

**MINISTRY OF EDUCATION AND TRAINING MINISTRY  
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**IMPROVE GROWTH QUALITY OF VIETNAM'S  
INDUSTRIAL SECTOR**

**Major: Development economics**

**Code: 9310105**

**ABSTRACT OF DOCTORAL DISSERTATION  
IN ECONOMICS**

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# INTRODUCTION

## 1. Necessity of the Topic

Unlike the agriculture, the industry sector has a greater advantage of the growth rate and the level of scale expansion. The industrial development is the driving force for the development of the whole economy, especially in the context of globalization and international economic integration. The high, stable and quality growth of the industry will create material preconditions to increase the pace of the national development and accelerate the industrialization and modernization.

In the period of more than 30 years since Vietnam started to “reform” the economic management mechanism, the industry sector has achieved a remarkable growth rate compared to other sectors of the economy; The growth rate has been highly stable for many years but there have been some downturn signs in recent time due to the increase of intermediary costs, the slowdown of labor productivity, the reduction of capital efficiency, the poor diffusion to other economic sectors and negative impacts on the environment.

Although many Resolutions and policies have been issued and improved through Party Congress sessions from the 6th to the 11th Congress, the quality of industrial growth has not been improved, affecting the ability to achieve the economic growth targets.

The problem posed for the Vietnamese industry at present is that if it's not oriented appropriately, if the causes of the decline in the growth rate are not resolved, if the quality and effectiveness of the industrial growth are not improved, it will be difficult to maintain the high growth rate of the industry and the entire economy.

## **2. Research objectives**

### **2.1. General objectives**

In theory, the Dissertation was done with the aim to systematize theoretical issues about the quality of industrial growth. In practice, the objective is to apply theoretical issues, the proposed target system on the grounds of the analysis of the relationship between the growth and growth quality of the industry and the factors affecting the growth quality of the industry, to put forward key solutions to improve the growth quality of the Vietnamese industry in the upcoming years and finally to maintain a high, stable growth rate of the Vietnamese economy in the long run.

### **2.2. Specific objectives**

(1) Summarize theoretical issues related to the growth quality; (2) Make analysis and evaluation through some suitable targets to highlight the quality of growth of the Vietnamese industry in recent time; (3) Make suggestions to help policy makers have more bases to put forward solutions to improve the growth quality of the Vietnamese industry in the upcoming time.

## **3. Object and scope of the research**

### **3.1 Research Object**

With the research objectives above, the Vietnamese industry is the main research object of this dissertation. On the basis of the availability of the collectible data, the research object will be studied in details through secondary sub-sectors of the industry.

#### ***Scope of Research***

+ *About the Space*: The industry sector in the territory of Vietnam; *about time*: mainly in the period of 2001-2015. In addition, to see the trend of development of the phenomenon, it's possible to use the figures of the previous years from 1990 backward, especially from 1995.

## 4. Research approaches and methods

### 4.1. Approaches

The author approaches the research object systematically from theoretical issues to identification of the research object on the basis of theoretical frameworks of the industrial growth quality to find out policy-related suggestions to promote the growth quality of the industry in the coming time.



### 4.2. Research methods

The dissertation uses a variety of methods, especially desk research and modeling method.

## 5. New contributions of the dissertation

+ ***In theory:*** The dissertation systematizes theoretical issues related to the growth quality of the sector; proposes a system of targets and criteria for assessing the growth quality of sectors in general and the industry sector in particular in the context of Vietnam's developing economy, the globalization and international economic integration.

+ ***In Practice:*** The dissertation concludes that the growth quality of Vietnamese industry is not high through the low value-added ratio, the dependence on external material sources, the low labor productivity and the low ability to promote other sectors to develop

accordingly; points out the reasons for the restrictions of the existing industrial growth quality; proposes measures to improve the growth quality of the Vietnamese industry in the coming time; and also makes recommendations to the State to create a good foundation to boost up the growth rate and quality of the industry in the coming years.

