

SUSTAINABLE E-COMMERCE DEVELOPMENT IN VIETNAM

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ABSTRACT: In recent years, the e-commerce market in Vietnam has been expanding rapidly and has become a popular business method known to both enterprises and the general public. The diversity in operational models, participant demographics, operational processes, and supply chains for goods and services, supported by modern internet infrastructure and technology applications, has made e-commerce a crucial pillar in the country's digital economic development. Vietnam is considered one of the fastest-growing e-commerce markets in Southeast Asia, with an average annual growth rate of about 18%, and the market is projected to potentially reach \$26 billion by 2024. However, alongside these opportunities and significant potential, e-commerce in Vietnam faces numerous challenges.

Keywords: E-commerce, sustainability, Vietnam

1. Introduction

Today, e-commerce has become an incredibly influential sector for the economic growth of nations. The development of e-commerce not only facilitates business activities but also brings new values and meets the evolving needs of both businesses and consumers. Consequently, every country in the world is concerned with the development of e-commerce. Some roles of e-commerce include reshaping the nature of each nation's economy and the global economy, increasing the importance of knowledge in the economy, creating opportunities for developing countries to catch up and even surpass more advanced nations, and reducing the knowledge gap between developed and developing countries.

In recent years, the e-commerce market in Vietnam has been rapidly expanding and has become a well-known business method among enterprises and the general population. The diversity in operational models, participant demographics, operational processes, and supply chains for goods and services, supported by modern internet infrastructure and technology applications, has made e-commerce a crucial pillar in the country's digital economic development.

Despite facing negative impacts in 2020 due to the COVID-19 pandemic, e-commerce in Vietnam has continued to experience robust growth, becoming one of the fastest-growing e-commerce markets in Southeast Asia. According to the White Paper on Vietnam's E-commerce, in 2020, the e-commerce growth rate reached 18%, with a total market scale of \$11.8 billion, making Vietnam the only country in Southeast Asia with double-digit e-commerce growth. Calculations by major global corporations such as Google, Temasek, and Bain & Company suggest that Vietnam's digital economy could exceed \$52 billion and maintain the third position in the ASEAN region by 2025.

However, the overall human resources in e-commerce are still lacking and weak, and the technical infrastructure for e-commerce is not yet optimal, causing e-commerce to struggle in gaining trust and achieving robust development. Therefore, the formulation of a development strategy for e-commerce plays a crucial role in ensuring the healthy growth of e-commerce in

Vietnam in line with global trends, enabling businesses to increasingly leverage this business method. Based on this foundation, the author analyzes the current situation of e-commerce in Vietnam and proposes some solutions to foster its development.

In 2021, the COVID-19 pandemic had a severe impact on the trade and service activities of Vietnam and the global economy as a whole. In 2021, Vietnam's economic growth reached 2.58%, the lowest in the past 30 years.

In this context, Vietnam's e-commerce sector still maintained stable growth, reaching 16%, with retail revenue amounting to \$13.7 billion in 2021. The proportion of e-commerce retail revenue in the total retail of goods and services nationwide reached 7%, a 27% increase compared to the same period in 2020. In 2022, e-commerce continues to develop and create new consumer trends. If in 2016, the revenue from business-to-consumer (B2C) e-commerce was \$5 billion, by 2019, it had doubled, reaching over \$10 billion.

According to the 2022 White Paper published by the Department of E-commerce and Digital Economy (Ministry of Industry and Trade), the scale of Vietnam's e-commerce retail market grew by 20% in 2022, reaching \$16.4 billion, accounting for 7.5% of the total retail revenue of goods and services in the country. An estimated 57 - 60 million Vietnamese people engage in online shopping, with an average per capita spending of \$260 - \$285.

In addition to the benefits that e-commerce brings, such as expanding market opportunities, reducing costs, increasing profits, and facilitating quick transactions, there are still many limitations in online trading, including issues of counterfeit products, smuggled goods, and intellectual property infringements on e-commerce platforms and social media. E-commerce activities involving foreign elements take various forms and disputes with partners in e-commerce, especially emerging social media platforms as a popular e-commerce transaction method, remain unregulated. Violations in e-commerce are becoming increasingly complex, leading to consumer concerns.

