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The Role of ICT in Global Supply Chain Management

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Abstract
In today's economy, Supply Chain is a very important network to achieve the highest profit of manufacturers and businesses. Therefore, the flow of goods becomes the biggest concern of companies and business organizations. There has never been so much reliance on ICTs, and never have they been so appreciated." Digital technologies are an important part of building a better back for a safer, more connected world. and more sustainable for all - with a partnership between governments, private sector companies, universities, key regional and international organizations to take full advantage on that basis, the essay studies the current status of the role of ICT in global supply chain connectivity**.** global supply chain, thereby providing governance implications and proposing some solutions to limit risks for the global supply chain.

Keywords: Global Supply Chain, Vietnam, ICT, Electronic Transactions

1. Introductions

1.1 The need for ICT for global supply chains

ICT has an extremely important role, affecting our lives in many different aspects:
The role of ICT in life
ICT contributes to creating a globally connected society, eliminating language barriers, people can interact and communicate with each other quickly and efficiently through electronic devices such as phones, computers, tablets, laptops.
Applying ICT and digital transformation is no longer a necessary condition, but a mandatory condition if businesses want to develop faster and more sustainably. ICT offers the following benefits:

- Production automation, control, data storage.
- Fast, low-cost online transactions.
- Create many new and innovative products to meet market demand.
- High output, low price, easy to compete.

1.2 Current global supply chain situation

The structure of the supply chain, it can be seen that a supply chain consists of many interconnected entities. The term supply chain indicates a product supply link that moves from supplier to manufacturer, distributor, retailer and finally customer along the supply chain. A supply chain consists of the following basic actors:
Supplier: supplier is considered as an outside member, with unlimited production capacity. However, due to uncertain factors in the delivery process, suppliers may not be able to deliver raw materials to manufacturers on time. Suppliers can include both domestic and foreign suppliers selected by manufacturers depending on their supply capacity and reputation.
Manufacturers: include manufacturers of raw materials to produce products, using raw materials and processed products of other manufacturers to make products. Manufacturers (or manufacturers) are those who directly make products. They can also create intangible products such as music, software, entertainment games or designs. The current trend is that manufacturers of physical products are moving to cheaper parts of the world. More and more manufacturers in developed countries are focusing on the production of intangible products and services.
Distributors: are businesses that buy large quantities of products from manufacturers and distribute wholesale

products to customers, also known as wholesalers. The primary function of wholesalers is to coordinate fluctuations in product demand for manufacturers by holding inventory and performing a variety of business activities to find and serve customers. Distributors may be involved in the purchase of goods from the manufacturer to sell to the customer, sometimes simply acting as a product broker between the manufacturer and the customer.

Retailer: A person who stores goods in a warehouse and sells them in smaller quantities to customers. They always keep an eye on the needs and tastes of their customers. Retailers advertise products to customers, and combine reasonable prices, wide range of products, attentive service with convenience to attract customers' attention to their products. me.

Customers, consumers: are any individuals who perform the act of buying and using products. Customers can buy products to use or buy products in combination with other products and then sell to other customers.

2. Theoretical basis

2.1 Concept and structure of ICT

- **Concept**

ICT stands for Informatiom Communication Technology in English, which means information and communication technology. This is a phrase often used to describe a broader sense of the information technology industry.

It is a term to combine and increase the role of the two fields of communication and telecommunications (telephone network lines and mobile signals), intelligent building management systems and audio-visual systems in the field. modern information technology.

In addition, ICT is also a term to talk about all the means used to process information, share sound and images such as telephones, media, audio processing, network transmission and monitoring function.

- **ICT structure**

ICT includes all technical facilities used to process information and facilitate communication, including computer hardware and networks, communication mediators as well as necessary software.

