

Original Paper

Comparing Labor Productivity of Vietnam to Some Asian Countries

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Abstract

In Vietnam, social labor productivity is an indicator of the National Statistical Indicator System (specified in the Law on Statistics), which is calculated by the average GDP per employed worker per year. Research results show that in the 2016-2020 period, labor productivity of the whole economy has improved markedly, with an average increase of 5.78%/year in the 2016-2020 period. However, Vietnam's labor productivity still has internal limitations that have not been overcome. In comparison with selected Asian countries, Vietnam's labor productivity has a low absolute value despite its relatively high growth since 1991. In most of the sectors compared, it is basically at the lowest level. As a result, proposing solutions to improve and enhance labor productivity aimed at promoting sustainable economic growth in Vietnam in the coming time is an urgent issue for the development of the country.

Keywords

compare, labor productivity, GDP per employed worker, Asian countries, sustainable economic growth, Vietnam

1. Introduction

Productivity is a key concept in economic growth and social welfare. According to Huynh & Le (2016), the growth of labor productivity was important indicators of economic growth quality (Huynh & Le, 2016, pp. 18-27) while some researchers found that labor productivity and competitiveness were two central issues of an integrated economy (Dong, Diem, Chinh & Hien, 2020, pp. 619-627). This parameter measures the efficiency between the effort and/or materials used and the output goods or services produced. A country with high productivity leads to a high standard of living when it creates

great value with small inputs. Labor productivity determines the winner and the prosperity. The Vietnamese Government and people have been well aware of the role of labor productivity, clearly seen the low level of labor productivity and tried to find ways to increase the national and local labor productivity, but the results have been modest.

In 2013, the Government of Vietnam promulgated the Decision No. 339/QĐ-TTg dated February 19th, 2013 approving the overall scheme on economic restructuring associated with renewal of growth model towards improving quality, efficiency and competitiveness in the period 2013-2020 (The Government of Vietnam, 2013).

In August 2019, the Government of Vietnam held a Conference on improving national labor productivity (Government News, 2019) where scientists and managers talked a lot about the causes of low labor productivity, including the low quality of Vietnam's labor, the inadequate shift in economic structure towards reducing the proportion of agriculture and increasing the proportion of non-agricultural sector, many shortcomings in the state management, and the large number of small and medium sized enterprises...

Improving national labor productivity has become a topic of interest to many researchers and policy makers. According to some studies, labor productivity is affected by many factors, such as human capital, foreign direct investment, industry, even enterprise level (firm-level), ... (Dong, 2019, pp. 104-110; Dong, Trong & Hanh, 2022; Ha, Van & Huy, 2021; Ngoc & Van Phuoc, 2017, pp. 1-2; Vinh, 2019, p. 97). Some studies also show a link between unions and labor productivity (Peter, 1991; Sullivan, 1984).

2. Research Methodology

The research method mainly used in this article is the secondary data analysis method. Accordingly, we selected and analyzed the available secondary data from two main sources, including: "Vietnam Productivity Report: Origins of Vietnam's labor productivity growth over three decades of reform and integration 1990-2020" by Ohno et al. in 2020 (Ohno, Nguyen & Pham, 2021), and the works "Movements and socio-economic situation of Vietnam in five years 2016-2020" by the General Statistics Office of Vietnam (General Statistics Office of Vietnam, 2021). In addition, there are references to a number of other documents of the General Statistics Office (GSO) of Vietnam, and directives of the Prime Minister of Vietnam. In which, the reference base to outline a picture of Vietnam's labor productivity in the 2016-2020 period is collected and analyzed mainly from the works of the GSO of Vietnam. The basis for drafting a model to compare labor productivity in Vietnam to other Asian countries based on major sectors comes mainly from the works "Vietnam Productivity Report: Origins of Vietnam's labor productivity growth over three decades of reform and integration 1990-2020".