## **6. Structure of the dissertation**

With the objectives, scope and methods as above, in addition to the introduction, conclusion and appendix, the dissertation consists of four chapters:

*Chapter 1:* Overview about researches related to the topic.

*Chapter 2:* Theoretical bases of the industrial growth quality.

*Chapter 3:* Actual status of the growth quality of the Vietnamese industry in the period of 2001-2015 and research on improving the growth quality of the Vietnamese industry

*Chapter 4:* Major solutions to improve the growth quality of the Vietnamese industry.

*Conclusion* and policy implications: summary of key research findings, policy implications.

## **CHAPTER 1**

### **OVERVIEW ABOUT RESEARCHES RELATED TO THE TOPIC**

#### **1.1. Domestic researches**

Researches by Nguyen Ngoc Son (2012, 2015); Ho Tuan (2009); Nguyen Thi Lan Huong (2012), Ho Huu Nghia (2011), Nguyen Kim Phuc (2011); Nguyen Van Nam and Tran Tho Dat (2006), Ngo Doan Vinh (2006), Nguyen Van Thuong (2005), Nguyen Thanh Do (2005), Dinh Van An (2008), Nguyen Thi Kim

Dung (2006) on the growth and the growth quality of the economy and of tertiary sectors.

## **1.2.Relevant overseas research works**

*Overview about classical to modern growth models and researches on the quality of growth and the role of resource factors in the growth* as Harrod Domar, Robert Solow, or Barro (1991), Temple (1999). ), Lindauer (2002), Krugman, P. and Obstfeld, M (1991), Begg (2008); Gillis et al. (2001), Killick (1993), Snowdown, Vane (2005); Abel, Bernanke, and Croushore (2011), Mishkin (2012), ....

*About the trend in improving the growth quality of the industry*, studies by Lindauer, D. (2002), Lucas (1993), Solimano, A. (1993), and Stiglitz (2000).

## **1.3. Research issues and research approaches of the dissertation**

### 1.3.1. Research issues in the dissertation:

Clarify theoretical issues about the quality of industrial growth;

Assess the growth quality of the Vietnamese industry;

Propose solutions to improve the growth quality of the Vietnamese industry on the basis of the context, viewpoints and orientations for the industrial development in the coming time, in order to maintain and improve the contribution of the industry to the economy.

### 1.3.2. The approach of the dissertation.

Rely on a theoretical analysis of the growth and the quality of growth to provide a system of criteria for assessing the quality of the industrial growth on a measurable and comparable basis.

The approach of the research on the growth quality of the industry growth is based on the structure of the growth, the

achievements of the growth, and the spillover effects of the industrial growth on the economy.

Identify the factors that affect the quality of growth of the industry, then base on the current state of the growth quality of the industry to provide a system of solutions to improve the growth quality of the industry sector.

## **SUMMARY OF CHAPTER 1**

The author has studied 110 documents inside and outside the country to clarify theoretical and practical issues about the growth rate and quality of the industry to apply to the research on the growth quality of the Vietnamese industry. On that basis, the author found that the selection of criteria and targets for the evaluation of the growth quality of Vietnamese industry in the context of integration, selection of diffusion research method through the drawing and pushing sectoral coefficients based on the application of the Leon Tief Inter-sectoral Balance Sheet is feasible in terms of theory and practice to assess the quality of growth of the Vietnamese industry. This is also a remarkable new point of the dissertation.

## **CHAPTER 2**

### **THEORETICAL AND PRACTICAL BASES TO IMPROVE THE INDUSTRIAL GROWTH QUALITY**

#### **2.1. Theoretical basis of the industrial growth quality**

##### **2.1.1. Concept of the growth quality**

##### **2.1.1.1 Quantitative economic growth**

Economic growth is the increase in the income of the economy in a certain period of time (usually one year). The increase is shown in term of scale and speed. The growth scale reflects the increase more or less, while the growth rate is used with a meaning

of the relative comparison and reflects a rapid or slow increase between periods. The income of the economy can be expressed in kind or in value. The income is the value reflected through targets and is calculated for the whole economy or the average per capita.