2.2 Features and roles of ICT

- **Characteristic**

- The development of e-commerce is associated with and interacts with the development of ICT. E-commerce is the application of information technology in all commercial activities, for that reason, the development of information technology will promote e-commerce to develop rapidly, however, the of e-commerce also promotes and opens up many areas of ICT such as hardware and software for e-commerce applications, payment services for e-commerce, as well as boosting production in ICT fields such as computers, telecommunications equipment, and network equipment.
- In terms of form: e-commerce transactions are completely online. In traditional commercial activities, the parties must meet face-to-face to conduct negotiations, transactions and come to a conclusion. And in e-commerce activities, thanks to the use of electronic means connected to the global network, mainly using the internet, now the parties involved in the transaction do not have to meet each other face to face. but can still negotiate and transact with each other even if the parties to the transaction are in any country. For example, in the past, if you wanted to buy a book, you would have to go to the store to consult and choose to buy a book that you want. After choosing a book to buy, the reader has to go to the cashier to pay for that book. But now with the advent of e-commerce, just have a computer and the internet, through a few mouse clicks, readers do not need to know the face of the seller, they can still buy a book. books you want on online shopping websites like amazon.com; vinabook.com.vn
- Scope of operation: across the globe or the market in e-commerce is a borderless market. This shows that people in all countries around the globe do not have to travel to any place and still can participate in the same transaction by accessing commercial websites or accessing the internet. social networking sites.
- Participants: In e-commerce activities, there must be at least three participants. Those are the parties to the transaction, and it is indispensable for the participation of the third party that is the network service provider and certificate authority, who create the environment for e-commerce transactions. Network service provider. Network service providers and authentication agencies are responsible for transferring and storing information between parties participating in an e-commerce transaction, and at the same time they also confirm the reliability of the information in the transaction. Ecommerce.
- Unlimited time: Parties participating in e-commerce activities can conduct transactions 24 hours 7 days within 365 consecutive days wherever there is a telecommunications network and there are electronic media connected to these networks are highly automated vehicles that speed up the transaction process.
- In e-commerce, the main information system is the market. In traditional commerce, the parties must meet in person to conduct negotiations, transactions and sign contracts. In e-commerce, the parties do not have to meet each other face-to-face, but can still negotiate and sign contracts. To do this, the parties must access each other's information system or the information system of search solutions through the internet, extranet, etc. to learn information about each other from which to negotiate. sigh a contract. For example, now that commercial enterprises want to find partners around the world, they only need to go to search sites like google, yahoo or to e-commerce portals like ecvn.com or Korea's domestic e-commerce portals. is ec21.com.

- **Role**

- Expanding the market: With a much smaller investment cost than traditional trade, companies can expand the market, find and approach suppliers, customers and partners around the world. Expanding the network of suppliers and customers also allows organizations to buy at lower prices and sell more products.
- Reduce production costs: Reduce paper costs, reduce information sharing costs, printing costs, and sending traditional documents.
- Improve distribution system: Reduce inventory and delivery delay. The system of showrooms to introduce

products is replaced or supported by online showrooms, for example in the auto industry (GM, Ford Motor) saving billions of dollars in costs from reducing inventory costs.

- Going beyond time limits: Automating transactions via the Web and the Internet keeps business running 24/7/365 with no additional variable costs.
- Manufacturing on demand: Also known as the "Pull Strategy", attracting customers to the business by the ability to meet all customer needs. A good example is Dell Computer Corp.
- New business model: New business models with new advantages and value for customers. Model of Amazon.com, buy in groups or auction agricultural products online to exchanges.
- Increase the speed of launching products to the market: With the advantage of information and the ability to coordinate between businesses, it increases production efficiency and reduces the time to launch products to the market.
- Reduce communication costs: email is more economical than fax or traditional mail
- Reducing procurement costs: Through reducing administrative costs (80%); purchase discount (5-15%)
- Strengthening customer relationships: Through convenient online communication, relationships with intermediaries and customers are strengthened more easily. At the same time, the personalization of products and services also contributes to tightening customer relationships and strengthening loyalty.
- Updated information: All information on the web such as products, services, prices... can be updated quickly and promptly.
- Business registration fee: Some countries and regions encourage by reducing or not collecting online business registration fees.
- Other benefits: Enhancing corporate reputation and image; improve the quality of customer service; new business partners; simplify and standardize transaction processes; increase productivity, reduce paper costs; increase access to information and reduce transportation costs; increase flexibility in transactions and business activities.
- Going beyond the limits of space and time: E-commerce allows customers to shop anywhere, anytime for stores around the world
- Wider choice of products and services: E-commerce allows buyers to have more choices because it has access to more suppliers.
- Lower prices: Due to more convenient, easier and richer information, customers can compare prices between suppliers more conveniently and thereby find the most suitable price.
- Faster delivery of digitized goods: For digitized products such as movies, music, books, software.... the delivery is made easy via the Internet.
- Information is richer, more convenient and of higher quality: Customers can easily find information quickly and easily through search engines; At the same time, multimedia information (audio, images) helps promote and introduce products better
- Auction: An online auction model was born that allows everyone to participate in buying and selling on auction floors and at the same time can find and collect the items they are interested in anywhere in the world.
- E-commerce community: E-commerce business environment allows all participants to coordinate and share information and experiences effectively and quickly.
- "Meet all needs": The ability to automate allows to accept different orders from every customer
- Taxes: In the early stages of e-commerce, many countries encouraged by exempting taxes on online transactions
- Online activities: E-commerce creates an environment to work, shop, and transact... remotely, thus reducing travel, pollution, and accidents.
- Improve living standards: Having many goods and many suppliers will create pressure to reduce prices, thereby increasing the shopping ability of customers, improving living standards.
- Benefits for poor countries: Poor countries can access products and services from more developed countries through the Internet and e-commerce. At the same time, it is also possible to learn experiences and skills... Online training also helps these countries to quickly absorb new technologies.
- Public services are provided more conveniently: Public services such as health care, education, government public services... are carried out online at a lower cost and more convenient. Issuing of licenses issued online, medical consulting services.... are typical examples of success

