²⁵ International Telecommunication Union. 2018. Measuring the information society report: Volume 1 2018. ITU: Geneva, Switzerland.

go beyond being a low cost labour market with a heavy reliance on FDI for export growth, and move to increasing the capacity to use technology to increase total factor productivity growth across all industry sectors. The way forward is through improving labour productivity and knowledge-based industries through technology adoption, digitalization, structural reform, skills development and education.

4.2. Challenges, Barriers and Threats

Demerits of Digital Economy

(i) Loss in Employment: The more we depend on technology, the less we depend on human resources. The advancement of the digital economy may lead to the loss of many jobs. As the processes get more automated, the requirement for human resources reduces. Take the example of online banking itself.

(ii) Lack of Experts: Digital economy requires complex processes and technologies. To build the platforms and maintain their upkeep require experts and trained professionals. These are not readily available, especially in rural and semi-rural areas.

(iii) Heavy Investment: Digital economy requires a strong infrastructure, high functioning Internet, strong mobile networks and telecommunication. All of this is a time consuming and investment heavy process. In a developing country like ours, development of the infrastructure and network is a very slow, tedious and costly process²⁶.

According to the report “Vietnam’s future digital economy towards 2030 and 2045”, rural areas of Vietnam still lag behind metropolitan areas, although the provision of satellite and wireless services is now boosting the user rate in most of the remote provinces.

Lack of finance and insufficient information were found to be the main barriers to further digitalization at an enterprise level in Vietnam’s manufacturing and agriculture sectors. In particular, unclear economic benefits and uncertain impacts of technology adoption, and prohibitively high investments are the most important challenges for digitalization in Vietnam, especially for small and medium enterprises (Cameron A et al, 2019).

Most small and medium-sized enterprises (SMEs) still face many barriers in digital transformation as they lack awareness of the role of digital transformation according to a recent report released by the Vietnam Chamber of Commerce and Industry (VCCI). The report showed that, SMEs, though they account for nearly 98% of Vietnam's businesses, have a low level of technology and innovation. According to a survey by the Ministry of Industry and Trade, up to 16 out of 17 industries surveyed have a low level of readiness for engagement in digital transformation. Notably, over 80% of enterprises have just started to understand digital transformation. Recently,

²⁶ <https://www.toppr.com/guides/business-environment/emerging-trends-in-business/digital-economy/>

the concepts of ‘digital economy’ and ‘digital transformation’ are mentioned a lot, but many SMEs do not actually understand and apply these matters in practice.

Shortage of skilled labour for digital transformation is also one of the main challenges for Vietnam’s current status and future. According to the Ministry of Education and Training, at present, the proportion of universities and colleges nationwide training information technology (IT) accounts for 37.5%, each year about 50,000 IT students graduate. Only about 27% of IT workers are able to meet the requirements, the other 72% need additional training for a minimum of 3 months²⁷. According to TopDev, in 2019²⁸, Vietnam lacks 90,000 employees, in 2020 this number has increased to more than 400,000 and is estimated to be 500,000 by 2021. This shortage comes from many aspects, mainly because the number of high professional staff has not met the market's demand, while the new graduates have neither practical skills nor soft skills (teamwork, time management, communication, etc.). IT personnel lack communication skills and fluency in English. In addition, training programs’ focus does not meet businesses’ needs; technology changes too fast for schools to develop proper training programs.

One of the challenges of digital transformation is lack of coordination of different public agencies in implementation national digital economy strategies. For example, while Vietnam Customs and the Ministry of Finance have been working together on a payment system for collecting customs duties and electronic taxation, there have been no efforts to align this with the government’s overarching digital economy strategy. The main reason for the lack of coordination is the absence of political leadership on digital economy issues. While the Ministry of Information and Communications’ Digital Economy Agency has recently been given the responsibility of drafting guidelines to propose an implementation plan, without the endorsement and commitment from higher levels; namely, at the level of deputy prime minister or prime minister, and the designation of a coordinating taskforce, the plans are likely to go unrealized (World Bank, 2018).

Digital technology could raise risks related to jobs, skills and discrimination (Cameron A et al, 2019).