#### **2.1.1.2. Opinions about the growth quality**

The growth quality of the industry is a concept that “ reflects the inner content of the growth process manifested in the means, methods, objectives and effects on the environment holding that growth.” It’s demonstrated through the ability to use inputs to achieve the growth of the industry, the contribution of the sector`s constituent parts to the overall industrial growth and the impacts of achieving the targets on other sectors of the economy.

The high growth rate of the industry is understood to be the high-speed, efficient and sustainable growth of the industry, reflected through the suitability of the internal structure of the industry with the technological level, potentialities and strengths of the industry; the integrated productivity, labor productivity, large contributions to the export, value added ratio in the value of products tends to increase; industrial growth has diffusion effects on other sectors of the economy; the growth is able to save energy, and protect the environment.

#### **2.1.2.2. Criteria for assessing the industrial growth quality**

##### ***a) Proposed opinions***

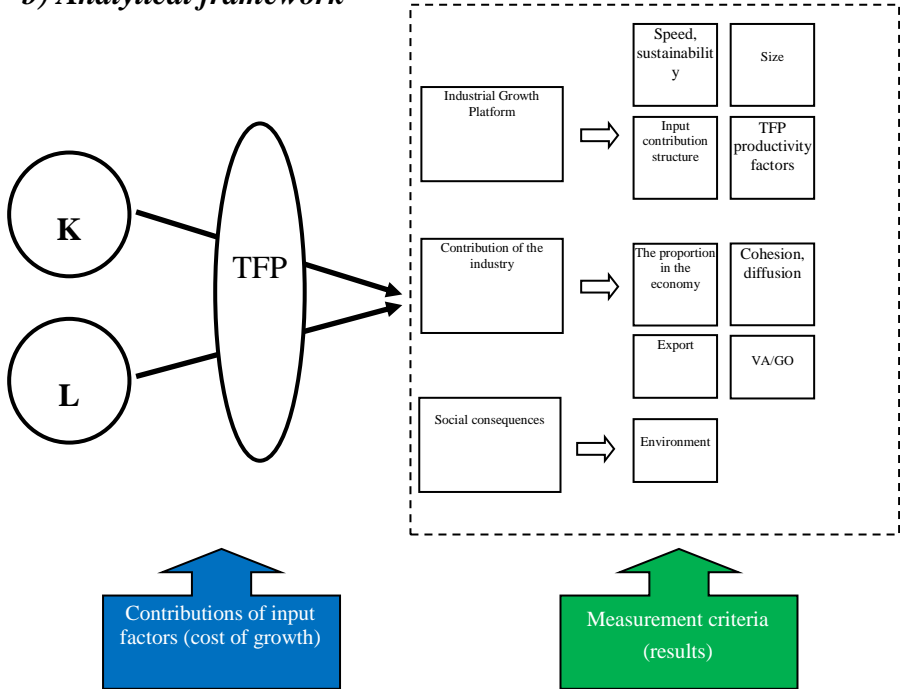
(1) Analytical framework and criteria system must be based on strong theoretical and practical arguments; they must be inherited and updated to be able to apply for a long time.

(2) The proposed system of criteria and targets should be measurable and comparable (both inside and outside the country).



(3) Analytical framework and criteria system should be suitable to practical conditions in Vietnam in general and must be linked to the industrialization and modernization.

**b) Analytical framework**



**Figure 2.1. Analytical Framework for the Growth Quality of the Vietnamese Industry**

Source: Author.

To measure the quality of growth of the industry, the author provides three groups of criteria: (i) the structure of industrial growth, reflected through the mobilization of economic resources for the growth, and the role of resource factors in Vietnam’s industrial growth in the context of scarce resources; contributions of the industry to the overall growth of the sector, to assess the level of

industrial production; (ii) Effectiveness of industrial growth; This group of criteria is reflected through the output efficiency of growth, the efficiency in capital use, labor productivity, export, efficiency of energy consumption; and (iii) the diffusion effects resulted from the industrial growth. This reflects the diffusion feature and role of the industry, the industrial growth promotes the development of other sectors and fields through its drawing and pushing forces for other sectors and fields.