3. Analytical methods and reasoning

3.1 Prove argument method

This is an argument using arguments, evidence and accepted facts to demonstrate the role of ICT in connecting the global supply chain.

The arguments in the article have been selected and analyzed, contributing to a higher persuasiveness for the article.

3.2 Analytical methods

This is a method in which the object is divided into many parts to dissect, analyze, and review the content comprehensively according to certain criteria and relationships.

Analysis helps the reader understand different aspects of the problem. Through symbolic images, the interrelationships make it easier for readers to visualize instead of dry, abstract subjects.

3.3 Explanation method

The article uses the explanatory method to explain, the concept of the global supply chain and its reality to make the reader understand and understand the problem properly. Simplicity is the use of words that are easy to understand and detailed to describe concepts that are difficult to imagine for the reader.

3.4 Comment method

In the article using the comment method to discuss, comment and evaluate the role of ICT in connecting the global supply chain, this method is objective and honest, expressing subjective opinions about perceptions. determined.

4. Analysis of the situation and risks of the global supply chain

4.1 Current status of e-commerce development in Vietnam

E-commerce activities in Vietnam are still in the early stages of development. However, in recent years, when e-commerce is popularized, Vietnam has implemented a number of e-commerce applications such as buying and selling goods and services, providing public services, although the results are not high. . E-commerce activities implemented in Vietnam are only formal due to limitations in technical infrastructure as well as people's awareness.

4.1.1 The promulgation of relevant laws and legal documents

In the context that the law-making work in 2005 was promoted to meet the requirements of international economic integration, legal documents related to e-commerce were also initially formed and supplemented. figs in Vietnam:

*** Law on Electronic Transactions**

On November 29, 2005, the Law on Electronic Transactions was passed and took effect on March 1, 2006. The Law provides for data messages, electronic signatures and authentication of electronic signatures, conclusion and performance of electronic contracts, and electronic transactions of state agencies; security, safety, protection, confidentiality in electronic transactions; settle disputes and handle violations in electronic transactions.

The Law on Electronic Transactions has recognized that data messages are not denied legal value, have the same value as documents, originals and as evidence. The law also recognizes electronic contracts and types of messages represented as data messages.

Although it has created a legal foundation for electronic transactions in commerce, the Law on E-Transactions still cannot express all the unique characteristics of e-commerce, so there is a need for a guiding document. detail.

*** Commercial law**

The Commercial Law (amended) was approved by the National Assembly on June 14, 2005 and took effect from January 1, 2006. The new Commercial Law has expanded the scope of regulation compared to the 1997 Commercial Law, not only covering the purchase and sale of goods, but also regulating the provision of services and trade promotion. Many new types of commercial activities were also mentioned such as logistics services, franchising, multi-level selling, buying and selling through the commodity exchange, etc..

Commercial Law is the foundational legal document for commercial activities, including e-commerce. Article 15 (Principles of recognizing the legal value of data messages in commercial activities) of the Law notes: "In commercial activities, data messages satisfy the conditions and technical standards according to the provisions of law. provisions of the law shall be recognized as having the same legal validity as the document."

In addition, another provision related to e-commerce is Clause 4, Article 120 (Forms of displaying and introducing goods and services), which considers "Displaying and introducing goods and services". on the Internet" is a form of displaying and introducing goods and services.

*** Social legal**

The Civil Code, passed by the 11th National Assembly, at its 7th session on June 14, 2005 and took effect on January 1, 2006, is an important legal document regulating the rights and obligations of civil servants. subjects participating in civil relations. Clause 1, Article 124 "Forms of civil transactions" states that data messages have the same value as documents: "Civil transactions through electronic means in the form of data messages are considered written transactions. copy."

