

Industrial Revolution 4.0: Current Opportunities and Challenges for the Development of Trade in Services in Vietnam

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Abstract: Industrial Revolution 4.0 is considered to be an opportunity for comprehensive innovation in economy and has been carried out successfully in some developed countries. According to Mr. Nguyen Van Binh - Head of the Central Economic Commission: “Industrial revolution 4.0 gives developing countries an opportunity to shorten the process of industrialization by leap-frogging and leaping on advanced technologies”. It can be seen that Industrial Revolution 4.0 has affected all areas including trade in services of our country. However, in parallel with the opportunities, there are many challenges and potential risk that trade in services in Vietnam has to face. Consequently, this paper focuses on clarifying some related concepts and pointing out the opportunities and challenges that trade in services in Vietnam has to face during Industrial Revolution 4.0.

Key words: opportunities; challenges; trade in services; Industrial Revolution 4.0

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Trade in services is a popular concept in the world but still quite new in our country. With specific characteristics of services, trade in services also has different characteristics compared to trade in normal goods. Therefore, promoting the development of trade in services also requires differences and encounters more difficulties. In the context of the explosion of Industrial Revolution 4.0, Vietnam's trade in services is facing opportunities and challenges and if not actively embracing, it is very likely that the development of trade in services in our country will face many difficulties in the coming time.

The article uses statistical method combined with data analysis and processing method to generally assess the problems of the trade in services in our country in the context of Industrial Revolution 4.0. Using the dialectical thinking method, it proposes a number of solutions to develop the trade in services in our country in the coming time.

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1. Some Related Concepts

In the view of Karl Marx, a service is the offspring of commodity production, and when commodity production thrives, requiring a smooth, uninterrupted and continuous circulation to satisfy ever-increasing human needs, then services develop.

Philip Kotler defined a service as an activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product.

Ph.D. Le Thien Ha, Vietnam Institute of Trade Research, proposed that service is a concept that refers to economic sectors whose production process does not create normal goods but special goods by satisfying human needs in addition to the needs for goods supplied by agriculture and industry.

Here, a service can be understood as all activities aimed at meeting a certain human need whose product exists in the intangible form.

In English, Trade both means business and the exchange of goods and services. In addition, English uses other terms such as Business or Commerce which means goods trading, goods business, or trade.

According to the Commercial Law of Vietnam, “Commercial activities mean activities for the purpose of generating profits, including: sale and purchase of goods, provision of services, investment, commercial promotion and other activities for the profit purpose”.

In international commercial law, investment, credit and technology transfer are considered commercial activities. There are three main areas in the trade industry, including trade in goods, trade in services, and trade in investment, of which trade in services is the activity of buying and selling various types of services. In commercial activities, there are types of supporting activities such as trade promotion, commercial services.

To better understand the term “trade in services” and differentiate it from the term “commercial services”, the author has pointed out the differences below:

Commercial services serve as a bridge between “input” and “output” in the process of production and consumption of products. The advent and development of transportation services such as road, air, and sea transportation have contributed to overcoming geographical obstacles, speeding up goods circulation, promoting demand for trading, exchange of goods from one country to another, from one region to another... Banking services also allow the payment to be carried out effectively, helping both exporters and importers achieve their purposes in the trading relationship. Telecommunication and information services also play a supporting role for commercial activities in stimulating demand and shortening the time for consumers to make buying decisions. Services such as agency, wholesale, and retail services act as an intermediary between manufacturers and consumers, and at the same time contribute to speeding up the process of goods consumption, shortening the time of goods circulation, helping manufacturers quickly recover capital for investment in reproduction. Thus, commercial services are only a branch of service activities, consisting of all activities to support the business process of enterprises, including pre, during and after sales support, which may or may not be accompanied by products.

Commercial services are those associated with commerce aimed at serving the trade (freight forwarding services, goods inspection services, commercial advertising services), which distinguishes them from other services (healthcare services, legal consulting services).

Trade in services is the exchange in which the object of exchange is services.