3. Research Results

3.1 Current Situation of Labor Productivity in Vietnam in the Period 2016-2020

According to the GSO of Vietnam (2021), the labor productivity of the whole economy has improved markedly, with an average increase of 5.78%/year in the period 2016-2020, higher than that in the period 2011-2015 (4.3%). Also in the 2016-2020 period, the contribution of Total Factor Productivity (TFP) to economic growth averaged 45.72%, much higher than 32.84% in the period 2011-2015 and 39.35% in the period 2011-2020.

Table 1. Vietnam's Labor Productivity in the Period 2016-2020

Million VND/worker	2016	2017	2018	2019	2020
OVERALL LABOR PRODUCTIVITY	84.4	93.2	102.1	110.5	117.4
By economic sectors					
Agriculture, forestry and fishery	33.1	35.8	39.8	44.7	52.7
Industry and construction	109.7	118.5	128.3	126.5	128.6
Service	103.9	113.8	119.5	129.8	135.2
By economic types					
State	275.9	311.9	338.8	386.6	
Non-State	42.5	46.5	51.6	56.4	
Foreign-invested sector	233.1	233.5	247.6	257.6	
Growth rate - %					
OVERALL LABOR PRODUCTIVITY	5.7	6.1	5.9	6.3	4.9
By economic sectors					
Agriculture, forestry and fishery	5.7	6.4	9.0	10.6	9.1
Industry and construction	-1.9	2.8	3.8	-2.2	3.7
Service	7.0	5.0	1.8	5.7	2.3
By economic types					
State	6.9	6.6	5.2	10.8	
Non-State	5.7	6.6	6.6	7.8	
Foreign-invested sector	-2.4	-3.9	3.9	2.9	

Source: General Statistics Office of Vietnam, 2021.

The data show that the labor productivity increased from 84.4 million VND/worker in 2016 to 117.4 million VND/worker in 2020 in the condition that the labor force increased by 1%/year on average, showing the improved operational efficiency of the economy. Also in this period, the highest labor productivity growth rates were 8.16%/year and 7.37%/year of the agriculture, forestry and fishery sector and the state economic sector, respectively. However, the labor productivity in the agriculture, forestry and fishery sector is still very low compared to that of the industry-construction and service sectors. According to 2010 constant prices, the labor productivity of the agriculture, forestry and fishery sector was 2.9 times and 2.4 times lower than that of the service sector and the industry-construction sector,

respectively. At the same time, Vietnam's labor productivity is highly dependent on the increase in labor productivity of the industry-construction and service sectors (Table 1).

Also according to 2010 constant prices, the labor productivity rate of growth in the industry-construction sector was not high (even negative growth in 2016 and 2019) while the employment elasticity of industries in this sector is larger than those in the agriculture, forestry and fishery, and service sectors, which shows that the industry-construction sector in Vietnam is still based on the horizontal growth model, mainly using outsourced labor and assembly. This fact warns that Vietnam's labor productivity will continue to be low if there are no breakthroughs to increase labor productivity in the industry-construction sector.

Despite some achievements in the 2016-2020 period, Vietnam's labor productivity still has limitations. Specifically:

Firstly, enterprises encounter difficulties in accessing and applying advanced technology to production, have limited access to formal credit, lack skilled labor, have difficulties in joining and learning from value chains led by FDI enterprises, and slowly integrate into the global value chain...

Secondly, the difficulties in accessing and applying technology to production put pressure on the realization of the goals of industrialization, modernization, and shortening the development gap with other nations in the region and in the world.

Thirdly, the industry-construction and service sectors, especially service industries that are the driving force or lifeblood of the economy, such as finance, banking, and tourism, still account for a low proportion. Although the processing and manufacturing industry is the leading one in labor productivity growth, it is highly concentrated in export products based on low to medium technology.

Fourthly, at present, most Vietnamese enterprises are small and medium-sized enterprises, with limited capital, limited ability to invest in technology, weak production management experience, poor competitiveness, and low level of science, technology and innovation. Many enterprises are using old and outdated technology, 2-3 generations behind the world average.