Besides the provisions on civil transactions, property and forms of ownership, the Civil Code devotes an important content to civil contracts. The provisions on civil contracts are the foundation for the law on contracts in general, including commercial contracts.

The Civil Code provides specific provisions on the cases of entering into, amending, performing and canceling contracts. Accordingly, the time of entering into a contract is the time when the offeror receives a reply accepting the contract. For a written contract, the time of signing is the time when the last party signs the document. The place for entering into a civil contract shall be agreed upon by the parties, if there is no agreement, the place for entering into a civil contract is the place of residence of the individual or the head office of the legal entity that has made the request for the conclusion of the contract. . These are important concepts to take into account when developing legal documents related to entering into contracts in the electronic environment.

* **The laws of import and export**

The Customs Law (amended) was approved by the National Assembly on June 14, 2005 and took effect from January 1, 2006. Compared with the 2001 Customs Law, this law adds a number of provisions to pave the way for the application of electronic customs (e-customs declaration sequence, declaration location, electronic customs dossier). Article 39 stipulates customs procedures for goods imported and exported by e-commerce.

The Customs Law is a legal document that actively contributes to the implementation of e-government and e-commerce in the current period.

*** Intellectual property law**

Approved by the 11th National Assembly, 8th session on November 29, 2005 and took effect on July 1, 2006, the Intellectual Property Law represents a step forward in perfecting the legal document system. laws protecting intellectual property rights.

The Intellectual Property Law has a number of provisions related to e-commerce, for example, regulations on acts that are considered infringing copyright and related rights in the electronic environment: intentionally destroying or making invalidate technical measures taken by copyright or related rights holders to protect their rights; intentionally delete or change the electronic rights management information contained in the work; remove or change the rights management information in electronic form without the permission of the relevant right holder. Although there are no specific regulations related to the field of e-commerce, the principles in the Intellectual Property Law can be applied to this new environment. For example, unauthorized use of a trademark on the Internet is still considered an

infringement of the owner's exclusive rights to the trademark as it would in a traditional environment.
However, with the rapid development of e-commerce in Vietnam in the near future, along with the difference in the nature of intellectual property objects in the electronic environment, for example: copies (works protected under copyright law) in an electronic environment that is indistinguishable from the original, the use of a meta tag that is a trademark of another....) may cause application the law of the judicial authorities will be difficult. Therefore, in the coming time, the promulgation of a number of sub-law documents governing intellectual property relations in e-commerce is essential to create transparency and promote the development of commerce. electronic.

*** Law on Information Technology**
Article 23 "Setting up a website" stipulates that organizations and individuals have the right to set up websites and must register with a competent state agency. While the similar regulation previously issued by the Ministry of Culture and Information has not been lifted, this regulation (even if it is just "registration" and not "ask for permission") is still an annoying procedure. It is worthwhile and difficult to apply in practice, especially when the need to set up a website for business activities is increasing day by day.
In particular, the Law on Information Technology dedicates a whole section on e-commerce, including Articles 32 to 40, which contains provisions on the rights and responsibilities of organizations and individuals providing information, products and services. products and services in the network environment (Article 34), sales websites (Article 35), responsibility for providing information for the conclusion of contracts in the network environment (Article 36), ordering in the network environment (Article 36). 37), advertising in the network environment (Article 39).
The above regulations have contents that directly refer to e-commerce activities, but are still incomplete because they cannot cover all issues of e-commerce while there are contents related to the scope of e-commerce. regulation of other legal documents, for example advertising, payment, or personal information protection (Article 17). In this regard, at a number of meetings and seminars, representatives of the Ministry of Trade as well as some other agencies said that the Law on Information Technology should not be too detailed for each application area such as e-commerce. death, telemedicine, online training but should only provide general provisions to encourage these activities to develop.

*** Other legal documents**
+ Decree on e-commerce
+ Decree on digital signatures and electronic authentication
+ Documents on electronic payment
+ Decree 101/2001/ND-CP dated June 31, 2001 detailing a number of articles of the Customs Law

4.2 Impacts of ICT
4.2.1 Impact on marketing activities
E-commerce is the application of electronic means and telecommunications networks to conduct commercial activities, which is mainly the conduct of commercial activities through websites. Therefore, marketing activities in e-commerce have many changes compared to traditional marketing activities. In traditional commercial activities, mainly implementing "push" marketing strategies, in e-commerce activities mainly implementing "pull" marketing activities. Goods in e-commerce have high personalization because through the website enterprises can directly communicate with a large number of customers at the same time, so businesses will know the tastes of consumers. as well as changes in consumer tastes to create the best quality products that best meet consumer needs. This means that the product life cycle will be shortened. In addition, e-commerce also helps businesses reduce distribution costs and selling costs to the lowest level by eliminating intermediaries involved in marketing activities. Especially for digital goods, the purchase, sale, exchange and payment take place at the same time even though the buyer and seller are in different countries around the world.