Trade in services can be understood as the exchange of commercial services of (domestic and foreign) organizations through an organization or business. In other words, a commercial service is a commodity, like any other commodity, and it is something exchanged in the trade in services.

The WTO secretariat has divided trade in services into 12 areas, including: Business services; Communication services; Construction and related engineering services; Distribution services; Educational services; Environmental services; Financial services; Health-related and social services; Tourism and travel-related services; Recreational, cultural and sporting services; Transport services; Other services not included elsewhere. These 12 areas are further subdivided into 150 subareas. Some main characteristics of trade in services are as follows:

Services are intangible, invisible products that are perceived through customers' direct consumption. The production and consumption of service products take place at the same time, but the effectiveness of a service is different for each consumer.

Trade in services has a wide scope of activities, from services for personal consumption to production, business and management services in all sectors of the national economy.

Trade in services has a great spread. In addition to the direct effect of the services themselves, trade in services plays an intermediary role for the production and trade of goods; therefore, the development of trade in services has an indirect effect on all sectors of the national economy.

International trade in services is influenced by psychology, customs, cultural traditions, language, and personality of service providers and consumers, which is different from trade in goods or products that are inanimate objects which are controlled when crossing borders but not as complicated as controlling people in trade in services. [4]

The term “Fourth Industrial Revolution” has been applied to important technological developments several times over the past 75 years, and is used for academic discussion. The concept of Industry 4.0 or smart factory was first introduced at the Hannover Industrial Fair in the Federal Republic of Germany in 2011. Industry 4.0 aims to create smart manufacturing and management processes in the manufacturing industry. The introduction of Industry 4.0 in Germany has prompted other advanced countries such as the US, Japan, China, and India to promote the development of similar programs aiming to maintain their competitive advantages.

Prof. Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, has defined that Industry 4.0 is a term for technologies and concepts of the organization in the value chain associated with physical systems in virtual spaces, Internet of Things (IoT) and Internet of services (IoS).

2. Current Context of Trade in Services in Vietnam

Before considering the current context of the trade in services in our country, we look at the following Figure 1 to have an overview of the economic growth in Vietnam as well as the service sector in the period 2015-2017.

As we can see from Figure 1, the service sector of our country over the past years has shown itself as a spearhead sector, making a great contribution to the economic growth of the country. It can be seen that the growth of the service sector has been steadily increasing with little change unlike other sectors. This further confirms that services are a potential area and have many development opportunities in Vietnam.