2. Content of E-commerce Development

2.1. E-commerce Concept

E-commerce is a relatively broad concept, and as such, it goes by various names. Common terms for it include online trade, paperless commerce, or e-business. However, the term e-commerce is the most widely used, recognized, and generally accepted convention to refer to the form of commerce conducted over the internet. Presently, there is no universally agreed-upon definition for e-commerce, as numerous international organizations have put forth their own interpretations of e-commerce. Broadly speaking, e-commerce definitions can be categorized into two groups:

The first group understands e-commerce in a narrow sense, where it involves businesses using electronic means and the internet to buy and sell their goods and services. Transactions can occur between businesses, such as the Alibaba e-commerce platform, between businesses and individual customers like Amazon, Tiki, and Lazada, or between individuals themselves on platforms like eBay. Some perspectives on e-commerce include the 1988 Asia-Pacific Economic Cooperation (APEC) Electronic Commerce Working Group's definition: "E-commerce is the conduct of business transactions using electronic means and digital technology." According to the U.S. Bureau of Statistics in 2000, "e-commerce is the

completion of any transaction via computer networks that involves the transfer of ownership or rights to use goods and services."

The second group interprets e-commerce in a broader sense, encompassing all business activities carried out through electronic means, represented by the acronym MSDP, which stands for:

M - Marketing (having a website or conducting promotional activities online) S - Sales (having a website with transaction support and contract signing capabilities) D - Distribution (distributing digital products online) P - Payment (online payments or through intermediaries like banks)

Some viewpoints on the broad definition of e-commerce include: "E-commerce encompasses commercial transactions related to organizations and individuals, based on the processing and transmission of digitized data through open networks (such as the Internet) or closed networks with gateways to open networks (such as AOL). Goods and services can be ordered over the network, with payment and delivery taking place either online or not." According to the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Commerce in 1996, the term "commerce" should be broadly construed to cover issues arising from any commercial relationships, whether contractual or not. Commercial relationships include the following: supply or exchange of goods and services; distribution agreements; commercial agency, factoring, leasing; construction; consulting, engineering; investment; financing, banking; insurance. With this perspective, the United Nations defined e-commerce as "the conduct of the entire business process, including marketing, sales, distribution, and payment."

E-commerce, known by various names such as "online trade," "paperless commerce," or "e-business," is still most commonly referred to and consistently used in documents and research by organizations and researchers.

E-commerce starts with the electronic buying and selling of goods and services through electronic means and telecommunications networks, particularly computers and the internet. As businesses advance, they integrate information technology into all aspects of their operations, from sales and marketing to payments, purchases, production, training, collaboration with suppliers, partners, and customers. At this stage, e-commerce evolves into electronic business (e-business), and businesses that extensively utilize e-commerce are referred to as e-businesses.

In a narrow sense, e-commerce involves the electronic buying and selling of goods and services through electronic means and telecommunications networks, particularly computers and the internet. In a broader sense, the European Union (EU) believes that e-commerce encompasses commercial transactions through telecommunications networks and electronic means. It includes indirect e-commerce (exchange of tangible goods) and direct e-commerce (exchange of intangible goods).

According to the Organization for Economic Co-operation and Development (OECD), e-commerce includes commercial transactions related to organizations and individuals based on the processing and transmission of digitized data through open networks (such as the Internet) or closed networks with gateways to open networks (such as AOL). The World Trade Organization (WTO) defines e-commerce as the production, advertising, sale, and distribution

of products bought and paid for over the internet, with delivery either via telecommunications or digitally.

In Vietnam, Decree No. 52/2013/ND-CP classifies two common forms of e-commerce: (i) e-commerce websites for selling goods and (ii) e-commerce trading platforms. E-commerce websites are electronic information pages established to serve some or all processes of buying and selling goods or providing services, from displaying and introducing products or services to contract signing, service delivery, and post-sale services. This can be considered a case where merchants create their own websites for selling their own products and services. E-commerce trading platforms, on the other hand, are e-commerce websites that allow traders, organizations, and individuals who do not own the websites to carry out some or all of the processes of buying and selling goods or services on them. In this case, traders establish e-commerce trading platforms and permit other users to post information and conduct transactions on the platform.