4.2.2 Changing business model
On the one hand, traditional business models are under pressure of E-commerce to change, on the other hand, completely new e-commerce business models are formed. Eg:
Dell is known as one of the most successful manufacturers in the world. In 1996, Dell began selling computers online. In 2000, the company was selling over 50 products a day online. Dell was the first company to build a custom manufacturing (BTO) system. With the new business model, Dell has given customers more choices with the best products, and highly personalized products. Thanks to the application of internet into business activities, the company now sells directly to the end customer without having to use intermediary distributors.

- Amazon.com: is the world's first e-commerce business. Right from the first day of establishment, the company has built for itself a business model that is selling completely online on the Internet (click and motor). Instead of building physical stores, the company built virtual stores on its website amazon.com, where consumers can search for product information, make purchases. and pay at the company website. Amazon.com is considered the largest retail website in the world today and it has a great influence on most retail stores.
- Cisco: is the leading manufacturer of connection equipment, routers and switches in the world. In 1994, the company launched online sales. The company also built a business model similar to Dell that of custom manufacturing by implementing an online support system called “Cisco Connection Online” - CCO. This online support service is of great interest to the company's customers and partners. 85% of online customer service is implemented through this system.

4.2.3 Impact on production
E-commerce has transformed manufacturing from mass production to just-in-time and on-demand production. In e-commerce, the production system is integrated with the financial system, marketing operations, and other functional systems inside and outside the organization. Now, thanks to an e-commerce application, businesses can guide customers to order according to their individual needs in just a few seconds using ERP software on the website. The life cycle of some products has been shortened by about 50% thanks to the e-commerce application. Eg:
- Li&Fung is an e-commerce enterprise mainly following

the B2B model, specializing in the production of clothing, textiles, crafts, toys, sportswear and home products. The success of Li&Fung today is due to businesses that know how to apply e-commerce in the supply chain to create more added value in a borderless production environment. The company was the first company to deploy a global intranet for production activities in 1995. The implementation of the intranet has helped enterprises to buy and ship raw materials at the right time, and check the production process online. through digitized images recorded from the factory. In addition, in 1997, the company built an extranet to connect the company with partners and customers. The company's extranet allows for online product development as well as online order tracking, eliminating paperwork.

Ford is the second largest automobile manufacturing company in the world, operating in more than 40 countries with 114 manufacturing plants and more than 350,000 employees. The company has changed business activities by applying high technology and internet in production activities as well as distributing products and services to customers in the fastest, best and most efficient way. . By using the website to communicate and communicate with suppliers and distributors, the company has saved about 25% of the car cost. Ford also allows customers to design vehicle models on the web and then build on those designs.

4.2.4 Impact on financial and accounting activities

E-commerce is the application of information technology to all commercial activities, for that reason, financial and accounting activities in this field have their own characteristics. The biggest difference between financial and accounting activities in the field of e-commerce compared to the traditional ones is mainly in the electronic payment system. Now the traditional payment system is no longer effective with e-commerce operations, instead it is the implementation of online payment solutions. Online payment solutions have helped customers and businesses save a lot of costs and time and speed up transactions in financial and accounting activities. Currently, in the field of e-commerce, many new terms such as electronic wallets, electronic money have appeared in the field of e-commerce. For example, in the banking sector, many new activities have been established and developed such as: banking online shopping, online credit card payment, smart card payment, mobile banking….

4.2.5 Impact on foreign trade

E-commerce has a feature that is a global market, without borders, so foreign trade activities in this period have some differences compared to previous foreign trade activities. Thanks to the application of e-commerce, it is easier and easier to conduct foreign trade activities, especially for import and export activities of digital goods such as e-books, music, movies, photos ....or services such as financial services, transportation services... In addition, e-commerce has helped businesses reduce a lot of costs and time including travel costs, transaction costs, expenses. intermediaries fees. Currently, e-commerce is considered an effective tool for conducting import and export activities of small and medium enterprises, especially newly established enterprises. Deploying e-commerce, or here is the use of the internet in business activities, has helped businesses quickly access all markets around the globe at the lowest cost without having to go through any channels. which intermediary.