***c / The set of criteria for evaluating the growth quality of Vietnamese industry sector in the dissertation***

The set of criteria for evaluating the growth quality of Vietnamese industry sector is based on three groups of criteria mentioned above.

***(1) Group of criteria representing the structure of growth***

***Target 1:*** Contributions of the sub-sectors to the growth of the whole industry sector, especially the structure and contributions of the processing industry to the overall growth of the whole sector;

***Target 2:*** Contributions of resource factors to the growth of the industry sector, especially the contribution of human resources and TFP to the overall growth of the sector.

***(2) Group of criteria representing the achievement of growth targets:***

***Target 3:*** The growth rate of industrial sub-sectors, especially the processing industry, is fast, stable and long-term. In addition, the growth rate of processing industry has increased faster than the entire industry.

***Target 4:*** Labor productivity in the industry.

Productivity is the ratio between the output and the inputs used to produce that output, mathematically, the productivity is reflected by:

$P = \text{total output} / \text{total input}$

Labor productivity in the industry should maintain a steady increase, higher than the average productivity of the economy.

**Target 5:** Efficient use of investment capitals in the industry

According to the formula:

$$g = s/k \Rightarrow k = s/g$$

In which:

k – ICOR ratio

g - Scale growth rate of the sector / the economy

s - Accumulative / investment ratio of the sector / the economy.

**Target 6:** The rate of intermediary costs in the production value of the industry, especially the processing industry.

**Target 7:** Energy consumption in the industrial production.

**(3) Group of criteria representing the diffusion effects of the industrial growth on other sectors and fields of the economy.**

**Target 8:** Contributions of the industrial growth to the overall growth of the economy.

**Target 9:** Industrial growth and export .

**Target 10:** Impacts of the industry on other economic sectors through the strong connection (back and forth) between the industry and other sectors in the economy.

**Target 11:** Industrial production and environment.

2.2. Experiences of countries in the industrial development and industrial quality improvement

### ***2.2.1. Thailand***

### ***2.2.2. China***

### ***2.2.3 International experience in orientating the industrial development***

International experiences in orientating industrial policies and proposing good industrial polices including five characteristics:

(i) industrial policy designed for some selected industries

(ii) industrial policy that is not a single policy, but includes a variety of policy types;

(iii) industrial policy that is related to the governmental intervention;

(iv) industrial policy towards the resource allocation (due to the market`s failure); and

(v) industrial policy that aims to create dynamic comparative advantages for targeted industries (prioritized industries).

There are so many useful contents drawn from the experience lessons of other countries that can be applied to Vietnam, but two of the following points should be noted:

(1) Selection of the prioritized industries: Countries are putting the priority to the industries that are more capable of creating the diversity in the development.

(2) Setup of the targets of industrial policies

## **SUMMARY OF CHAPTER 2**

Some main conclusions are as follows:

Domestic and oversea researches related to the growth quality above have allowed the formation of theoretical foundations, evaluation criteria, orientations and policies to improve the growth quality and the growth quality of economic sectors in the whole country in general.

So far, most of the researches only refer to the assessment of the quality of growth of small and tertiary industries according to the economic classification system. There has been no research evaluating the growth quality of the whole industry sector of Vietnam, especially no research has highly updated the changes on Vietnam's industrial development policy, impacts on the growth quality of the whole sector.

The proposed system of criteria for assessing the quality of industrial growth is quite consistent with the approach of domestic and foreign scholars on the topic and is quite specific, systematic, comprehensive, and suitable to the industrial conditions in Vietnam.