In summary, although there are various interpretations of e-commerce worldwide, they generally agree that e-commerce involves business activities and the exchange of commercial information among businesses, between businesses and individual customers, between businesses and government regulatory authorities, and among government regulatory authorities through electronic means, taking place over the Internet.

2.2. Current Situation of E-commerce Development in Vietnam

Alongside the rapid advancement of information technology, primarily driven by the growth of the internet, e-commerce in Vietnam has witnessed remarkable development in terms of scale, quantity, and quality.

In terms of scale and the pace of e-commerce growth: Following the COVID-19 pandemic, e-commerce in Vietnam continued to grow steadily and robustly in 2022 and the subsequent years. The Vietnam E-commerce Association (VECOM) made this prediction based on surveys of thousands of businesses nationwide and the flexible adaptability of businesses and consumers during the fourth wave of the COVID-19 pandemic.

During the past two years, which were the peak periods for e-commerce due to the pandemic, Vietnam experienced two waves. The first wave occurred during the initial outbreak of COVID-19 in 2020. The second wave of e-commerce took place from June to September 2021, coinciding with the fourth COVID-19 wave. Throughout these two waves, the entire economic and social activities were hampered, and e-commerce businesses were significantly impacted. However, many merchants made efforts to shift to digital platforms to seize new business opportunities. Simultaneously, online consumers increased both in quantity and quality. The second wave, combined with the first wave, accelerated the rapid and sustainable development of e-commerce.

According to the Ministry of Industry and Trade's report, Vietnam's e-commerce revenue in 2021 reached an estimated \$13.7 billion, a 16% increase compared to 2020, accounting for 6.5% of the country's total retail revenue. Statistics from the General Statistics Office indicate that in 2022, e-commerce in Vietnam maintained a growth rate of over 25% and reached a scale of over \$20 billion. Hanoi and Ho Chi Minh City are the two leading cities in the country in terms of e-commerce growth. According to the Vietnam E-commerce Association's report, Ho Chi Minh City continued to lead the Vietnam E-commerce Index 2022 with a score of 90.6.

Hanoi ranked second with a score of 85.9, trailing Ho Chi Minh City by 4.7 points. Danang ranked third with a score of 36.6, significantly behind Ho Chi Minh City and Hanoi. The average score for this year's index was 20.4. However, there is still a considerable gap between the two economic centers, Hanoi and Ho Chi Minh City, and the rest of the provinces and cities, indicating significant potential for e-commerce development in rural areas.

Notably, the e-commerce growth rate has continued to increase in recent years despite the impact of the COVID-19 pandemic. Many localities across the country implemented disease prevention measures and social distancing. Nevertheless, the e-commerce growth rate has been maintained and even shows an increasing trend. People and businesses have gradually become accustomed to and quickly adapted to e-commerce transactions. Many individuals have shifted from traditional in-person purchases and transactions to indirect transactions through e-commerce platforms, as well as through digital platforms like Facebook, Zalo, YouTube, and Messenger. Many commercial contracts are now executed through online communication platforms such as Zoom and Google Meet. In general, the purchasing habits of Vietnamese consumers have positively changed. While they were previously more accustomed to traditional face-to-face transactions, where they could physically handle and try out products, they have gradually embraced and favored online shopping. The trend of online shopping is becoming increasingly common among the population, spreading from urban to rural areas, from lowlands to mountainous regions. E-commerce promotion is becoming a trend, and products and goods are not only introduced and promoted on major e-commerce platforms but also on business and individual websites, as well as by suppliers, customers, and partners. The geographical distance and space have been narrowed, bringing convenience to all participants in e-commerce.

According to data from the Vietnam E-commerce Whitepaper for 2021, the value of shopping and the number of shoppers participating in e-commerce transactions on e-commerce websites in Vietnam have developed year by year. Specifically, the number of online shoppers on e-commerce platforms in Vietnam in 2020 increased by 1.5 times compared to 2016. Correspondingly, the average spending per shopper in 2020 also increased by 1.41 times compared to 2016.

With the pandemic situation in Vietnam being controlled and business and commerce returning to a normal state, this growth trend is expected to continue and even accelerate further.