- Job automation: Up to 38.1% of Vietnam’s current jobs can be transformed or displaced due to automation by 2045. A more moderate estimate suggests around 15% of total jobs in Vietnam will be automated by 2033.
- Skills shortages: For example, Vietnam is projected to be short 500,000 data scientists, and up to 1 million ICT workers by 2020.
- Unfair algorithms: AI can create opacity and discrimination in life-affecting judgements and processes. For example, facial recognition software used for policing is sometimes inaccurate and more likely to falsely identify people, or proxies for discrimination can be used to assess financial loans, education admissions, insurance or other life-affecting processes, and could potentially discriminate against certain social groups.

²⁷ “Human Resource for ICT Forum”, 30 March 2019.

²⁸ TOPDev. 2020. Vietnam IT landscape 2020

- Digitalization could deepen inequality: A 2016 World Bank report shows that digital technologies deliver fewer benefits to the poor, and higher potential benefits for those who are not poor.

5. Covid-19 and responses of the government and businesses from digital transformation perspective

5.1. Impacts of Covid-19 in digital economy development in Vietnam

Limiting face-to-face contact with others is the best way to reduce the spread of coronavirus disease 2019 (COVID-19). As a result, many meetings and conferences must be shifted from person-to-person method to online platform by using applications such as Zoom.us, Skype, Google Hangout, etc. On the other hand, a lot of large conferences were cancelled or postponed due to the coronavirus outbreak. The Vietnamese government also had many online meetings with local authorities instead of meeting in-person. The pandemic also led the trend of consumers changing gradually to contactless methods such as online-shopping, e-commerce, etc. to lower the risk of spreading corona virus. With the support of technology, e-commerce revenue increased sharply in the pandemic period. In order to cope with the effect of the pandemic, Vietnamese enterprises are applying technology to effectively communicate with customers and employees. According to the survey of the Vietnam General Statistics on 126,565 enterprises, one of the measures taken by them to mitigate the negative impact of the pandemic has been to promote e-commerce.

In Vietnam, there have been many new studies on high technology applications to produce medical devices for the prevention of epidemics, for example, production of breathing apparatus, rapid test-kit. Vietnam's COVID-19 test kits have passed European standards and have been granted the CE marking and Certificate of Free Sale (CFS), allowing the test kits to be sold in the European Economic Area, including the UK.

5.3. Responses from businesses to Covid-19 from digital transformation perspective

The compulsory governmental campaign "social distancing" to counter Covid-19 has forced businesses to turn on their "survival" mode and to take a wide range of unprecedented measures. There will always be an opportunity in the most difficult period and domestic businesses have demonstrated a high level of flexibility, adaptability and creativity, especially in the adoption of digital technologies while operating their businesses. New business models based on digital platforms have been tested, run and operationalized.

Vietnam is one of the countries with a young population, with a population of 100 million and more than 150 million mobile devices, 70% of them connected to the Internet. As a result, it seems that Vietnam has prepared for changes, especially for enterprise digitization which is currently being promoted stronger than ever. The keywords #SocialDistancing #WorkFromHome have been hot topics recently.

Figure 1. Responses by Vietnamese IT businesses to Covid-19



Source: TOPDep (2020)

Regarding fast adaptation, many businesses have departments that regulate suitable processes to ensure work productivity. Management models are gradually shifting from offline to online, then continuing to "work from home" with only 50% of employees in the office. However, this is not easy for most enterprises especially the large ones with complex operating systems. According to the survey of TOPDev Vietnam, although IT businesses seem to be less affected by this pandemic, they still have to restrict lots of optional activities, ensuring the cash flow which helps them overcome this tough time.

In recent times after the outbreak of the Covid-19 epidemic, many businesses of all industries have applied technology in production, especially selling towards stronger digitalization. Especially when the social quarantine order was issued, all service stores simultaneously only sold take away items, the stores closed and the products from the counter were brought online. Supermarkets also provided online delivery services at the same time, technology car manufacturers also quickly launched new services such as "online shopping". Some businesses in the real estate industry sold through software, (recording video etc) to introduce the project to customers instead of viewing directly as before.