## **CHAPTER 3**

### **ACTUAL STATUS OF THE GROWTH QUALITY OF VIETNAMESE INDUSTRY IN THE PERIOD OF 2001-2015 AND RESEARCH ON IMPROVING THE GROWTH QUALITY OF VIETNAMESE INDUSTRY**

#### **3.1. Position of the industry in the Vietnam`s economy**

The industry is playing an increasingly important role in the economy of the whole country. The proportion of the industry sector in the country's GDP has risen sharply, accounting for 33.3% of GDP in 2015.

However, the pace of technological innovation is slow and the supporting industry has not developed yet.

#### **3.2. Actual situation of the industrial growth quality in Vietnam**

##### **3.2.1. Evaluate the structure of growth**

###### ***3.2.1.1. Growth structure by industries***

Industrial production value reached a high average growth rate. In recent 5 years from 2011 to 2015, the industrial production value has reached a high growth rate of 18.7% / year. In particular,

the mining industry has contributed 1.94 percentage points to the high growth rate in the period of 2011-2015, accounting for 10.4% of the total growth of the industrial production value; manufacturing industrial sub-sectors have contributed 13.02%, accounting for 69.7% of the growth rate, and the electricity, water and gas industries have contributed 3.71% or 19.9% of the growth rate.

And processing industry still plays a key role in the contribution to industrial GDP growth, with 7.9 percentage points in the period of 1996-2000, 7.1 percentage points in the period of 2001-2005, 4.8 percentage points for the period of 2006-2010 and 4.6 percentage points in 5 recent years from 2011 to 2015. However, the contribution rate in the corresponding periods for the total growth rate of GDP of the whole sector tends to decrease in the last 15 years: 67.8%, 70.7%, 80.1% and 69.7%, respectively.

The high intermediary costs, low added value, undeveloped supporting industries. In the long run, many economists say that maintaining an industrial structure with a low value added ratio will hardly achieve a high and long-term growth rate for this sector.

### ***3.2.1.2. Growth structure according to the contribution rate of resource factors***

- Contributions to the growth rate of Vietnam's key industries such as food processing, tobacco production, textile, garment, footwear and more are mainly due to the growth of inputs, the contribution of technological advances to the growth of these industries is insignificant. There are 46 industries having a growth in the labor productivity in the period of 2011-2015 and the growth of most of these industries is thanks to improvements in technology, technical improvements, which indicates the importance of technological advances for the increase of the productivity of the Vietnamese industry.

- The increase of labor has an insignificant impact on the growth of the research industries.

### **3.2.2. Achievement of growth targets**

#### ***3.2.2.1. Labor productivity***

Compared to the average industrial labor productivity of the group of countries or countries, the industrial labor productivity of Vietnam in 2015 is only 81% of the group of East Asian and Pacific countries, equal to 41% of Thailand, 6.4% of Korea, and 58% of China.

#### ***3.2.2.2. Efficiency in use of investment capital***

Statistical data for the period of 2000 - 2015 show that the ICOR ratio of Vietnam's industry is quite high, which means that investment efficiency is low, reaching 4.6, mainly due to the investment in technology and new industries.

Industrial growth is still prone to broad-based growth with the low efficiency in use of the investment capital, which also shows that the industrial growth quality needs to be improved.

#### ***3.2.2.3. Rate of intermediary costs in the production value***

The ratio of intermediary costs in the total industrial production value has been increasing continuously from 57.5% in 1995 to 70.4% in 2005 and 81.8% in 2015. Mainly because the processing industries have a large quantity of imported materials.

#### ***3.2.2.4. Energy consumption in the industrial production***

Vietnam has consumed electricity much more than other countries in the region to generate 1 USD of GDP. In 2015, Vietnam's electricity capacity is 0.68 KWh / USD while electricity capacity of Singapore, Hong Kong, Korea, Malaysia, Philippines, Thailand and China are 0.16 MW, 0.15, 0.40, 0.41, 0.25, 0.40 and 0.54 respectively (Table 3.9). China has made a significant improvement, if in 1990 this target was 1.61, then it fell to 1.04 in

2000, 0.65 in 2010 and 0.54 in 2013 . Thus, to generate 1 USD of GDP, Vietnam had to consume electricity 4.3 times more than Hong Kong and Singapore, nearly 1.7 times more than Korea, Thailand and Malaysia, 2.7 times more than the Philippines, and 1.27 times more than China.