The US is the first country to conduct e-commerce activities and has obtained great benefits in promoting foreign trade activities. Currently, US e-commerce activities account for about four-fifths of all e-commerce transactions globally. Meanwhile, in 2007 the total import and export turnover of the US accounted for about 1/9 of the total import and export turnover of the whole world. It can be seen that e-commerce has a great impact on foreign trade activities of the United States.

4.2.6 Impact of E-commerce on industries

a. The impact of e-commerce on the music and entertainment industry

In the above model, the structure and process of the music industry remains largely the same, with most of the distribution done through retail, and the marketing of the music listener communities through the media channels. pine. The most obvious advancement has been in the retail distribution of e-commerce apps with compressed music discs for sale online but delivered by traditional methods (via postal service or express delivery). Online retailers also provide additional services to assist in finding and providing information about artists via web or email to customers.

However, along with the strong development of technology, the internet has had a stronger impact on the music industry. With the internet, there are 2 types of computers, the server and the client. Servers (distributors, music product suppliers) to store data and information, clients (consumers) for users to search and look up information. However, now, this boundary has blurred: The first is broadband transmission technology, always in a connected state. With a fixed IP address, that computer can become a server under certain circumstances. The second is peer-to-peer data sharing technology that is also capable of turning a most ordinary personal computer into a server. This freedom and openness has made the information revolution in recent years. The structural model of the music industry changes.

The first change is that the only direction from production to distribution of information has changed, artists, consumers and parts of the music industry have merged into one network with the help of internet technology.

The second change is that the functions of production, distribution, and marketing have "become" applications, more neutral, and less subject to interrelationship uncertainty. cooperation between artists and businesses in the music industry. Technology became a common resource for all involved in the industry and P2P technology was also adopted internationally, the production of fan-made products also increased. The use of software that downloads and compresses files from CDs and DVDs also encourages the music industry to find solutions to digital property rights protection (DRM) technology that is technically sound.

b. The impact of e-commerce on the education industry

With the development of electronic technology and especially the birth and development of the internet, the education industry has provided new forms of training: in addition to direct training in the classroom or traditional distance learning. There is also an electronic training form (e-learning). E-learning can be online education or blended learning.

E-training is the use of electronic media (such as radio, television, CD/DVD, computer or email, web) to conduct forms of training. Online training is a part of e-learning which mainly uses the internet to deliver online courses which allow for online exchange between teachers and learners. Mixed training is a combination of the above forms, although in reality it is mainly a combination of online training and face-to-face instruction.

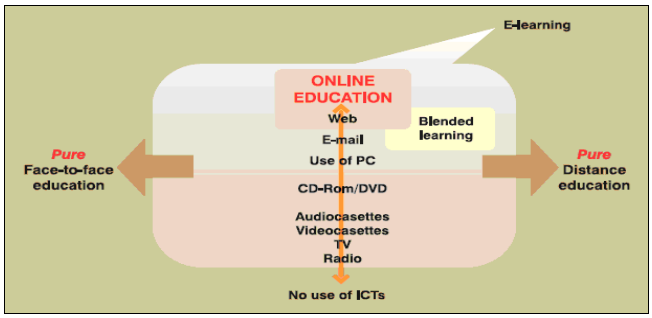

Fig 1: Online training model

Online training has thrived. The reason is that it is internet technology that creates motivations for the investment and development of this form of training:

- Improve training service delivery capacity: The Internet allows access to a wider range of learners in more remote geographical areas, where traditional training services are difficult to obtain.
- Improve learning quality: Online learning allows enhancing the ability to personalize with each learner, being more flexible and increasing the choice for learners, thereby improving the quality of learning.
- Enhancing accessibility: E-training can provide effective solutions to teacher access problems.
- Cost-effective: E-training has the potential to increase service delivery capacity and increase student access, thus potentially saving costs (providing services to multiple learners). at a lower cost) through reducing costs per trainee, thereby improving the financial position of the training organization. However, the economies of scale of online training in practice are still not clear because the initial investment in the infrastructure is quite high, and the initial step takes a long time.
- Enhance the ability to acquire skills and information technology infrastructure, thereby promoting access to the knowledge economy.
- Marketing and competition strategies: Because online training is the future, training service providers must invest in infrastructure for online training in order to compete and survive.
- Currently, many universities in the world, both in developed and developing countries, have provided online training services: University of Monterrey (Mexico); Mauritius University; National University (Lesotho); Indira Gandhi Open University (India); UK Open University; LEAD (UK); UN University (UNCTAD TrainForTrade); Finnish Virtual University; UK eUniversity; Malaysia University of Science and Technology; Massachusetts Institute of Technology (USA);…
- Sales of online training in the world in 2002 were USD 6.6 billion (5.6 billion from the US) and expected to be USD 23.7 billion in 2006 and will continue to increase.
- Vietnam: Readiness index for online training: ranked 57 in the world (3.7 points)