6. EVFTA and its Implications on Digital Transformation of Vietnamese Economy

6.1. EU's policies towards digital transformation

In its digital strategy, the EU states digital technologies will help the EU reach climate neutrality, the goal set in the European Green Deal²⁹. At the global level, the EU aims to become a role model for the digital economy by development of digital standards and promoting them worldwide and

²⁹ <https://op.europa.eu/en/publication-detail/-/publication/bd211835-5390-11ea-aece-01aa75ed71a1/language-hu>

by supporting transforming economies in going digital. Digital issues are a key element of the EU's trade policy. All major bilateral trade agreements, including the EVFTA with Vietnam, deal with the issues of digitalization and digital transformation from different aspects. The EU also works with countries and partners around the world, including with Vietnam to ensure that technology helps us improve lives.

The European Union plays an active role in shaping the digital economy, with cross-policy initiatives that range from boosting investment to reforming EU laws, to non-legislative actions to improve. The 2014-2019 parliamentary term has seen several initiatives in the areas of digitalization of industry and public services, investment in digital infrastructure and services, research programs, cybersecurity, e-commerce, copyright, and data protection legislation. There is a growing awareness among EU citizens that digital technologies play an important role in their everyday lives.

The European Union will increase its support for digital transformation in the coming years, as illustrated by the recent proposal for the Digital Europe program (for 2021-2027) – which would be the first ever funding program dedicated solely to supporting digital transformation in the EU.

EU Legal framework for digital transformation

The EU will take action related to digital transformation under a range of sectoral and horizontal policies and on the basis of a number of provisions of the Treaty on the Functioning of the European Union (TFEU). Based on this provision, the Union and the Member States must take action to help industry adjust to structural changes, encourage an environment favourable to initiative and to the development of businesses (particularly SMEs) throughout the Union, favour cooperation between undertakings and foster better exploitation of the industrial potential of policies of innovation, research and technological development.

At the international level, the EU has entered into dialogue with partners worldwide to maintain support in areas such as internet governance, intellectual property rights and common standards for future technologies, such as 5G, and to seek agreements on convergence towards harmonization of spectrum management. The EU is also increasingly seeking to achieve global improvements in cybersecurity resilience and deterrence.

EU has released digital policies in different areas³⁰:

- *Digitalizing European industry*: the Commission has been seeking to implement a set of measures to coordinate European, regional and national initiatives for the digitalization of industry. These include public-private partnerships pooling resources for developments in digital technologies and digital industrial platforms.
- *Digitalization of the public sector*: on the basis of the eGovernment action plan for 2016-2020, several initiatives have been adopted or are on-going to modernize digital public

³⁰ [https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/633171/EPRS_BRI\(2019\)633171_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/633171/EPRS_BRI(2019)633171_EN.pdf)

services. The eIDAS Regulation, on cross-border recognition of electronic identification means, entered into force in September 2018. Furthermore, the Single Digital Gateway Regulation, applicable since October 2018, offers to businesses and citizens a single online point of access to gather information about national laws, administrative requirements and procedures such as company registration.

- *European electronic communications code review*: the new package of measures adopted by the co-legislators in 2018 will give citizens more rights, such as the right to switch telecoms providers in a simpler way and the right to receive public alerts on mobile phones in case of an emergency.
- *New broadband funds*: Connecting Europe Broadband Fund will help private investors join up efforts to support digital network infrastructure in under-served areas and trigger up to €1.7 billion in additional investment up to 2021. In addition, the implementation of the new WiFi4EU initiative will support internet connectivity free to users in local communities.
- *End of roaming charges*: since June 2017, citizens can now use their mobile phones while travelling in the EU just like they would at home, without paying extra charges.
- *Open internet*: with the net neutrality rules in force since the spring of 2016, every European has access to open internet, guaranteeing their freedom without discrimination when choosing content and services of their choice.
- *Cybersecurity*: the Directive on high common level of network and information security (NIS Directive) adopted by the co-legislators in 2016 (with a transposition deadline of May 2018) improves Member States' cybersecurity capabilities and cooperation and imposes measures on companies to prevent security incidents and cyber-attacks. Furthermore, in September 2017, the Commission adopted a cybersecurity package with new initiatives to further improve EU cyber-resilience, deterrence and defence.
- *Free flow of non-personal data*: a new EU law was adopted in November 2018, everyone will have access to better and more competitive data storage and processing services in the EU.
- *Cross-border online content*: since April 2018, new EU rules on cross-border online content have allowed citizens travelling across the EU to access online content services they have subscribed to in their home country, including films, TV series and sports broadcasts.
- *Protection of personal data online*: under the new data protection rules, which have been in place across the EU since 25 May 2018, Europeans can safely transfer personal data between online service providers and have the right to know how their personal data are being collected.
- *End to geo-blocking*: since 3rd December 2018, Europeans have been able to shop online without worrying about geo-blocking, as website can no longer block or re-route them just because they are in another EU country.