### **3.2.3. Evaluate the diffusion effects of industrial growth on the economy**

#### ***3.2.3.1 Contributions of the industrial growth to the overall growth of the economy.***

The contribution rate of this sector to the economic growth of the country increased rapidly in the period of 1991-2001, from 39.3% to the highest level of 51.5% of the total 100 % of the growth of the economy in 2001. However, the role of the the industry sector in the nation economic growth has had a tendency to go down since 1999 when its contribution rate decreased from 51.5% to 38.9% in 2015.

#### ***3.2.3.3 Diffusion effects of industrial growth on economic sectors***

The results of analysis of I / O table in 2012 and the previous I / O tables show that in the period of 2000 - 2012, the Vietnamese economy has developed in the open direction, increasing the foreign trade turnover. (i) In the total supply, the proportion of imported goods and services increased from 19.6% in 2000 to 20.1% in 2012; in the total demand, the proportion of exported goods and services increased from 18.8% in 2000 to 22.4% in 2012.

In this period, some industries are heavily dependent, others are little dependent on the rest of the total 32 gross sectors in which the industry accounted for 26/30 of the gross sectors. In other periods, these interdependent relationships may change. This change partly reflects the trend of industrial development toward the



industrialization and modernization of the country and the division of labor inside and outside the country.

If in 2007, the diffusion coefficient of some industries is higher than 1, from high to low include: cast iron, steel, metallurgy and other metals; petroleum and petrochemical products; food and feed processing industry; garment and footwear; fertilizers, pesticides and plastics; machinery, automobiles, boats, means of transport; beer, wine and cigarettes; coal mining; wooden products, papers, printing; drugs and other chemicals; electricity and electronics.

Considering the target of diffusion to the added value of the industry, it can be seen that the industries that are likely to stimulate the increase in the added value in the economy are the industries of crude oil, natural gas and minerals, mining, production of leather products and leather tanning that are the most promising industries to increase VA of other sectors in the economy (the specific impacts of these industries on other sectors and on the economy)

#### ***3.2.3.4 Impacts of industrial production on the environment***

The above results show that although the level of environmental pollution varies from industry to industry, the level is worrisome. According to the results above, the biggest polluters are metallurgy, leather tanning, textile, dyeing, mining and thermal power.

### **3.3. Factors affecting the growth quality of Vietnamese industry**

#### **3.3.1. Viewpoints about the development of industries**

#### **3.3.2. Industrial trend in the world**

#### **3.3.3. Supporting industries**

#### **3.3.4. Efficiency in use of resources**

#### **3.3.5. Quality of human resources**

#### **3.3.6. Technological level of the enterprise**

### **3.4. General assessment of the industrial growth quality in Vietnam**

#### **3.4.1. Results and restrictions**

*First*, the growth is high but the achievement of the growth targets is low.

*Second*, the low achievement of growth targets is also reflected through the increasingly high intermediary cost in industrial production.

*Third*, the structure of industrial growth is not reasonable ..

*Fourth*, industrial growth is still mostly the broad-based growth.

*Fifth*, the industrial growth in the past time has contributed significantly to the increase of Vietnam's export turnover.

*Sixth*, the industrial growth has well promoted other sectors and fields of the economy.

However, *seventh*, the industrial growth is achieved on the basis of the excessive energy consumption and causing the pollution for the ecological environment that is a pressing problem today.

#### **3.4.2. Restrictions on the growth of Vietnamese industry**

*First*, backward technology, small scale, low labor productivity.

*Second*, the value added of the industries reached a low rate against the output value.

*Third*, the source of material is dependent on foreign markets, domestic resources have not been exploited effectively.

*Fourth*, lack of good management and business staff as well as mechanisms and policies encouraging the creativity.

