A STUDY ON THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND URBANIZATION IN THE NORTHERN VIETNAM KEY ECONOMIC REGION

By

Le Minh Quan

THESIS

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
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Committee in charge:

Professor Jeong-Ho KIM, Supervisor

Professor Song Su CHOI

Professor Seul Ki CHOI

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ABSTRACT

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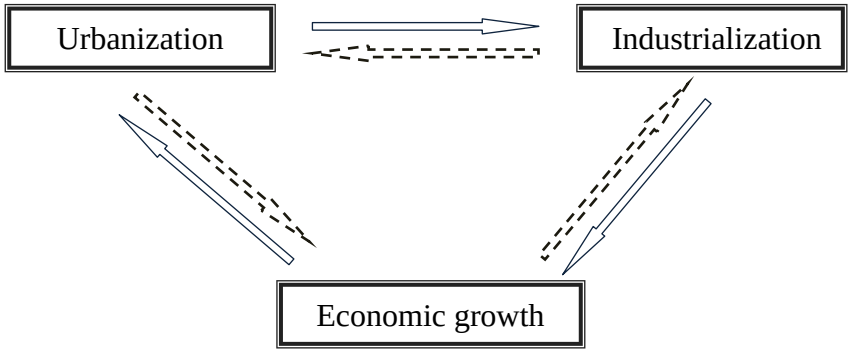
Urbanization, industrialization and economic development have causal relationships with each other. Much of the urbanization takes place through rural-to-urban migration. Migrants move to cities, particularly to large cities in order to gain access to jobs, better education, knowledge and information, new technology, better opportunity for money making through service jobs and small businesses, and exposure to a larger world. The urban concentration of population also generates “agglomeration” in consumption, production as well as distribution, leading to efficiency. The diversity of consumable goods available is another benefit for urban consumers. From the standpoint of producer, it is easier to mobilize not only labor but also capital and other resources. Corporate managers can also gain management knowhow and market information more easily and timely, both domestic and international, which helps them be better prepared for severe competition. Meanwhile, industrialization helps corporations produce goods and services competitively to the satisfaction of the market. There also exist various kinds of services such as banking, insurance, consulting, financing, tax-related services that help firms be engaged in production activities more efficiently and competitively. For another aspect, the urban area is a bigger market for product consumption and distribution in comparison with the rural area of the same size.



The urbanization is generally measured in terms of urbanization rate and population concentration of large urban areas or regions. By the same token, industrialization, in terms of the percentage of workforce employed by manufacturing and service sectors in particular, as compared with the agriculture sector, and economic development in terms of increase in the GDP per capita.

For Vietnam's cases, there are some researches directly or indirectly dealing with urbanization, industrialization and economic growth. However, there is no such research as this paper and especially focusing on analyzing the relationship between urbanization and economic growth in regional areas of Northern Vietnam, so called "The Northern Key Economic Region (NKER)". The researches previously mentioned mainly touch on sustainable urban transport plans, a development trend of urbanization, a relationship between urbanization and migration of population, advantages and disadvantages of migration. However, this paper partly utilizes the results of the previous researches to support the analysis outcomes and conclusive statement suggested in this paper.

The urbanization is an inevitable trend of the development process of each country. In recent years, Vietnam has achieved positive results in the urban development associated with the goals of the economic growth, and the improvement of the quality of people's life. The urban system has achieved rapid growth in terms of both quantity and quality. The urban appearance has also been changed towards more civilized and modern one, creating a new and better urban space, gradually to meet the needs for an improved environment for working and living. As of December 2012, Vietnam has developed 765 cities; urbanization rate reached 32% and expected to be higher in next ten years. The urban areas annually contributed about 70-75% of the country's GDP. The urban area has proven its role as a driving force for economic development, industrial readjustment, shifted labor structure not only in the urban area but also in local, regional areas, and further whole country.