Fifthly, the technological level of enterprises is still backward, and enterprises' participation in innovation-related activities is still limited. Researches show that enterprises with research and development activities have 19.3% higher labor productivity than other enterprises. However, currently, the proportion of enterprises spending on research and development activities in Vietnam is still low.

3.2 Comparing Labor Productivity of Vietnam to Some Asian Countries

3.2.1 Level and Growth of Labor Productivity in the Whole Economy

In comparison to selected Asian countries, Vietnam's labor productivity has a low absolute value despite its relatively high growth since 1991. Despite the increasing trend, Vietnam's labor productivity does not have any significant breakthrough that can significantly enhance its position in the world compared to neighboring countries (Figure 1).

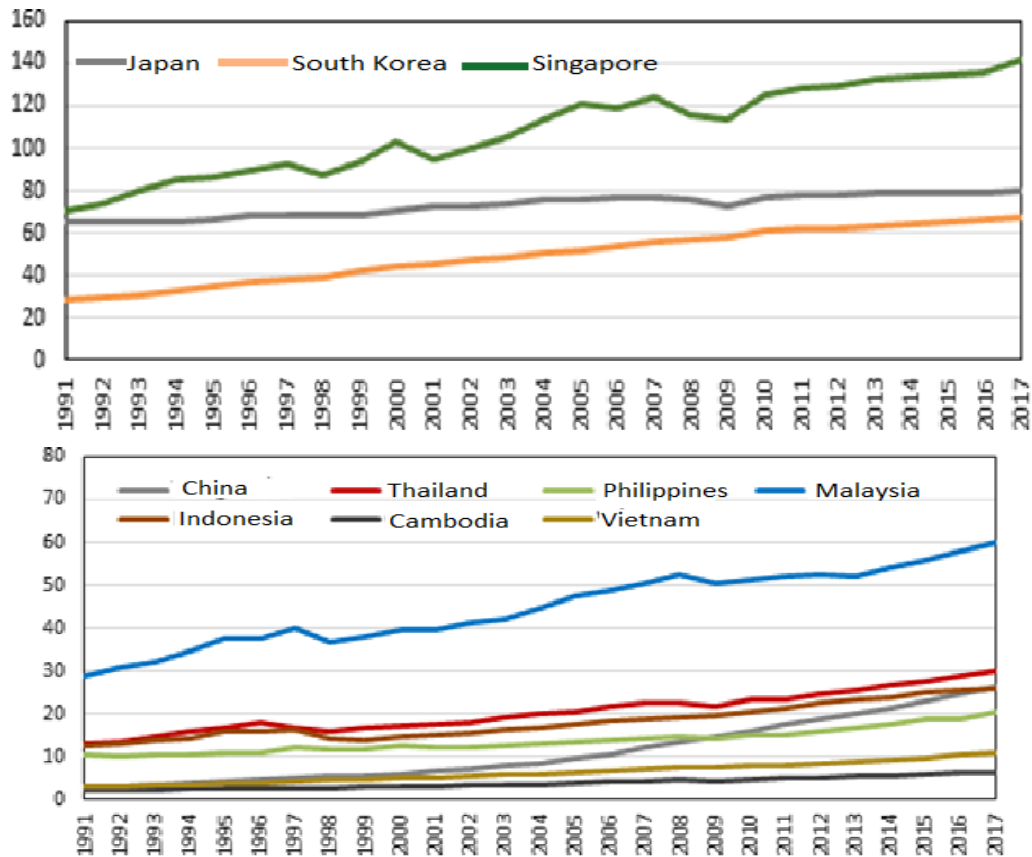


Figure 1. Labor Productivity in Vietnam and Some Countries

Table 2. Labor Productivity Growth in Vietnam and Some Countries

Unit: %				
Nation	1991-2000	2001-2010	2011-2017	1991-2017
Cambodia	3.72	4.06	4.93	4.16
China	9.25	9.94	7.26	8.98
Indonesia	2.47	3.29	3.51	3.04
Japan	0.99	0.79	0.51	0.79
Malaysia	3.92	2.61	2.28	3.01
Philippines	1.26	1.95	4.47	2.34
Singapore	3.95	1.91	1.91	2.66
South Korea	5.30	3.29	1.43	3.54
Thailand	3.46	3.19	3.72	3.42
Vietnam	5.74	4.79	4.83	5.15

Source: Ohno, Nguyen & Pham, 2021.