*Fifth*, the State management mechanism is not synchronous.

*Sixth*, training human resources.

### **SUMMARY OF CHAPTER 3**

The author has used the criteria system including 3 groups of criteria, 11 targets mentioned in Chapter 2 to assess the growth quality of the Vietnamese industry.

The dissertation affirms that the growth quality of the Vietnamese industry is not high and there are potential obstacles for maintaining the growth rate in a long run.

The reasons for the actual status of the industrial growth quality in Vietnam are also indicated.

### **CHAPTER 4**

#### **MAJOR SOLUTIONS TO IMPROVE THE GROWTH QUALITY OF THE VIETNAMESE INDUSTRY**

##### **4.1. Orientations for developing Vietnamese industries**

To rapidly develop industries, it's necessary to promote their competitive advantages, dominate the domestic market and boost up the export, such as agro-forestry and aquatic product processing, garment, leather-footwear, electronics and information technology, some mechanical products and consumables.

Selectively build some heavy industry establishments: petroleum, metallurgy, mechanical engineering, basic chemicals, fertilizers, building materials ... with reasonable steps, suitability with the conditions of capital, technology and market to promote the effectiveness.

Strongly develop hi-tech industries, especially information technology, telecommunications, electronics and automation. Attach importance to the development of the software manufacturing industry into an economic branch having a remarkable growth.

Develop essential national defense industrial establishments, combining defense industry with civil industry.

Plan the rational industrial distribution in the whole country. Efficiently develop industrial zones, export processing zones, build a number of hi-tech parks, form large industrial clusters and open economic zones.

## **4.2. Directions to improve the growth quality of Vietnamese industry**

The improvement of the growth quality of Vietnamese industry should focus on the following major directions:

*First*, effectively use resources of the growth.

*Second*, reduce intermediate costs in the production process.

*Third*, promote the industrial growth in depth.

*Fourth*, improve the ability to attract labor.

*Fifth*, strengthen measures to protect the environment.

## **4.3. Major solutions to improve the growth quality of Vietnamese industry**

### **4.3.1. Improve the quality of the development planning of the industry**

#### **4.3.2. Improve the investment efficiency**

##### **4.3.2.1. For State investment capital**

##### **4.3.2.2. For the capital of state-owned enterprises**

##### **4.3.2.3. For non-state capital sources**

Encourage the development of the private and foreign invested economic zones Promote the technological innovation to increase the investment efficiency.

#### **4.3.3. Encourage the application of science and technology**

##### **4.3.3.1. Promote the demand for technological innovation and make investment in technological innovation for enterprises**

- Improve the contribution of foreign investments in promoting investment in technology renovation and technology transfer.

- Support small- and medium-sized enterprises to invest in technology transfer in the production.

#### **4.3.3.2. Form the market for scientific and technological products and support the development of this market**

Mechanisms, policies and measures should be focused in the direction: Fully establish mechanisms for the smooth operation, remove the factors restricting potential actors from engaging in official transactions on the market and support the participants in terms of finance, human capital and information.

#### **4.3.4. Improve the quality of human resources**

(i) clearly identify the sectors which currently lacks labor, qualified workers to increase the investment and support; (ii) standardize of training institutions, improve professional skills, train skills with quality targets that are stipulated clearly, (iii) there should be a close coordination among parties participating in the labor market (enterprises having a great demand for labor, institutions for training professional skills and training agencies ) in the process of formulating policies on training human resources.

#### **4.3.5. Strengthening measures to protect the environment**

#### **4.3.6. Encourage the development of supporting industries in Vietnam**

The supporting industries that need to be developed in the coming time including: textile - garment, leather - footwear, electronics - information technology, automobile assembly and manufacturing, mechanical engineering.

### **SUMMARY OF CHAPTER 4**

Chapter 4 of the dissertation has summarized the orientations and objectives of Vietnam's industrial development in the period up to 2020 and with a further vision.

Orientations to improve the growth quality of the industry in the upcoming time are also mentioned.