Despite of the positive effects that the urban development in Vietnam has brought, its impact is still limited and it does not meet development requirements acclaimed by both the urban and local areas. Although the number of cities was increased, but its quality has not been improved due to lack of appropriate attention and due diligence. The urban development in Vietnam was not tightly controlled under the programming and planning. The quality of infrastructure in urban areas was still below than is needed, leading to increasing traffic jams, air pollution, and more seriously shortfall of clean water supply. The obsolete drainage systems in many urban areas cause degraded hygiene and inundation in many places. Environmental pollution got worse due to waste, untreated sewage. Construction and urban development has been wastefully in using natural resources, energy consumption and large emissions that were causing ecological imbalance, environmental degradation... That is the big challenges affecting to the image of urban area, residential environment, and the growth and economic development.

The economic growth and urbanization have tightly relationship with each other. Overall, rapid economic growth led to a high speed of urbanization and vice versa. The determination of the size of the urban population growth, the establishment of a model of urbanization in a manner of being consistent with the level of economic development has a significant and positive impact back on the economy. In other words, economic growth has accelerated urbanization, and urbanization process contributed to better allocation of resources and gave more strengthened motivation for the economic development.

The urbanization in the Northern Vietnam Key Economic Region has been a driving force of the socio-economic development, contributing to the national goal of industrialization and modernization. However, the urbanization has a negative impact on the growth and economic development of the region. Therefore, the economic development of the NKER forces the policy makers and the urban planners to be faced with enormous challenges. These challenges include ensuring a high quality of people’s life, ensuring effective use of the resources, and protecting the environment in the region. In other words, the challenges are how to promote economic growth but to control the negative effects on the environment and infrastructure, whilst delivering a high quality of life for urban residents in the region.

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Le Minh Quan

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ABBREVIATIONS

CKER	Center Key Economic Region
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNP	Gross National Product
GSO	General Statistics Office
HCMC	Ho Chi Minh City
MPI	Ministry of Planning and Investment
NKER	Northern Key Economic Region
NI	National Income
RRDA	Red River Delta Area
SKER	Southern Key Economic Region
SUTP	Sustainable Urban Transport Plans
UN	United Nations
UNIDO	United Nations Industrial Development Organization
VND	Vietnamese dong
WB	World Bank

CHAPTER 1 INTRODUCTION

1.1. Statement of the problem

The Northern Key Economic Region (NKER) includes seven provinces and cities: Hanoi, Hai Phong, Quang Ninh, Hai Duong, Hung Yen, Bac Ninh, and Vinh Phuc, along with the Central Key Economic Region (CKER) and South Key Economic Region (SKER) formed three pillars of economic development of the country.

According to the General Statistics Office of Vietnam, NKER with a natural area of 15,278 km^2, its population of 14 million people, its economy accounted for about 21% of the GDP, a share of investment reached 26% of total projects, 27% of investment capital, contributing 25% of the national budget. Its average income was about $1,000/ person/ year, equal 1.4 times higher than an average rate of the country (in 2012).

However, the development of the urban areas and industrial parks in the NKER is irrational. The process of urban development is quite fast but no overall planning for long-term vision; environmental pollution, especially water pollution due to industrial and urban waste is aggravating; there exists no plan to build the proper training centers for the NKER. These will be further discussed in the next analysis.

1.2. Purpose of study

By reviewing the status and situation of urbanization development of the NKER, which affected the regional development, this paper analyzes the limitations of present development policies and programs, and then draw out policy implications and propose suitable policies and guidelines for the sake of the desirable economic development of the country as well as the local areas.

1.3. Research Questions

How is the economic growth and urbanization related with each other?

What is relationship of the two: urbanization and industrialization; industrialization and economic growth; urbanization and economic growth; and vice versa?

What recommendations are for the competent authorities of the government?

1.4. Hypothesis

The urbanization is an indicator of the economic transformation and has a mutual relationship with the economic growth in Vietnam in general, and in the NKER in particular.

1.5. Study method

The study method based on the following ways:

- Study documents;

- Inherit the previous studies;

- Use methods of analysis, statistic, comparison, and collection; and

- Ask for specialists.