- *Re-use of Public sector Information (PSI)*: the recently adopted review of this legislation will make even more PSI material held by public sector bodies available for re-use in order to foster transparency, data-based innovation and fair competition.
- *Modernization of EU copyright rules*: EU copyright law has been modified to ensure a wider online access for citizens to creative content and to better protect authors and artists with regard to the digital exploitation of their works.

The European Digital Strategy

A European approach to digital transformation means empowering and including every citizen, strengthening the potential of every business and meeting global challenges with EU's core values.

European Digital Strategy includes four aspects³¹:

- Technology that works for people
- A fair and competitive digital economy
- An open, democratic and sustainable digital society
- Europe as a global digital player

EU - ASEAN cooperation on digitalization

In October 2019, the European Commission met ASEAN senior official in Vientiane (Lao PDR) to exchange and discuss digital economy and connectivity and advance EU-ASEAN digital cooperation. This was the 12th occasion for such dialogue belonging to an EU-funded development cooperation programme called the Enhanced Regional EU-ASEAN Dialogue Instrument (E-READI) with the budget of 20 million Euros for the period of 2016-2024. As for digital cooperation, the EU exchanged on the state-of-play of the joint initiative - launched at the end of 2018 - aiming to develop a basis for an ASEAN digital benchmarking index. This project taps into EU's experience in measuring digital economy, in particular the world-class digital economy and society (DESI) index and its methodology, being financially supported by the EU-ASEAN Regional Dialogue Instrument (E-READI³²). The Digital Economy and Society Index (DESI) is a composite index that summarises relevant indicators on Europe's digital performance and tracks the evolution of EU Member States in digital competitiveness. Over the past year, all EU countries improved their digital performance. Finland, Sweden, Denmark and the Netherlands scored the highest ratings in DESI 2020 and are among the global leaders in digitalisation. Currently, the ASEAN and its members are largely lacking a measurement tool to track their digital performance at the regional and national level. A conjoined workshop and study tour was organised in Brussels in December 2019 for all ASEAN authorities in order to delve deeper into the topic through training sessions and round table discussions. At the workshop, the EU and ASEAN exchanged experiences on

³¹ European Commission (<https://ec.europa.eu/digital-single-market/en/content/european-digital-strategy>)

³² European Commission (2019) https://eeas.europa.eu/delegations/kenya/49815/enhanced-regional-eu-asean-dialogue-instrument-e-readi_bg

evidence-based policymaking and on policy measures to stimulate the digital economy. Presentations of the European Digital Economy and Society Index and its five dimensions helped discussions on the creation of an ASEAN Digital Benchmarking Index. This type of monitoring on the progress of relevant digital indicators is important for both the EU and ASEAN as it gives a good global indication of digital development.

In addition, at the end of September 2020, the EU had a video conference with foreign ministers of ASEAN on strengthening EU-ASEAN partnership in the context of Covid-19. In the conference, the EU was committed to stepping up economic partnership between EU and ASEAN to speed up recovery after the pandemic. Numerous EU-ASEAN programmes to facilitate trade and integration to promote economic recovery are committed to be built. As to present, the EU cumulatively contribute also 50% of the €1.2 billion ASEAN Catalytic Green Finance Facility. An immediate common objective should be to establish an EU-ASEAN energy dialogue to tap into the potential of sustainable connectivity and the green recovery³³, in which digitalization is one of key drivers for those targets.