In 1991, calculated in USD at 2010 constant prices with the purchasing power parity exchange rate, Vietnam's labor productivity reached US\$2,958, while China's reached the lower rate (at US\$2,772). In this year Japan's and Korea's labor productivity respectively were 22.1 times and 9.5 times higher than that of Vietnam. ASEAN-5 nations' labor productivity were also higher than Vietnam's. Specifically, Singapore' labor productivity was 23.8 times higher and that of Malaysia was 9.8 times higher than Vietnam's, the labor productivity of Philippines, Indonesia and Thailand was 3.6 times, 4.2 times and 4.4 times higher than labor productivity of Vietnam (Ohno, Nguyen & Pham, 2021).

Moreover, in comparison with high-performing economies in the region, Vietnam's labor productivity growth over time has been lower. As mentioned, in 1991, Vietnam's labor productivity was equivalent to China's. Then, China has achieved a quickly average growth rate of labor productivity with 8.96% in the period from 1991 to 2017 and the growth rate is even close to 10% per year in the first decade of the twenty-first century. As a result, China' labor productivity increased by 9.4 times in the period of 1991-2017 while Vietnam increased only by 3.7 times (Ohno, Nguyen & Pham, 2021). In order to not lag behind other nations in the region, Vietnam needs to significantly promote the labor productivity growth, not just maintain the current growth rate.

3.2.2 By Economic Sectors

In this section, Vietnam' labor productivity is compared with that of other nations in 9 sectors based on the classification of Asian Productivity Organization. In each sector, labor productivity is determined as the rate of value added to the quantity of employed workers.

In most sectors the results indicate that labor productivity in 2017 of Vietnam was at the lowest level in relation to that of other Northeast and Southeast Asian nations. Even in sector construction, and transport, warehousing and communication, the labor productivity of Vietnam was lower than that of Cambodia, was the lowest among comparable countries. Vietnam's labor productivity ranked near the bottom, only higher than Cambodia's in the following sectors: agriculture, forestry and fishery; manufacturing and processing; electricity, gas and water supply; wholesale, retail sale, repair of vehicles and household appliances, and hospitality; community, social and personal services. By contrast Vietnam has relatively high labor productivity in sectors including: financial intermediation; mining and quarrying; real estate, leasing and trading activities. The next subsections will more fully review Vietnam's position in individual sectors.

For the agriculture, forestry and fishery sector, Vietnam's agricultural labor productivity performed nearly US\$4,784/worker in 2017, only higher than Cambodia's (US\$4,261/worker) and equal to 51.7% of China's labor productivity (9,256 USD). Labor productivity in this sector of Malaysia is approximately 11.2 times higher than Vietnam's. In spite of a relatively high average rate of growth between 1991 and 2017, Vietnam's agricultural productivity is still near the lowest level compared to other countries in the region (Ohno, Nguyen & Pham, 2021).

For mining and quarrying sector, labor productivity depends largely on the technology and characteristics applied in each mining country. In this sector Vietnam's labor productivity performed higher than Cambodia's (nearly 11 times), Philippines' (4 times), Japan's (3.5 times), Korea's (1.7 times) and China's (1.7 times) in 2017 (Ohno, Nguyen & Pham, 2021).

For the processing and manufacturing sector, in the period of 1991-2017, Vietnam's labor productivity increased from 3,212 USD/worker to 11,515 USD/worker with the average rate of growth 5.0% per year. China's labor productivity in this sector grew by an average of 9.7% per year during the same period to achieve a labor productivity level nearly 4.7 times higher than that of Vietnam in 2017. Other countries had much higher labor productivity than Vietnam in 2017, including Singapore (17.3 times), Korea (10.8 times), Japan (9.9 times) and Malaysia (7.4 times) (Ohno, Nguyen & Pham, 2021).