1.6. Object and scope of study

Object of study

The issues relating to population, labor force, employment rate, economic structure, technology, capital, natural resource and infrastructure in the NKER and its relationship with the urbanization, industrialisation and economic growth.

Scope of study

- *Content:* the study identifies key connections between the pairs of the urbanization and industrialization, the industrialization and economic growth, ultimately the urbanization and economic growth aiming at harmonizing the NKER's urban development goals and economic growth.

- *Time:* period from 2001 to 2012

- *Spatial*: research data in the provinces/cities of the NKER, Hanoi was taken for proof analysis.

CHAPTER 2 BASIC CONCEPTS

The urbanization is measured by urbanization rate and population concentration of large urban areas or regions. By the same token, industrialization, in terms of a percent of workforce employed by manufacturing and service sectors in particular as compared with agriculture sector; and economic development, in terms of an increase in the GDP per capita.

2.1. Concepts of the urbanization and other related terms

Urbanization: a process led to a higher proportion of total population in a living area such as city and town.

Rate of urbanization characterizes a projected average rate of change of the size of urban population over a given time period.

Urban growth is an absolute or simple growth in a number of urban dwellers.

Urbanism is a characteristic way of urban dwellers' lives.

Exceptional is not so much an increased proportion of urban growth, but the absolute growth of urban population.

Rapid growth of cities in the developing world has produced several distinctive forms and processes.

Rate of urbanization characterizes an average rate of change for the size of urban population over a given time period.

$$k = \frac{Urbanization\ population\ (of\ the\ entire\ region)}{The\ total\ population\ (of\ the\ entire\ region)}\ (\%)$$

2.2. Concepts of the industrialization and other related terms

In 1963, United Nations Industrial Development Organization (UNIDO) offered this definition: "Industrialization is a process of economic development, in the process, an accelerating part of the national wealth motivated to develop various sectors of economic structure in the country with modern techniques. The feature of this structure is the changing distribution to produce the capital goods and consumer

goods, have the ability to ensure that the whole economy developing high pace, ensure that to the advancement of economic - social".[1]

Nowadays, under the increasingly strong and direct impact of scientific and technological innovation, globalization, and shift towards developing knowledge - based economy, defining the industrialization is widely open to debate. However, the concept of industrialization is generally meant a process of transformation of the agricultural economy based on manual techniques, small-scaled commodity production with heavily self-sufficient nature to an industrial economy based on modern techniques with productivity, quality and efficiency; it is also a process of developing the market economy and deeper integration into the economic life. Today, industrialization is strongly tied to modernization of all aspects of economic life of national society. Vietnam has identified "Industrialization or modernization is a process of fundamental transformation of the overall operations: sale, socio-economic service and management from using manual labors as a basic to using common labors with technology, media and modern methods based on the development of industrial revolution and scientific technological progress to produce high productivities".[2] In general, the industrialization and modernization is a process of national transition from a state of the agricultural economy and agricultural civilization to the industrial economy and industrial civilization that may contain certain elements of knowledge economy and intellectual civilization.

For a country that starts economic development from an economy of backward agriculture, handicrafts or labor-incentive industry with low productivity, industrialization and modernization are implemented in a long process with fraught difficulties. The success of this process depends directly on the path of the right strategy to ensure the mobilization and efficient use of the domestic resources and the attraction of the external resources to serve the real tasks for the economic and social development of the country.

2.3. Concepts of the economic growth and other related terms

Economic growth is an increase in the amount of the goods and services produced by an economy over a given period (usually one year).

[1] "The fundamental problems of industrialization in the developing countries". Moscow, 1972. Translated from the University of Economy and Planning, 1973 page 1.

[2] Documents of the 7th Meeting of the Central Committee of the Communist Party of Vietnam (Course VII), page 43.

Economic growth is measured as the percentage of change in the Gross Domestic Product (GDP) or Gross National Product (GNP).