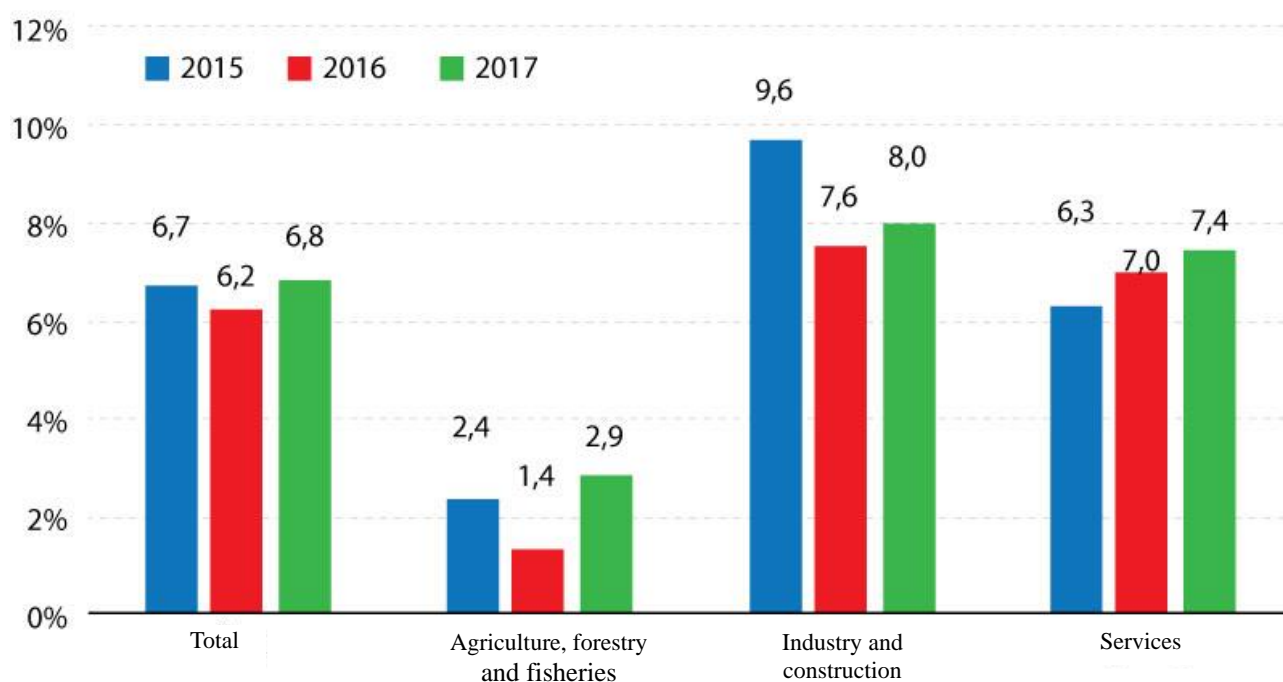


Figure 1 Vietnam's Economic Growth by Industry, 2015-2017 (%)

Source: General Statistics Office of Vietnam (2015, 2016, 2017)

According to the General Statistics Office, 2017 saw a new record of Vietnam's import and export when the total import-export turnover exceeded \$400 billion (USD). Of which: Regarding the service sector, service export turnover in 2017 was estimated at \$13.1 billion, up 7% compared to 2016, of which tourism service export turnover reached \$8.9 billion, accounting for 67.6% of the total export turnover and increasing by 7.4%; transportation service export turnover reached \$2.6 billion, accounting for 19.7% and increasing by 5.7%.

The service import turnover in 2017 was estimated at \$17 billion, up 1.6% from the previous year, of which transportation service import turnover reached \$8.2 billion, accounting for 47.9% of the total import turnover and increasing by 2.8%; tourism service import turnover reached \$5.1 billion, accounting for 29.8% and increasing by 12.7%. The trade deficit in services in 2017 was \$3.9 billion, accounting for 29.9% of the service export turnover.

Exports have been growing very high but at a high growth rate in the region in the context of international trade tending to decline. In which, although Vietnam has a trade surplus in goods, services still have a trade deficit. This shows that our country lacks attention to the service sector; hence, Vietnam needs to consider services as a breakthrough to develop and improve the export structure. It is necessary to enhance the development of services, especially logistics services, in order to switch to trade surplus in services.

However, this is the picture of the previous period. At present, when Vietnam is also among the countries affected by Covid-19 pandemic, some statistical analysis and forecasting of the trade in services in our country are as follows:

According to Mr. Jacques Morisset, Chief Economist of the World Bank Vietnam, in the context of the global Covid-19 pandemic, Vietnam is an exception thanks to its great success in controlling and handling the pandemic so far. The economic impact of the Covid-19 pandemic on Vietnam's economy is also considered to be less severe than in many other countries. This is reflected in the fact that GDP continued to grow in the first 6 months of 2020,

reaching 1.8% — despite being the lowest level in the past three decades.

Looking specifically at each sector, it can be seen that the service sector only grew by 0.6% (equivalent to the contribution of 15.0%) while the agriculture - forestry - fisheries sector grew by 1.2%, contributing 11.9% to the overall economic growth, and the industry grew by 3.0% (equivalent to the contribution of 73.1%). Thus, compared to the previous average levels, the service sector is affected more negatively (with a decrease of 6.3% compared to the previous year).

According to the Government Portal, the trade in services in the first three months of 2020 was less active due to the impact of the pandemic. Consumers limit shopping in public places, traveling and eating out. The number of international visitors to our country in the first quarter of 2020 declined by 18.1% over the same period last year, of which the decline occurred in most markets with the strongest decline concentrated in major markets such as China, Korea, US.