Regarding the types of goods traded on e-commerce websites: According to the Vietnam E-commerce Whitepaper, the main categories of goods that are purchased the most are as follows: Food items (accounting for 52%); Clothing, Footwear, and Cosmetics (accounting for 43%); Household appliances (accounting for 33%),... The majority of respondents (63%) believe that the main reason they choose a website/application for transactions is based on reviews from reputable sources such as friends, family, or internet reviews (Figure 3).

In terms of market segmentation: The e-commerce market in Vietnam is currently dominated by foreign businesses. Notably, some Vietnamese businesses that started out as domestic enterprises have been bought by foreign entities or have foreign entities holding controlling stakes. For example, Tiki was originally a Vietnamese platform, but by the end of 2020, foreign capital accounted for nearly 55% of the platform, and by 2021, 90.5% of the shares were transferred to Tiki Global, a Singaporean entity. Consequently, Tiki became a Singaporean

company. Similarly, Sendo started as a Vietnamese business, but by the end of 2020, foreign capital had risen to over 65%.

Therefore, among the four largest e-commerce platforms in the current Vietnamese market, three of them have foreign investments. The dominance of foreign e-commerce platforms is evident through their website traffic. According to February 2022 statistics, Shopee had a total of 78.5 million visits, Lazada had 14.8 million, Tiki had 14.1 million, and Cho Tot (Vietnam) had 12.7 million. In the ranking of mobile shopping applications (Android, iOS) in Vietnam, Shopee is also the most widely used app, followed by Lazada and Tiki.

Regarding legal policies: Recently, the government has issued new laws aimed at protecting consumer rights. Specifically, according to the new regulations in Article 1 of Decree No. 85/2021/ND-CP, information about goods and services on e-commerce websites must be detailed by the providers. This effort is intended to minimize fraudulent activities and illegal sales on e-commerce platforms, providing peace of mind to consumers. However, in practice, some penalties are still not stringent enough, and the risk of illegal data collection on the internet remains significant.

In general, the development of e-commerce in Vietnam has seen positive changes in terms of scale, quantity, quality, and structure, with a high growth rate contributing to changing the economic and social landscape of the country. However, alongside these positive results, e-commerce in Vietnam still faces limitations that need further improvement.

On September 25, 2021, the government issued Decree No. 85/2021/ND-CP, amending and supplementing some provisions of Decree No. 52/2013/ND-CP dated May 16, 2013, on e-commerce, effective from January 1, 2022. In order to timely guide the implementation of Decree No. 85/2021/ND-CP, the Ministry of Industry and Trade issued Circular No. 01/2022/TT-BCT on January 18, 2022, amending and supplementing some provisions of Circular No. 47/2014/TT-BCT dated December 5, 2014, on the management of e-commerce websites, and Circular No. 59/2015/TT-BCT dated December 31, 2015, on the management of e-commerce activities through mobile applications.

Regarding administrative sanctions for violations in e-commerce activities, on January 31, 2022, the government issued Decree No. 17/2022/ND-CP amending and supplementing some provisions of decrees related to administrative penalties in various areas, including e-commerce activities, aimed at enhancing enforcement of the law.

On May 15, 2020, the government issued Decision No. 645/QĐ-TTg, approving the overall plan for the development of national e-commerce for the period 2021-2025. This policy provides comprehensive solutions and specific resources to support the development of the e-commerce market over the next five years. The legal framework for e-commerce activities is increasingly being perfected to meet the requirements of development, especially in the context of rapid and robust growth of e-commerce in Vietnam, which plays a larger role in the domestic trade system and builds trust among consumers, as well as ensuring the state's management role.

According to the e-Conomy SEA 2021 report by Google, Temasek, and Bain & Company in 2022, Vietnam's digital economy is growing at the fastest rate in Southeast Asia, with the total value of goods expected to increase by 28% from \$18 billion in 2021 to \$23 billion in 2022. With a growth rate of 31% in the 2022-2025 period, Vietnam's digital economy is projected to reach \$49 billion in 2025 and a record-breaking \$120-200 billion by 2030.