GDP = Consumption + Investment + Government Spending + (Exports - Imports)

GNP = GDP + Net income inflow from assets abroad or Net Income Receipts - Net payment outflow to foreign assets

Economic growth is an objective expression of the transformation of quality for the economy, reflecting improvement in the material living standards of the country and achievement of development goals targeted. However, countries with rapid economic growth do not have the same degree of social progress and development. This means that economic growth is necessary but not sufficient to improve the living standards for majority of the population who live in the country with a low per capita GNI. It should be necessarily accomplished because, without growth, individuals may be better off only when there is a drastic transfer of income or assets from some group of people to the other individuals. Economic growth helps a majority of people to come up to more equally heightened level of income and living standard without sacrificing other group of people, the better-off.

Nevertheless, economic growth is not always a necessary and sufficient condition to improve standard of living for the majority of population. It may be a fallacy to assume that higher GNI per capita means that every member of a society or families will have higher income equally or most of social conditions will be improved at one time. The reasons for it can be attributable to a market failure, inefficient allocation of resources, waste of national fund, ineffective policy implementation, or the costly projects undertaken, and it often provides less benefit to people than anticipated. There are actually a lot of evidences to support this statement: most of the wealth of ancient Egyptians invested in the construction of the pyramids, developing countries today can develop their militaries, weapons of mass destruction...

The measures of economic growth: SNA method (System of National Accounts), income of the economy reflects in the following indicators:

1) Gross Output (GO) is the total value of sales by producing enterprises (their turnover) on the territory of a country in an accounting period (usually a year). There are two ways to obtain a measure of GO: (1) the total value of sales derived from enterprises, industries in the entire national economy, (2) it is directly calculated

from manufacturers and services include intermediary costs (IC) and the gross value added (VA).

2) Gross Domestic Product (GDP) is the market value of all officially recognized final goods and services produced within a country in a given time period. To calculate this GDP, there are three basic approaches: production, consumption, and distribution.

3) Gross National Income (GNI) consists of personal consumption expenditure, gross private investment, government consumption expenditure, net income from assets abroad (net income receipts), and gross export of goods and services after deducting two components: gross import of goods and services, and indirect business taxes.

GNI appeared in the SNA (System of National Accounts) table since 1993 to replace the indicator of GNP, which used in the SNA table in 1968. GNI and GNP are similar, and both of them measure the economic growth of a given country. A primary difference between the two is in how those measurements taken, and how economic growth is determined.

GNI measures total economic growth of a country and takes into consideration incomes and taxes earned both internationally and domestically, while GNP only measures the incomes and taxes earned from domestic citizens.

To better understand the differences between GNP and GNI, it is necessary to scrutinize the definition of the both terms. GNI is the value of services and products that a country produced within in a calendar year in combination with interest payments and dividends from outside countries in the same year. While GNP is the market value of all the products and services that a country produced through the labor or property supplied by its citizens.

GNI = GDP + NIA (Net Income from Abroad, i.e. incomes from export)

$$\text{Net Income from abroad} = \text{Income received from abroad} - \text{Income paid to abroad}$$

A difference in terms of amount between GDP and GNI is an income with foreign countries. In developing countries, the GNI is usually smaller than GDP due to this difference, which is normally negative.

2.4. Relationship between economic growth and urbanization

Urbanization is an inevitable result of socio-economic development, which takes place along with the process of industrialization, modernization, restructuring the economy from agriculture to manufacturing and service industries. Urbanization rate depends on the level of socio-economic development, and at the same time, it gives significant impact on economic growth. Urbanization not only affects the development of the economic sector but also dose on the social issues, the environment and the lives of future generations.

- Positive impacts

+ The process of urbanization has provided a large, qualified workforce. For example, in Hanoi, the average economic growth reached 10.02%/ year in the period 2001-2010, in 2010 contributed 21% of GDP and 30% of the total state budget revenues, 29% of industrial production value and nearly 40% of total exports. In this contribution, there is a labor force attracted due to the urbanization process, they have contributed to the economic development of Hanoi about 30% of GDP.