Some solution systems to improve the quality of growth in the future of the Vietnamese industry are analyzed by the author.

## **CONCLUSION**

The industry is playing an increasingly important role in Vietnam's economy, resulting from its superior advantages in terms of the growth rate and scale. The development of the industry accelerates the process of economic restructuring, ensures the supply of materials for the daily life of people, increases the export turnover and promotes the process of modernizing the country. In the age of globalization, international economic integration, the industry has a more and more decisive position, creating material preconditions to increase the economic growth rate, accelerate the industrialization and modernization of the country. Therefore, how to improve the quality of growth of the industry is a matter that attracts the attention of all levels, all sectors, as well as economic researchers.

The growth quality of the industry is a concept that "reflects the inner content of the growth process manifested in the means, methods, objectives and effects on the environment holding that growth." The high growth quality of the industry is understood to be the high-speed, efficient and sustainable growth of the industry, reflected through the suitability of the internal structure of the industry with the technological level, potentialities and strengths of the industry; the integrated productivity, labor productivity, high value added ratio in products; is capable of saving energy, producing highly competitive products; continually improves the position of the industries in the global value chain and be able to protect the environment. Criteria for assessing the growth quality of the industry

growth can be classified into three categories: (1) criteria for assessing the structure of growth; (2) Criteria for assessing the achievement of growth targets and (3) Criteria for assessing the diffusion effects of growth on the economy.

Research on the growth of Vietnamese industry through some aforesaid criteria in the period of 1996-2005 and 2006-2015 shows quite a clear picture of the quality of growth of the Vietnamese industry. First, industrial growth rate is high, but the growth efficiency is low, presented in the low labor productivity, the low efficiency in use of the investment capital, low and decreasing value-added value ratio in the total output due to the unreasonable industrial structure and the failure to develop the comparative advantages of Vietnam in the industrial production. Second, the structure of industrial growth is inappropriate in the width and in the depth; the manifestation is that industries have not used labor as effectively as expected, have not attracted an abundant source of labor, the value added is not high when they are only involved in the stages having the lowest added value ratio; and the contribution of technology and technical improvements to the growth has been poor. Finally, although industrial growth has contributed significantly to the overall growth of the economy, solve problems of employment and increase the export growth, but the contribution of the industry to the overall growth of the economy tends to decrease due to the low production efficiency; Moreover, the high growth achievements of the environment- unfriendly industry has been one of the main causes of the deterioration of the natural environment in Vietnam.

There are many reasons for the status of the low growth quality of the Vietnamese industry. The most remarkable is the low quality of industrial planning; the industries are underdeveloped, human resources have not met the requirements of the industrial

development in the integration period; the level of technology and the awareness of the role of technological innovation in improving the labor productivity, increasing the competitiveness and efficiency of the industrial production are unequal and unthorough; and the equitization process of State-owned enterprises is slow.

In order to improve the quality of Vietnam's industrial growth, some solutions may be proposed as follows: (1) Improving the quality of the industrial development plan; (2) Improving the efficiency in use of the investment capital in the industrial production in all economic sectors; (3) Encouraging the application and renovation of the technology in enterprises; (4) Investment in improving the quality of human resources to better meet the demands for human resource in the industrial development; (5) Strengthening measures to protect the environment ; (6) Encouraging the development of supporting industries to improve the added value ratio in the total industrial output due to the high reliance on sources of expensive raw materials on the world market; Finally, (7) Accelerate the equitization process of state-owned enterprises to improve the performance of this group of enterprises, contributing to create a level playing field and encourage industrial enterprises in all economic sectors to develop together.

The growth quality in general and the growth quality of the industry in particular is a big and complicated issue. The industry is a broad sector with a large number of sub-sectors having specific characteristics. Studying and identifying the growth quality of this sector thoroughly requires more time and effort and the more thorough research on each sub-sector of the industry. The research topic is complicated and certainly, the dissertation may have certain defects. A more extensive and deeper research on this issue will be conducted in the next studies.



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