For the electricity, gas and water supply sector, in 2017, the labor productivity of Vietnam reached US\$83,426/worker with an average rate of growth 5.95% per year in the period 1991-2017 and 8.12% per year in the period of 2011-2017. In this sector, labor productivity of Japan, Korea and China is higher than that of Vietnam (Japan is 1.2 times, Korea is 5.9 times and China is 1.7 times higher). China had the most impressive growth rate among the comparable nations, reaching 11.5% per year between 1991-2015, but growing at a slower rate than Vietnam in 2011-2017 at 7.73% per year. China's labor productivity in this sector reached US\$143,343/worker in 2017 (Ohno, Nguyen & Pham, 2021).

For the construction sector, in 2017, Vietnam's labor productivity was US\$9,791/worker, lower than Cambodia's with US\$10,479/worker. Cambodia had much higher labor productivity in this sector in the past and is gradually decreasing to near Vietnam's labor productivity. Vietnam's average growth rate of labor productivity reached 2.70% per year in the period of 1991-2017 and 2.60% per year in the period 2011-2017. In this sector, China performed the highest labor productivity rate of growth of any country, reaching 6.78% per year in the period 1991-2017 and 7.73% per year in the period 2011-2017 (Ohno, Nguyen & Pham, 2021).

For the wholesale, retail sale, repair of vehicles and household appliances, and hospitality sector, in 2017 Vietnam's labor productivity reached US\$9,237/worker with an average growth of 2.37% per year in the period 1991-2017 and 4.32% per year in the period 2011-2017. Singapore's in this sector was 17.7 times higher than Vietnam's. Compared to Vietnam, this figure was 7.3 times for Japan, about 4 times for Malaysia and South Korea, and nearly 3 times for China in 2017. Vietnam recorded a modest growth rate of labor productivity in this sector. China achieved the highest labor productivity growth rate among comparable countries, at 5.61% per year in the period 1991-2017 and 4.52% per year in the period 2011-2017 (Ohno, Nguyen & Pham, 2021).

For the transport, warehousing and communication sector, Vietnam's labor productivity is the lowest among comparable countries. In the year of 2017, Singapore's labor productivity in this sector was 14.6 times higher than Vietnam's, and Malaysia's was about 11 times higher than Vietnam's. Considering the period 1991-2017, Vietnam had the sixth highest average growth rate of labor productivity in this sector,

reaching 2.63% per year, behind China (7.4%/year), Indonesia (5.1%/year), South Korea (4.5%/year), Thailand (3.9%/year) and Malaysia (3.7%/year) (Ohno, Nguyen & Pham, 2021).

For financial intermediation, real estate, leasing and trading activities, in the year of 2017, Vietnam's labor productivity in this sector was 1.24 times, 1.8 times and 2.3 times higher than South Korea's, Malaysia's and Philippines', and Cambodia's, respectively (Ohno, Nguyen & Pham, 2021). This result is a bit surprising but there are also countries with much higher labor productivity than Vietnam in this sector such as Singapore, Japan and China. The reason for this large variation and why Vietnam has a higher labor productivity than South Korea, for example, needs to be explored. They may reflect actual differences or may arise as a result of differences in sector classification, data collection or measurement of VAT and labor inputs between these countries. A more accurate assessment is possible when more detailed disaggregated data are available. This warning may also apply to the other sectors considered in this section.

For the community, social and personal service sector, in 2017, Vietnam's labor productivity was only higher than Cambodia's and reached US\$9,957/worker. Labor productivity of Japan, South Korea and Singapore was 6.5 times, 5 times, and 4.1 times higher than that of Vietnam, respectively. The average growth rate of labor productivity in this sector of Vietnam was 2.63% per year in the period 1991-2017 and 3.87% per year in the period 2011-2017, ranking third (China was the first and Malaysia was the second in the same period) (Ohno, Nguyen & Pham, 2021).