+ Contribute to creating jobs and reduce current surplus labor. Due to the development of science especially biotechnology technology, rural labor force currently works only 30-40 days each year, while the non-agricultural industries, processing industries, rural industrialization are underdeveloped, thus agricultural workers cannot find jobs right in their hometown. As a result, urbanization has received the surplus labor to socio-economic development.

+ Urbanization creates the conditions to promote an economic restructuring in the country extensively, increasing the proportion of manufacturing and service industries in the whole economy, and reducing the importance of agricultural industry to a substantial degree.

- Negative impacts

+ Issues of labor and employment: In the case of Hanoi city, the proportion of agricultural area decreased continuously from 4.6% in 2001 to 1.2% in 2010; industry and construction sectors rose from 40.6% to 48.2%; service sector decreased slightly from 54.8% to 50.6%. This structure shows a progress and development of the city. However, urbanization created increased challenges and difficulties in solving employment issues due to gaps between qualifications and requirements for the

employee, which is one of main causes of unemployment in the midst of fast progress of urbanization.

+ Transportation infrastructure and living environment have been affected. The sudden increase of population in the process of urbanization has made infrastructure to become obsolete quickly; while new infrastructure could not be built quickly, and construction has been delayed, causing heavy traffic jams.

CHAPTER 3 LITERATURE REVIEW

Literature review refers to the overview of prior works in one's field of study so as to build a theoretical framework, increase knowledge on the subject, and see knowledge gaps within that field. The papers selected for a review for this section provide a structure to the correlation between economic growth and urban development, effects of transport infrastructure that relate to urban development and economic growth.

Literature review is not only to inform readers of the state of scholarship about the given topic, but also to plan, organize, and evaluate prior studies related to major points, parts, and arguments of each source. It conveys to readers knowledge and ideas already established on a study topic, and highlights the strengths and weaknesses of the studies to them. A critical review of literature also helps the author of this research to create a firm foundation of knowledge including main findings, relevant methodological issues, and major conclusions of other researches. Thus, literature review is necessary to assert that this study is a separate research, which does not overlap with any prior study.

3.1. Situation of the related researches in the country

Nguyen Sinh Hung - Deputy Prime Minister of Vietnam stated, "Vietnam has only one chance to get urbanization right. If we fail at urbanization, we will fail at industrialization and modernization".[3]

According to Luu Duc Hai, sustainable urban transport plans (SUTPs) have been developed in many countries around the world such as USA, UK, France, Japan, Australia, etc. and they provided some initial achievements for traffic as well as social and economic development. In Vietnam in general and large urban areas such as Hanoi, HCMC, Da Nang, and Hai Phong in particular, SUTP is a new problem raised by last two decades and it is now facing with many difficulties. The current transport system are now causing many negative impacts to public health and community, economic development such as air pollution, noise, congestion, traffic accident, etc. and more serious day by day. Therefore, the purpose of study is to establish indicators

[3] World Bank (2011). Vietnam Urbanization Review: Technical Assistance Report.

for the SUTPs for the special cities and the class I cities in Vietnam. The indicators and criteria will be the tools to control the speed of urban transport development, and be database to provide information about the sustainable traffic development problems in the urban areas.[4]

According to Truong Ba Thanh, urbanization is an inevitable development trend of the world's countries. It is followed by an increase in urban space, population density, commerce, or other activities in a given area over time. Urbanization is always along with the migration from rural to urban. The migration flows have created prosperity for urban areas, but it itself raised numerous implications for urban areas as rising unemployment, increasing traffic congestion, lack of housing, poor sanitation, lack of school, lack of health services, poor health care, etc. Therefore, the correct perception of the migration rules is always a hard question, so that there are effective measures in order to be active in controlling the migration flows in the urbanization process, but it is a burning desire of the macroeconomic policies makers, urban managers. To address the above requirements, the report goes on to study the theoretical models of migration to propose solutions of controlling the migration flows in the process of urbanization in the developing countries including Vietnam.[5]