In general, our country's trade in services, after 10 years of joining the WTO and international integration, has made positive changes and obtained many achievements. Despite the impact of Covid-19 pandemic, the sector still shows its importance to Vietnam's economy. However, Vietnam needs to attach more importance to the trade in services, not only because of the proportion of GDP, but also as a supporting sector for the development of other sectors and fields.

3. Opportunities and Challenges for the Trade in Services of Vietnam in the Current Industrial Revolution 4.0

3.1 Opportunities That Industry 4.0 Brings To Trade in Services in Vietnam

Industrial Revolution 4.0 (Industry 4.0) will have a strong impact on production activities, creating a big change in production methods. The convergence of physical and digital applications creates the emergence of the Internet of Things (IoT), which will rapidly and extensively change the entire value chain from research and development to manufacturing, logistics to customer services, significantly reducing transaction and transportation costs, leading to achievements in production and productivity. This can completely change the way that the traditional trade in services operates. Then, people can buy, sell, exchange and transact services at home through the modernization of the Internet. This is convenient for both service buyers and sellers, and a more convenient mode of trade in services will stimulate more consumer demand, helping to develop this sector in the future.

For the trade in services, Industry 4.0 helps significantly reduce transaction and transportation costs, minimize the impediment by geographical limitations, promote the development of transnational trade in services, create favorable conditions for our country's trade in services to easily penetrate international markets, reduce input costs and increase achievements.

Thanks to the benefits of the Internet, costs for transportation and information will be reduced, logistics services and supply chains will become more efficient, and commercial costs will be lowered, all of which will expand the market and promote economic growth. Industrial Revolution 4.0 is also bringing opportunities for the digital economy, smart production and services, smart agriculture, smart tourism, smart financial - banking services, smart logistics... that increase labor productivity, save management costs, production costs, and bring great benefits to the State, businesses and consumers. The growth of other sectors and fields leads to the development of accompanying and support services, accelerating the growth of accompanying trade in services in Vietnam.

3.2 Challenges That Industrial Revolution 4.0 Brings to Our Country's Trade in Services

Lagging-behind challenge goes further, and low-cost labor gradually loses its advantages. Service businesses in Vietnam today mainly focus on the competitive advantage of workers. Industrial Revolution 4.0 not only makes the human factor not the decisive factor but also greatly affects the technology factor. This causes businesses in trade in services to completely change their perceptions and adopt a new way of operating their businesses without being left behind and ensuring their competitiveness.

The second challenge of Industrial Revolution 4.0 is that millions of workers lose their jobs. When all activities can be handled by technology and services are directly transacted through the Internet, a large part of workers in the trade in services will become redundant. This will become pressure on the industry as it has to solve employment problems for workers.

When technology and automation play a prominent role, service businesses will face the pressure to enhance quality, improve and innovate technological lines, and recruit technologically capable human resources. At the same time, they also have to face increasingly fierce competition from foreign businesses. These are really difficult obstacles in the context of Vietnamese businesses still being far behind foreign businesses in terms of technology as well as human resources and investment capital.

Industrial Revolution 4.0 also poses a challenge for the infrastructure foundation. The technological infrastructure foundation in Vietnam still lacks synchronization and modernity. The challenge of the need to increase labor productivity without affecting unemployment rate, ensuring energy and infrastructure for development or climate change adaptation strategies, etc. of the service businesses requires the technological infrastructure foundation. If the technological infrastructure foundation fails to meet the demand for use, the quality will not be high which is difficult to compete with foreign enterprises. Meanwhile, the investment in high-tech infrastructure is very expensive and requires national synchronization.

4. Some Solution Orientations

The trade in services plays an important part in our country's service sector. Facing the opportunities and challenges of Industrial Revolution 4.0, it is necessary to have comprehensive solutions to promote the development of the sector. Some solution orientations proposed by the author below hope to partly help our country's trade in services step by step master its opportunities and challenges.