c. Impact of E-Commerce on E-Government

The governments of most countries today, with the strong development of e-commerce, are also taking positive steps towards building an e-Government, in which the government's public services government and government transactions are conducted online, commercially or non-commercially. Non-commercial services typically include: public information (publishing scientific research results, online health information, online public training), payment facilitation (filing tax returns). electronic, fine payment,) or other services. Commercial government services include: verification of identity (passport, ID card, etc.), qualifications (driver's license, vehicle registration), as well as tax collection registration electronic. All of the above transactions can be used with the help of electronic means, especially the internet.

E-commerce also has a strong impact on the government procurement process. Given the distinct differences between private (commercial) and public procurement, the public procurement process should ensure that all potential suppliers are informed of the tender, and not Is there any supplier who can have advantageous information over another, for example by way of "inside information". In addition, the element of transparency, in which the bidding regulations must be clear and easy to understand for easy evaluation, and the decision to win the bid must also follow the established, unified and clear procedures on paper. sheet. And e-Government must also ensure the implementation of the above standards for procurement.

Currently, e-procurement strategies that meet the above requirements are being studied and applied by many countries. A typical strategy is the Finnish model.

d. Impact of E-Commerce on the Insurance Industry

Along with the advent of the internet, the insurance industry also has an e-insurance business form and the structure of the insurance industry has also changed. When there was no internet, the structure of the insurance industry was almost horizontal, in which customers - the insured (individuals or companies) transferred risks to the insurer or reinsurer. Risk transfer can be done directly or through intermediaries such as insurance agents or brokers.

As the market and insurance industry operate on the internet, the above model has changed. The path to transfer risk and information from the policyholder to the insurer/reinsurer is no longer available. Policyholders may have a variety of ways to obtain information about insurance services and policies. Insurers and reinsurers, as well as insurance agents and intermediaries, are also expanding their markets through their internet presence. A new feature, which is the use of insurance industry standards (ACORD), facilitates insurance transactions and agreements. Another new feature is the emergence of interactive software (middleware), allowing the sharing of sources of information and data between insurers and the internet economy.

4.3 Benefits of e-commerce

4.3.1 Benefits to the organization

- Expanding the market: With a much smaller investment cost than traditional trade, companies can expand the market, find and approach suppliers, customers and partners around the world. Expanding the network of suppliers and customers also allows organizations to buy at lower prices and sell more products.
- Reduce production costs: Reduce paper costs, reduce information sharing costs, printing costs, and sending traditional documents.
- Improve distribution system: Reduce inventory and delivery delay. The system of showrooms to introduce products is replaced or supported by online showrooms, for example in the auto industry (GM, Ford Motor) saving billions of dollars in costs from reducing inventory costs.
- Going beyond time limits: Automating transactions via the Web and the Internet keeps business running 24/7/365 with no additional variable costs.
- Manufacturing on demand: Also known as the "Pull Strategy", attracting customers to the business by the ability to meet all customer needs. A good example is Dell Computer Corp.
- New business model: New business models with new advantages and value for customers. Amazon.com's model, group buying or online auction of agricultural products to B2B exchanges are typical of these successes.
- Increase the speed of launching products to the market: With the advantage of information and the ability to coordinate between businesses, it increases production efficiency and reduces the time to launch products to the market.
- Reduce communication costs: email is more economical than fax or traditional mail
- Reducing procurement costs: Through reducing administrative costs (80%); purchase discount (5-15%)
- Strengthening customer relationships: Through convenient online communication, relationships with intermediaries and customers are strengthened more easily. At the same time, the personalization of products and services also contributes to tightening customer relationships and strengthening loyalty.
- Updated information: All information on the web such as products, services, prices... can be updated quickly and promptly.
- Business registration fee: Some countries and regions encourage by reducing or not collecting online business registration fees.
- Other benefits: Enhancing corporate reputation and image; improve the quality of customer service; new business partners; simplify and standardize transaction processes; increase productivity, reduce paper costs; increase access to information and reduce transportation costs; increase flexibility in transactions and business activities.