General Statistics Office of Vietnam used the survey data of the census of population and housing in 2009 to provide the updated information of situation, trends and differences on the migration and urbanization in Vietnam. The results of data analysis showed that the immigration trend were increased in terms of both absolute quantity and rate in Vietnam and strong contribution of the migration to urban areas, especially to large cities. Migration contributed positively to migrants themselves and to development of the destination, but migration also contributed to the increase of socio-economic gap between destination and original place, between urban and rural area, and among the regions. Along with the process of industrialization and urbanization, population in the urban areas was growing strongly. City dwellers had many advantages compared to rural dwellers in the development process. However, the overloading state of urbanization in Vietnam was leading to a part of the urban

[4] Luu Duc Hai, 2011. Study on the indicator system establisation and the criteria for plainning a sustainable urban transport in the special and type-1 urban areas.

[5] Truong Ba Thanh and Hoa Dao Huu, 2010. Immigration problem in the process of urbanization - from theory to policy direction". Journal of Science and Technology, University of Da Nang, No. 3 (38).

population did not have access to basic amenities, even in the largest cities Hanoi and HCMC. The study also gave suggestions that development policy in Vietnam should pay more attention to the issues of the migration and urbanization at the present to ensure that the migration and urbanization will contribute the best to the growth and socio-economic development in Vietnam.[6]

The MPI's studies in terms of labor market and urbanization showed the following: First, the increase of productions is not enough to create jobs. Second, although productivity increased in most industries, but there was an increase of the productivity gap between the most effective sectors. Third, the supply of trained labors in Vietnam should be increased rapidly. Fourth, urbanization naturally goes breast with economic growth, and many things have to carry out to support the urbanization process orderly and effectively rather than try to limit that process. The stripping of necessary financial resources for the planning and development of cities, is equal with increasing the cost of industries located in urban areas through an increase of the labor costs, will cause difficulties for workers who seek employment in urban areas.[7]

3.2. Situation of the related researches in oversea countries

Study of Meyer (2000) indicates that one of the most important indicators to review the degree of a country's economic development is the rate of urbanization. From the earliest beginnings, cities have provided opportunities to achieve the economy of scale through division and specialization of labor, and these opportunities do not easily exploit at rural regions.

Terwase (2010) indicates "There are two-side relationships between urbanization and economic development. On the one side, it promotes economic development, while on the other side it is an impediment to economic development of most nations".[8] Terwase compared the economic situation of some developing countries and showed that it was better in the cities. He finally concluded that there

[6] General Statistics Office of Vietnam (2011). Migration and urbanization in Vietnam - Situation, trends and differences.

[7] Ministry of Planning and Investment (2010). Labor markets, employment and urbanization in Vietnam in 2020. Learning from international experience.

[8] Terwase, S. (2010). The Relationship between Urbanization and Economic Development in Developing Countries. International Journal Of Economic Development Research And Investment, (2), 30-36.

was a weak relationship between urban growth and economic development in the developing countries.

Thomas (2008) also agreed on the two-side relationships, and he added that "Urbanization has three components: natural increase of population, migration, and the reclassification of rural area as urban area or a change in the criteria for 'urban'".[9] She showed that many researchers considered that migration is the dominant factor, but main cause today is natural increase of population, instead of migration. It seems a controversial topic. However, the latest comprehensive researches made an effort to separate it from other components of urban growth put its contribution about 60% in the median country. The remaining part of urban growth - roughly 40% was a combination of migration and reclassification.

The cities have an advantage of modern system of infrastructure including networks of roads and railways, telecommunications, electricity, etc. Besides, there are a large number of public utilities like hospitals, schools, public offices, parks, and other facilities those take significant roles in pushing the economic development as well as satisfying the needs of habitants. The cities do compete with each other not just for material or human resources, but also for attracting large-scaled events, resources from international organizations and institutions, and even for a better image among the public. Infrastructure is one of the most important factors of living, production of goods and services and distribution of them, which is directly related to the quality of whole life of the people. The importance of infrastructure was again asserted by Walsh and Amponstira (2013): "the role of infrastructure… is to promote efficiency of rule and create a network in which the city can form a node connected with economically important locations... By contrast, infrastructure is being used to both promote economic activities and link up with cross-border markets".[10]

Glaeser and Mare (2001) argued that the cities have brought the economies of scale by reducing the transportation costs or better access to suppliers or other location specific productivity effect, allowing better matching workers and jobs, lowering cost of capital due to better monitoring or easier production of capital in some locations. Their findings showed that wages were 32% higher in the large cities

[9] Thomas, S. S. (2008). Urbanization as a driver of change. Arup Journal, 43(1), 58-66.