According to the report by the E-commerce Metrics platform, from the beginning of the year until the end of November 2022, the revenue of the four largest e-commerce platforms in Vietnam, namely Shopee, Lazada, Tiki, and Sendo, reached VND 135,000 billion. Despite having substantial revenue, the market share of these e-commerce platforms varies significantly. Specifically, Shopee accounts for a whopping 73% of the total revenue of the four platforms in 2022, with approximately VND 91,000 billion, while Lazada, the second-largest, has around VND 26,500 billion, equivalent to a 21% revenue market share. Notably, the two Vietnamese e-commerce platforms, Tiki and Sendo, only account for 5% and 1% market share, with revenue of VND 5,700 billion and nearly VND 1,000 billion, respectively. In 2022, TikTok Shop, an integrated online shopping feature within the TikTok social media app, has seen a resurgence. According to Metric's statistics for November 2022 alone, TikTok Shop's sales reached VND 1,698 billion, with 13 million products sold and 32,000 sellers generating orders. TikTok Shop's monthly revenue now equates to 80% of Lazada's revenue in the same period and is four times the revenue of Tiki.

The 2022 White Paper published by the Department of E-commerce and Digital Economy (Ministry of Industry and Trade) reveals the following:

- For consumers participating in e-commerce: The average number of goods/services consumers shop online of a person during the year: Less than 10 products/services (accounting for 29%); From 10 to 20 products/services (34%); From 20 to 50 products/services (18%); Over 50 products/services (19%). The value of goods consumers shop online of a person during the year: Less than 2 million VND (25%); From 2 to 5 million VND (32%); From 5 to 10 million VND (19%); Over VND 10 million (24%).

Criteria consumers are interested in when shopping online: Prestige of websites and e-commerce applications (accounting for 74%); Fast and flexible delivery according to customer booking schedules (57%); Multiple promotions (56%); Cheaper than in-store purchases (54%); Diversified goods, always available (48%); Genuine, quality goods (47%); Easy order tracking (42%); Easy and user-friendly website and application experience (34%); Customer service provides timely, good-faith support (30%); Personal information is kept confidential (25%); There was a livestream of product introductions (14%).

The group of 10 most commonly traded consumer goods and services online are: Clothing, shoes and cosmetics (accounting for 69%); Household appliances (64%); Technology and electronics (51%); Books, stationery, flowers, gifts (50%); Food (44%); Air, train, car tickets (27%); Hotel/tour bookings (25%); Movie and music tickets (22%); Watch movies online (20%); Online consulting and training services (17%)

- For e-commerce application business criteria: 42% of enterprises own websites in 2020; 43% in 2021; Enterprises build websites: 34% build their own websites; 66% hire website builders. Average time of customers when accessing e-commerce websites mobile versions/sales applications of enterprises: 36% stay less than 5 minutes; 36% from 5 to 10 minutes; 14% from 10 to 20 minutes; 14% over 20 minutes.

Situation of using digital signatures, contracts and e-invoices: 72% of enterprises use e-signatures; 73% of enterprises use e-invoices; 42% of enterprises use e-contracts.

Online support features: 92.8% of e-commerce websites and mobile applications have online support; Forms of user support on websites and mobile applications: Phone/hotline (91.6%); Online counseling/chat (62.6%); Email (59.2%); Other forms (4.3%).

Social networks integrated on websites and mobile applications: 65.9% of websites and mobile applications have integrated social networks; The most commonly integrated social network on e-commerce websites/applications: Facebook (accounting for 62.1%); Zalo (29.3%); Twitter (6.6%); Instagram (6.2%); Other (3.8%); Tiktok (1.8%); Viber (0.9%); Telegram (0.5%).

Methods of transporting goods used by enterprises: 69% of enterprises transport themselves; 59% use third-party services; 2% of other methods.

However, many businesses in Vietnam still struggle to apply information technology and e-commerce effectively, and some are not ready to implement broad e-commerce initiatives across various platforms. This is a common weakness among Vietnamese businesses. The application of IT and e-commerce to business operations is a necessity that all businesses must adopt sooner or later to achieve national digital transformation goals.