4.1 Create the Most Favourable Legal Corridor

Aiming to proactively exploit the opportunities brought about by Industrial Revolution 4.0 as well as limit the undesirable impacts on any sector of the economy, the Government of Vietnam needs to develop long-term orientations and specific policies.

In addition to internal efforts, in order to fully ensure the conditions for development, Vietnam needs to cooperate with international partners, businesses and experts in the context of science and technology having made great progress and spread rapidly when the international integration of Vietnam is increasingly deepened. To do that, Vietnam needs specific and uniform legal policies and a long-term strategic vision in making policies to attract investment and cooperation.

Policies to create favorable conditions for businesses to proactively improve, invest in technological infrastructure or access to technological developments in the world should also be specifically issued. This will encourage businesses to proactively access high technology and ensure the competitiveness of domestic

businesses.

4.2 Build Good Infrastructure to Welcome the Technological Revolution

Vietnam needs to develop an appropriate digital transformation strategy, make a smart governance policy, build digital connectivity infrastructure and network security, create digital human resources, and build a digital industry, smart agriculture, smart tourism, smart cities, innovation and start-up ecosystems.

Technology capacity of businesses needs to be improved not only in trade in services but also in all fields aiming to improve productivity, quality and competitiveness of businesses and the whole economy.

Particularly, with specific characteristics of service products, businesses engaging in trade in services require different technological infrastructure conditions. The synchronization of the national technological infrastructure will facilitate the development of both productivity and quality of the trade in services.

4.3 Develop High-quality Human Resources

The Government, businesses, research centers, and educational institutions in Vietnam need to be aware of and willing to change and have appropriate strategies for the development of industry - agriculture, services and the economy or human resources in the era of Internet of Things and Industrial Revolution 4.0.

Solving the problem of effective use of Industrial Revolution 4.0 and turning challenges into benefits requires a source of high-quality, high-tech skilled labor. On the other hand, improving human qualifications also easily solves the problem of labor surplus when Industrial Revolution 4.0 enters the economy in a deep and extensive manner.

5. Conclusions

Industrial Revolution 4.0 has exploded globally and will affect all areas of our economy comprehensively. Therefore, the development of any sector or field requires economic managers, businesses to evaluate the opportunities and challenges that they will have to take on in order to proactively work out appropriate plans and promptly turn challenges into opportunities. The article partly describes the context of the trade in services as well as opportunities and challenges that the sector may face in the coming time.

References

- Ho Thi Kim Thoa (2013). "Vietnam Trade Industry in the current international integration context", *Communist Review*.
- Nguyen Thi Xuan and Pham Thuy Duong (2017). "Development of service sector during growth model transformation process", *Journal of Finance*, No. 2, March 2017.
- To Uyen (2018). "'Dissect' the weaknesses of trade and service sectors", *Vietnam Financial Times*.
- Ho Van Vinh (2006). "Trade in services - Some theoretical and practical issues", *Communist Review*, No. 108.
- Available online at: <https://dantri.com.vn/dien-dan/cach-mang-cong-nghiep-lan-thu-tu-can-tam-nhin-chien-luoc-va-hanh-dong-quyet-liet-20180809223409629.htm>.
- Available online at: <http://vneconomy.vn/kim-ngach-xuat-khau-can-muc-ky-luc-20180102171508966.htm>.
- Available online at: <http://www.hids.hochiminhcity.gov.vn>.
- Available online at: <https://viettimes.vn/cach-mang-40-o-viet-nam-la-mot-cuoc-cach-mang-chay-theo-cac-yeu-to-tich-cuc-tren-the-gioi-303645.html>.
- Available online at: <http://baomoi.com/cach-mang-cong-nghiep-4-0-co-hoi-va-thach-thuc/c/23508186.epi>.
- Available online at: <http://baochinhphu.vn/Du-lich/Hoat-dong-thuong-mai-dich-vu-sut-giam-trong-quy-I2020/391191.vgp>.