In summary, Vietnam's labor productivity in most sectors is at the lowest level compared to comparable countries' in the region. In the agriculture, forestry and fishery sector, Vietnam's labor productivity is only higher than Cambodia's despite its relatively high growth. Regarding the labor productivity of the processing and manufacturing sector, there is a huge gap between Vietnam and only Northeast Asian nations but also ASEAN member countries. In the sector of service, Vietnam has a higher labor productivity than Cambodia, but generally lower than the other countries.

4. Some Solutions to Increase Labor Productivity Aimed at Promoting Economic Growth in Vietnam

Given the current situation of Vietnam's labor productivity in comparison with other Asian countries, there are still many limitations, especially in the context of international integration and fierce competition where improving and promoting labor productivity is a decisive factor to the competitiveness of the economy. This is a matter of survival for a developing country like Vietnam. To increase labor productivity, in the coming time, it is necessary to implement the following solutions:

Firstly, launching a movement to increase productivity in all sectors of the economy; select a number of fields (garment, machinery and equipment manufacturing, electronics), a number of localities to pilot the program for promotion of labor productivity growth, thereby replicating the whole economy. Improve productivity and quality through the application of advanced management technologies in the world with

adjustments to suit the characteristics and culture of Vietnamese enterprises; promote cloud computing applications in order to reduce costs, save time and improve the operational efficiency of enterprises...

Secondly, promoting agricultural restructuring in association with new rural construction, transform the structure of crops and livestock to suit reality, attach to the market and adapt to climate change; Intensify the application of scientific advances, especially biotechnology, to develop industry serving agriculture; Attract enterprises to invest in rural areas to switch from agricultural labor to industrial and service labor with higher productivity.

At the same time, focus on developing products with high added value, large export value, using high technology, automation, gradually reducing industries that use a lot of resources, minerals and simple labor. Promote the development of the processing, manufacturing, and service sectors in order to shift labor from agriculture to high-value industry and services; make the intra-industry shift from labor-based to technology-based production, high-value-added goods.

Thirdly, actively integrating into the international economy, effectively exploit signed free trade agreements, especially new generation ones. Improve market access, link with foreign corporations; Create favorable conditions for technology enterprises to develop new products, participate in public procurement tenders, and create markets to support development.

Fourthly, promoting the socialization of investment in science and technology; fully develop the science and technology market and increase the efficiency of the operation of technology markets and technology transfer.

Fifthly, a stable and successful economy in the operating trend of the Industrial Revolution 4.0 depends heavily on the quality of human resources and a qualified, innovative, and creative workforce. In order to increase labor productivity, it is necessary to rapidly reduce the number of unskilled workers, increase the number of workers with appropriate qualifications and skills by innovating training methods and programs, combining theory and practice, and providing vocational training in the direction of modernity, meeting the needs of society and international integration, in which focusing on training a team of good practitioners.

5. Conclusion

In conclusion, this manuscript highlights the state of social labor productivity in Vietnam and its significance as an indicator within the National Statistical Indicator System. The research findings reveal a notable improvement in labor productivity for the entire economy during the 2016-2020 period, with an average annual increase of 5.78%. Despite this progress, Vietnam still faces internal limitations that hinder further advancement in labor productivity. When compared to selected Asian countries, Vietnam's labor productivity remains relatively low in absolute terms, despite its relatively high growth since 1991. This disparity is particularly evident when examining various sectors, where Vietnam's labor productivity generally ranks at the lowest level. Consequently, it is crucial to address this issue urgently by proposing solutions aimed at enhancing and improving labor productivity to foster sustainable economic growth in Vietnam in the near future. By prioritizing this matter, the country can pave the way for its continued development and prosperity.

Addressing the limitations in Vietnam's labor productivity is crucial for enhancing competitiveness in the global market. Proposed solutions include launching a nationwide productivity movement, restructuring agriculture, promoting international integration, investing in science and technology, and improving human resources. By implementing these measures, Vietnam can increase labor productivity, drive economic growth, and thrive in the Fourth Industrial Revolution.

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