Additionally, most of the leading e-commerce platforms currently operating in Vietnam are provided by foreign businesses across borders, such as Facebook, Google, TikTok, Agoda, or directly invested by foreign businesses like Shopee, Lazada, Grab, and Traveloka, or built and operated by Vietnamese businesses with relatively high foreign capital contributions like Tiki, Sendo, Momo, and VNPay. To accelerate the rapid and sustainable development of e-commerce, it is essential to attract more investment capital into e-commerce platforms.

While domestic investment sources for e-commerce are limited, their effectiveness in some cases remains suboptimal. This underscores the importance of focusing on e-commerce and entrusting relevant state management agencies to build and operate e-commerce platforms. The funding for building and operating these platforms primarily comes from the state budget. As of 2022, most of these locally established e-commerce platforms are not operating efficiently, with low transaction numbers, poor product quality, outdated technology, limited product information updates, and a lack of supporting services such as marketing, payment processing, and order completion.

3. Barriers to the Development of E-commerce

Alongside the rapid growth of e-commerce in Vietnam in recent years, this market also faces several barriers, which are both general and specific in nature:

Lack of Trust:

According to a 2018 report by EVBN, the lack of trust remains the most significant barrier to the development of e-commerce in Vietnam. This lack of trust can manifest in various aspects of e-commerce transactions, including concerns related to product quality, customer service, data protection, bank fraud, and unfulfilled deliveries. This trust deficit originates from the relatively immature e-commerce market in Vietnam and ongoing limitations in the infrastructure supporting these activities. E-commerce only began emerging in Vietnam a little over 13 years ago. Initially, it was in its infancy, and the trust of consumers and businesses in this sector still faces certain limitations. It was only in 2015, after a period of ten years from 2006 to 2015, marked by widespread e-commerce adoption, that a significant number of people and businesses started engaging in online buying and selling.

Dominance of Cash On Delivery (COD) Payments:

Despite the strong growth of e-commerce in Vietnam, electronic payment methods still face limitations. The majority of Vietnamese people are accustomed to paying in cash, and many consumers are hesitant to trust financial organizations with their money and have concerns about the security of their financial information. Therefore, credit cards and online banking are not widely adopted, especially in rural areas and among older generations. Additionally, many consumers perceive credit card fees and online banking transaction charges as unnecessary expenses. The prevalence of cash-on-delivery (COD) preferences for payment leads to a high order cancellation rate and lower profitability for e-commerce businesses. This cultural preference hampers the growth of e-commerce in Vietnam.

Limited Logistics Infrastructure:

In Vietnam, e-commerce businesses typically need to work closely with third-party logistics providers to meet the regular demands of their customers. However, both e-commerce businesses and third-party logistics providers still face infrastructure limitations. Delivery failures, delayed deliveries, and high logistics costs are common issues. According to a 2019 survey by VECOM, most of these logistics companies' warehouse capacities do not meet real-world needs, leading them to rely on external storage. Moreover, warehouse management technology is not advanced, with only 36% of companies having online warehouse management systems connected to customers. Consequently, warehousing and inventory management costs remain high. Furthermore, the cost of delivery as a percentage of the order value is also high, with every second business surveyed having a ratio of 20% or higher. Therefore, investing in technology and logistics infrastructure is crucial for addressing these current challenges and facilitating the development of e-commerce in Vietnam.

Limited and Inconsistent Policies and Regulations:

Currently, many legal documents in Vietnam contain provisions related to personal data protection, such as the Cybersecurity Law, Civil Code, Penal Code, Information Technology Law, and e-commerce-related decrees. These legal frameworks are essential for e-commerce. However, the effectiveness of enforcing these policies is still low. Illegal activities related to data collection, use, dissemination, and unauthorized online business activities are common, contributing to the erosion of consumer trust in e-commerce in Vietnam.

Moreover, cross-border e-commerce, a potentially high-growth area, faces numerous policy and legal challenges both in terms of exports and imports. For example, e-commerce platforms often struggle to acquire foreign currency for cross-border payments because they must comply with extensive documentation requirements under the law. Additionally, the costs associated with obtaining and processing these documents are high compared to the value of the products. The current reliance on paper-based documents also lacks transparency in the payment process, which is incongruent with the modernization and automation inherent in e-commerce activities. In summary, while e-commerce in Vietnam has seen significant growth, it continues to face challenges related to trust, payment preferences, logistics infrastructure, and regulatory frameworks. Addressing these barriers is essential for realizing the full potential of e-commerce in Vietnam's digital economy.