6.2. EVFTA with commitments related to digital transformation

EVFTA devotes Chapter 8 to *Investment Liberalization, Trade in Services and E-Commerce*, in which Session F discusses on E-commerce issues. According to this Chapter – Section F, “the Parties, recognizing that electronic commerce increases trade opportunities in many sectors, shall promote the development of electronic commerce between them, in particular by cooperating on the issues raised by electronic commerce under the provisions of this Chapter of EVFTA”. The Parties shall not impose customs duties on electronic transmissions.

As requirements of EVFTA, Vietnam and the EU shall maintain a dialogue on regulatory issues raised by electronic commerce, which shall, among other things, address the following issues:

- the recognition of certificates of electronic signatures issued to the public and the facilitation of cross-border certification services;
- the liability of intermediary service providers with respect to the transmission or storage of information;
- the treatment of unsolicited electronic commercial communications;
- the protection of consumers in the ambit of electronic commerce; and
- any other issue relevant for the development of electronic commerce.

This dialogue may take the form of exchange of information on the EVFTA’s Parties’ respective laws and regulations on the issues referred to above issues as well as on the implementation of such laws and regulations.

³³ European Commission (2020) https://eeas.europa.eu/headquarters/headquarters-homepage/85434/strengthening-eu-asean-partnership-urgent-necessity_en

The Committee on Investment, Trade in Services, Electronic Commerce and Government Procurement established pursuant to Article 17.2 of EVFTA (Specialized Committees) shall be composed of representatives of the EU and Vietnam. The Committee on Investment, Trade in Services, Electronic Commerce and Government Procurement shall be responsible for the implementation of the commitments on E-Commerce.

6.3. Implication of EVFTA on digital transformation of Vietnam

The EVFTA will contribute to improving Vietnam's regulatory framework for digital transformation in a way that "promote the development of electronic commerce between EU and Vietnam". This will be achieved by regular and effective dialogue on regulatory issues raised by electronic commerce, as required by the EVFTA, on a wide range of issues which are related to e-commerce and digitalization. The norms, policies and regulatory frameworks related to e-trade in Vietnam will be gradually upgraded, thus promoting and facilitating further the digital transformation in Vietnam.

Regulations related to trade and investment in Vietnam have been and will be further reformed in order to enable Vietnamese and European businesses to reap the benefits from the EVFTA. For example, regulations to make electronic certificate of origins or e-traceability possible will be issued, paving the way for the digitalization transformation of both Government agencies and the businesses in Vietnam.

The EVFTA is expected to contribute to increasing European investment into Vietnam, especially in high-tech industry which is highly favourable for digital transformation. Reality shows that trade is often followed by investment. The EVFTA and EVIPA are expected to increase considerably European investment in Vietnam. As of the end of 2019, the EU had 2,375 investment projects from 27 European countries into Vietnam with a total registered capital of US\$ 25.49 billion, accounting for 7.03% of the total registered investment capital. The investment trend of the EU is mainly focused on high-tech industries, however, there has been a tendency to focus more on service sectors (postal and telecommunications, finance, serviced offices, and retail)³⁴.

Furthermore, European investment has a higher rate of localization or of involving local SMEs in the global supply chains³⁵. Leading European companies like Ericsson, ABB, Bosch, Zuellig Pharma, BNP Paribas etc. are contributing significantly to knowledge transfer, innovation, technology development and digitalization in Vietnam. According to the Ministry of Planning and Investment

³⁴ Ministry of Industry and Trade (2020). http://evfta.moit.gov.vn/data/7d80034a-9a2a-4c93-8046-9df701661850/userfiles/files/23_%20Bilateral%20relation%20between%20Vietnam%20and%20EU%20-%20100%20words%20-%20MOIT%20reviewed.pdf

³⁵ For example, Piaggio Vietnam, an assembler of the scooters, motorcycles, said that they have localization rate of 89% for Vespa and 84% for Piaggio Liberty with 98 domestic suppliers and 78 foreign suppliers. The rates of Piaggio Vietnam are higher when compared with other manufactures working on the similar ranges of products.