4.3.2 Benefits for consumers

- Going beyond the limits of space and time: E-commerce allows customers to shop anywhere, anytime for stores around the world
- Wider choice of products and services: E-commerce allows buyers to have more choices because it has access to more suppliers.
- Lower prices: Due to more convenient, easier and richer information, customers can compare prices between suppliers more conveniently and thereby find the most suitable price.
- Faster delivery of digitized goods: For digitized products such as movies, music, books, software.... the delivery is made easy via the Internet.
- Information is richer, more convenient and of higher quality: Customers can easily find information quickly and easily through search engines; At the same time, multimedia information (audio, images) helps promote and introduce products better
- Auction: An online auction model was born that allows everyone to participate in buying and selling on auction floors and at the same time can find and collect the items they are interested in anywhere in the world. .
- E-commerce community: E-commerce business environment allows all participants to coordinate and share information and experiences effectively and quickly.
- “Meet all needs”: The ability to automate allows to accept different orders from every customer
- Taxes: In the early stages of e-commerce, many countries encouraged by exempting taxes on online transactions

4.3.3 Benefits to society

- Online activities: E-commerce creates an environment to work, shop, and transact... remotely, thus reducing travel, pollution, and accidents.
- Improve living standards: Having many goods and many suppliers will create pressure to reduce prices, thereby increasing the shopping ability of customers, improving living standards.
- Benefits for poor countries: Poor countries can access products and services from more developed countries through the Internet and e-commerce. At the same time, it is also possible to learn experiences and skills... Online training also helps these countries to quickly absorb new technologies.
- Public services are provided more conveniently: Public services such as health care, education, government public services... are carried out online at a lower cost and more convenient. Issuing of licenses issued online, medical consulting services.... are typical examples of success

5. Management implications and solutions

Vietnam has joined the global supply chain of the IT industry since the 1990s, and has achieved many remarkable achievements in turning the IT industry into a spearhead economic sector with the highest export value of products in the world. goods export turnover of Vietnam . From the absence of the IT industry, Vietnam has gradually entered the world market, participating more and more deeply in the global supply chain of the IT industry.

Because it is considered a nascent industry, Vietnam's IT industry's participation in the global supply chain still faces many limitations. Most of the high-value stages of the supply chain are held by foreign investors, and Vietnamese enterprises are currently only involved in the processing and assembly of product components. In the matter of supplying raw materials and equipment, Vietnam has only stopped as a

level 1 and level 2 supplier (packaging, product packaging, screws, small components), the rest is in the design stage. Product design and branding are all held by foreign-invested enterprises. This is one of the basic limitations, due to many different reasons, but it shows that participating in the global supply chain is not an easy job.

Studying the experiences of other countries will bring many valuable lessons to Vietnam, including in terms of policies and solutions for small and medium-sized enterprises development, human resource development, and brand building. These lessons help Vietnam realize that the necessary and sufficient conditions to apply lessons learned in Vietnam today are not enough, it is necessary to continue to develop the economy to a higher level, there is a pursuit. catch technology more effectively, quality human resources and more complete policy institutions.

Policy recommendations based on the actual conditions of Vietnam's IT industry. In order for Vietnam's IT industry to participate more effectively in the global supply chain, it is necessary to have a series of different support policies in order to be able to promote the advantages and limit the challenges that Vietnam's IT industry faces. are encountered. In order to develop the IT industry to develop, to participate deeply in the global supply chain and value chain, it is necessary to study the lessons learned from the previous countries, based on the country's practice to develop policies, breakthrough measures for the IT industry in line with new conditions and new situations.

6. Conclusions, limitations and directions for further research

Firstly, joining the global supply chain is a necessary task for each country to be able to upgrade the position and rank of that country's economy as well as the key products of each country in the world. international markets. To join the global supply chain, countries all use a lot of different measures and policies, depending on the industry/product) because joining the global supply chain is not simple. It requires Firstly, in the internal strength of domestic enterprises, the competitiveness of enterprises, and supportive policies from the government, in order to minimize the risks and inherent fractures in the supply chain. Especially in terms of the global supply chain, the IT industry has a very high level of outsourcing and outsourcing. The internal strength of enterprises of each country will determine the position of participation in the supply chain at different levels.

Secondly, in East Asia, the participation in the global supply chain of the IT industry is very dynamic, in which has formed high-level suppliers (Japan, Taiwan, Korea) who are lower level suppliers (Malaysia, Thailand, Indonesia, China), followed by Vietnam and other countries. In the era of IT revolution 4.0, which is developing strongly and affecting all countries in the world as well as in East Asia, countries in the region are facing great opportunities and challenges in participating in the chain. global supply of the IT industry.

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