4. Trends in E-commerce Development

Continuous Growth in Mobile Shopping:

As previously mentioned, Vietnam has approximately 43.71 million smartphone users, according to Statista (2019). There has been a surge in mobile commerce (m-commerce) since 2015 when e-commerce businesses heavily invested in mobile-friendly versions of their websites. Thus, the trend of increased shopping on mobile platforms is inevitable. This trend is further fueled by the continuous expansion of 4G mobile network coverage in Vietnam.

Proliferation of E-commerce Platforms:

E-commerce platforms are considered effective channels with cost-efficient options for small and medium-sized businesses, individual entrepreneurs, and individuals. E-commerce platforms allow merchants, organizations, and individuals who do not own websites to engage in part or all of the buying and selling processes. According to data from the Department of E-commerce and Digital Economy (2020), Vietnam had a total of 999 registered e-commerce platforms in 2019, more than triple the number in 2014 (283 platforms). This trend of increased e-commerce platform usage is expected to continue as e-commerce businesses continue to invest in this format. This is a global trend in the development of e-commerce due to the advantages offered by e-commerce platforms.

Rapid Development of E-commerce Logistics:

E-commerce logistics services provide favorable conditions and support for the seamless flow of goods throughout the transaction cycle, from ordering to payment, packaging, delivery, payment tracking, and post-sales services. Significant investments in e-commerce logistics are expected to further drive the growth of the e-commerce sector. As long as e-commerce in Vietnam continues to grow at its current pace, e-commerce logistics is likely to develop rapidly. According to Statista's forecast (2019), the value of the e-commerce logistics service market in Vietnam is projected to reach 801 million Euros by 2022, an increase of over 800% compared to approximately 90.1 million Euros in 2018.

Strong Growth in Cross-border E-commerce:

According to EVBN (2018), the number of Vietnamese user accounts on Alibaba was 500,000 in 2016, with an additional 100,000 accounts added each year since then. Vietnamese users consume more foreign goods and services than foreign users consume Vietnamese goods and services. The trend can be explained by three factors: first, foreign goods are more diverse and better able to meet the needs of domestic customers; second, Vietnamese e-commerce platforms often have lower levels of trust compared to foreign e-commerce platforms; third, the cost of shipping goods from abroad to Vietnam is relatively low.

These trends are expected to make significant contributions to the overall development of the Vietnamese economy. Therefore, Vietnam needs to overcome current barriers and adopt appropriate development strategies to seize the opportunities of integration and harness the full potential of this promising sector of commerce.

5. Some Sustainable Development Solutions for E-commerce in Vietnam

Given the current state of e-commerce development in Vietnam, in order to continue improving and promoting e-commerce growth in the future, it is essential to implement several key solutions:

Firstly, the legal framework for e-commerce development needs to be improved. E-commerce is a relatively new field in Vietnam, and its complexity, along with the convergence of the physical and virtual worlds, poses challenges for policymakers in establishing an appropriate and comprehensive legal framework. Therefore, enhancing policies and legislation related to e-commerce, creating an ecosystem for e-commerce and the digital economy is crucial for guiding future e-commerce development. First and foremost, policies and laws should create a legal environment that fosters e-commerce development, ensures legitimate and fair benefits for e-commerce participants, promotes healthy competition, preserves the traditional cultural identity while embracing global cultural aspects, and aligns with international trade agreements and regulations that Vietnam is a member of. This includes strengthening state management of e-commerce, proactively preventing trade fraud, negative behaviors, and customer deception in e-commerce, combating tax evasion, promoting creativity, supporting businesses in applying science, technology, and technical knowledge in e-commerce activities, and continuously reforming and modernizing administrative procedures to create a business-friendly environment that attracts domestic and foreign investments.