(MPI), the EVFTA will promote high quality investment into some industries where EU has potential e.g. high-tech manufacturing, health care, clean and renewable energy, artificial intelligence, research and development, financial services. With relevant policies an incentive, Vietnam can become the destination for R&D centres or outsourcing for digitalization and digital transformation solutions. It can benefit from knowledge, technology, know-how which are brought in by European investors as it has been so doing in the last few decades. For example, Ericsson and Nokia with 5G technology have been cooperating with several large companies in Vietnam such as Viettel and VNPT in the development of communication technology. Moreover, in the process of working with the European FDI companies, Vietnamese companies will have opportunities to learn about the management skills, especially quality management systems. This investment will have both direct and indirect impacts on digital transformation in Vietnam³⁶.

Driven by market opportunities brought about by the EVFTA, Vietnamese companies will upgrade and transform digitally to reach the standards, norms of the European market. To reach the European standard requirements, Vietnamese manufactures need to apply advanced technology to better control the quality of products. Vietnamese businesses will have to optimize their current processes and to enhance customer experience. One of the main challenges that the EVFTA brings to Vietnamese enterprises is proof of origin for products originating in Vietnam which are exported to the EU. According to the requirement of EVFTA, Vietnamese exporters have to apply electronically for a certificate (movement certificate EUR.1), providing all required supporting documents. Recently, some Vietnamese exports started to apply information technology such as blockchain in tracing the origin of agricultural products exported. However, the application of advanced technology in tracing the origin of exported goods need to be spread, especially to agricultural and aquatic exporters. Recently, Vietnamese farms and agro-processing firms in the Coastal Regions, the Mekong Delta, the Central Highland or in the Northern Upland have applied digital technology in tracing, and in controlling the entire process of production and processing. They have succeeded in meeting export requirements in EU market. There is an increasing number of examples like this in many other locations of Vietnam and in many other sectors.

The EVFTA thus offers the motivation and incentives and also the push and for domestic enterprises to accelerate digital transformation. European importers and buyers are pushing further the requirement related to labour standards, eco or environment labour, technical standards. To make the best of the benefit brought about by the EVFTA, Vietnamese businesses will need to become more and more efficient in logistics, in seamless e-transaction (such as on e-commercial platform), e-contract, and digital after-sales activities, etc. The Vietnamese sellers need to follow the digital customs and culture of buyers in the EU. The implementation e-

³⁶ <https://investvietnam.vn/new-pacts-augur-high-quality-eu-investment-in-vietnam-n303.html>

transactions remains to be a challenge to Vietnamese exporters. Implementation of e-transaction regulations is to be stepped up.

Digital transformation, as a result of the Trade Agreement, is expected to take place not only in the business sector but also in the public sector. The EVFTA promotes modern governance in Vietnam. An effective and efficient government would depend on how the leadership builds a robust system and leverages the role of technology through digital transformation and e-government services. One can expect strong and decisive measures by the Government of Vietnam in the coming years to strengthen the efforts to digitalized public services, especially services for businesses, investors and in fields related to trade, investment, customs, taxes, logistics and others.

The free trade agreement will have impact on innovation and creativity of the business community in Vietnam, both by offering new opportunities in the European market and also by stronger enforcement of intellectual property right requirements. On one hand, businesses in Vietnam need to be more innovative to meet the complex and diverse taste of consumers in EU, their business ideas, copy rights and intellectual property will have a better chance of being protected. Intellectual property in one of the most important factors in a digital economy and EVFTA is promoting just that. In reality, EVFTA introduces new standards for intellectual property enforcement in Vietnam. It will usher Vietnam into an era of more effective IP enforcement. Regulations to offer better intellectual property will also be revised. For example, the EVFTA provides for the liability of internet service providers (ISPs) in the context of copyright infringement. Generally, the treaty focuses on the limitations of, or exceptions from, such liabilities, which differs substantially from the structure of the current domestic law, which sets out situations where the ISP must assume responsibility (in other words, the ISP does not bear any responsibility in situations other than those mentioned in the law). Prevailing regulations in Vietnam will need to be revised to reflect this requirement in the agreement.

The EVFTA, from the time it was negotiated, has triggered many legal reforms, boosted the modernization of the legislation in Vietnam and strengthened its enforcement. This more modern and effective legislation will contribute to, among other things, the digital transformation in Vietnam in the coming years and decades.

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