Secondly, the information technology infrastructure needs to be improved. To ensure the security of consumer information, it is essential to enhance, synchronize, and upgrade the information technology infrastructure. A robust IT infrastructure, particularly high-speed internet connections, can facilitate seamless, fast, and convenient e-commerce transactions. Achieving this requires the concerted effort of various stakeholders, including government ministries, departments, and local authorities, to build a comprehensive and synchronized infrastructure for future e-commerce development. This involves increasing public investment in the development of IT infrastructure to support e-commerce activities, encouraging and providing conditions for businesses to digitize, adopt IT in their e-commerce operations, and develop infrastructure and technologies that can adapt to the requirements of the Fourth Industrial Revolution. Additionally, it's essential to focus on developing IT human resources, regularly accessing and updating modern technology platforms, encouraging innovation in e-commerce technology and techniques, and establishing policies to protect intellectual property rights for inventions, innovations, and technology-related products.

Thirdly, businesses should actively enhance their brand reputation and post-purchase service quality. For businesses, investing in post-purchase customer support in e-commerce plays a vital role in retaining customers and receiving positive product reviews on e-commerce platforms. This, in turn, attracts new customers through word-of-mouth recommendations. By increasing customer loyalty, businesses can undoubtedly improve their conversion rates in e-commerce.

E-commerce is at the forefront of the digital economy, where advanced technologies of the Fourth Industrial Revolution (Industry 4.0) are widely applied to enhance business efficiency, modernize distribution systems, and improve the competitive capabilities of companies. The National E-commerce Development Plan for the 2021-2025 period is closely linked to strategies and policies for active participation in Industry 4.0, the direction of digital economic

development, and national digital transformation. Companies are the core force in implementing e-commerce applications, while the government plays a role in management, infrastructure development, and creating an environment for e-commerce growth. Therefore, the key solutions to focus on include:

Enhancing policies and mechanisms to meet the demands of e-commerce development in the context of Industry 4.0. This involves reviewing, supplementing, amending, and issuing new policies and legal documents to create conditions, promote, and support e-commerce activities and new business models based on digital technology.

Strengthening the capacity to manage and organize e-commerce activities, combating fraudulent trade practices, intellectual property infringement, and unhealthy competition in e-commerce.

Promoting e-commerce education and skills training for the general population and businesses to enhance their participation and utilization of e-commerce applications. This includes improving consumer awareness and readiness to deal with negative behaviors in e-commerce. Developing infrastructure and solutions to support electronic transactions, including payment integration in e-commerce and public services. Special attention should be given to the development of mobile payment facilities, e-wallets, QR codes, NFC technology, and POS systems.

Enhancing delivery and logistics infrastructure for e-commerce, incorporating new technologies into logistics operations.

Establishing systems for tracking, tracing, and controlling the circulation of goods based on electronic documents in commerce, including electronic invoices, electronic labels, electronic warehouse receipts, and other electronic trade documents.

Organizing annual e-commerce events to stimulate the domestic market and expand cross-border e-commerce activities, providing a platform for organizations and businesses to showcase the latest technologies and advanced e-commerce models for consumers to experience. These events should also promote the development of new e-commerce habits and skills.

Continuing support programs for digital transformation in both small and medium-sized enterprises (SMEs), encouraging the application of digital technologies to improve their production and business models. Researching and selecting priority industries and sectors for developing new technology applications in production and business.

Supporting businesses in efficiently distributing goods domestically and internationally at the lowest cost. Additionally, government agencies should provide plans to support export activities through cross-border e-commerce to promote more comprehensive and sustainable cross-border e-commerce activities, enabling Vietnamese companies to diversify their export channels in foreign markets.

6. Conclusion

This study has provided an overview of the fundamental concepts of e-commerce and highlighted the current situation of e-commerce in Vietnam. E-commerce is a model of buying and selling goods that has emerged and developed in Vietnam in recent years. The COVID-19 pandemic has contributed to shaping the online shopping habits of consumers. However, there

are still certain barriers, such as information security concerns, which make consumers hesitant when purchasing products on e-commerce platforms.

On the government side, continuing to improve and refine the legal framework for e-commerce remains a necessary action to create a healthy environment for both buyers and sellers in the digital environment. Additionally, enhancing technology infrastructure can facilitate smoother and easier e-commerce transactions.

From the perspective of businesses, it is essential to pay more attention to post-purchase customer care activities on e-commerce platforms to gain loyal customers who will recommend their products to others.

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