[10] Walsh, J., & Amponstira, F. (2013). Infrastructure Development and the Repositioning of Power in Three Mekong Region Capital Cities. International Journal Of Urban & Regional Research, 37(3), 879-893. doi:10.1111/j.1468-2427.2013.01212.x

and 21% higher in the standard cities than in the hinterland.[11] The reasons for the higher urban wage were supposed not only to compensate for migrant costs, higher costs of living, inconveniences of cities, but also for higher productivity. To understand the wage growth effect, Glaeser and Mare tested two hypotheses and concluded that urban wage growth effect was not simply a result of better labor market coordination in cities; workers were actually acquiring more skills in dense environments. Glaeser and Mare also gave the value explanations on why there were differences between urban and non-urban productivity: the transports serve the firms in the city where they can save transport costs to markets. Indeed, cities have better access to national transportation networks. City also functions as an economic center and a major port, serves as a hub of the multi-modal transport network consisting of roads, railways, airways, and even waterways. This is a clear tradeoff between savings in transport offset by high urban wages. By contrast, Lucas (1988) and Rauch (1991) argued that the mass of human capital within cities acts to increase average productivity. Another view by Ciccone and Hall (1993) suggested that knowledge spillovers allow workers to take advantage of their neighbors' wisdom since the cities' density make neighbors closer and urban areas facilitate the local human capital. These externalities may affect individuals by different ways. Another possible explanation for the urban wage premium is that workers (both non-migrants and rural-urban migrants) living in cities are simply better by some unobserved way. For non-migrants those have been living in cities and have been familiar with the culture in cities, they are able to compete with their counterparts. For the rural-urban migrants, they are the brightest and best-educated workers attracted to cities by non-work related advantages to being in cities or simply by luck. Finally, one of the important reasons to explain a higher wage in urban areas comes from saving input costs (economy of scale) due to convenient access between urban areas and improvement of transport infrastructure. As a result, cities seem to speed wage growth.

Dhakal and his colleagues (2010) agreed on the significant role of urbanization to economic growth. They proposed a simultaneous equations model in which economic growth and urbanization treated as endogenous variables. Annual time-series data is used and the model is estimated for each of the five South Asia

[11] Glaeser, Edward L.and Mare, David C. (2001). Cities and Skills. Journal of Labor Economics, University of Chicago Press, vol. 19(2), 316-42.

countries: Bangladesh, India, Nepal, Pakistan, and Sri Lanka, and for the panel to analyze. The overall results suggest that urbanization plays a positive role in economic growth in South Asia and vice versa, economic growth has a positive effect on urbanization. The relationship between economic growth and urbanization is complementary to each other.[12]

Mills and Hamilton (1984) stated that the role of economies of scale in the creation of cities affirmed and most urban areas arose because of the economic advantages of large-scale activities.

Rakodi (2004) indicated that cities of developing countries have been facing with the challenges of rapid population increase with unaccompanied economic growth. As a result, cities in these regions are often characterized by the following crises such as lack of economic dynamism, governance failure, severe infrastructure, and service deficiencies. However, urban centers continue to grow, despite the severity of these obstacles that make urbanization to have a weak relationship with economic development of developing countries. Shabu (2010) had the same point of view, and he emphasized that the proportion of region's population living in cities is rising at an alarming rate without proportionate increase in the economic variables of cities, the economic development process will suffer.

The number and size of cities in Vietnams has significantly increased during the last 10 years from 601 cities in 1999 to 731 cities in 2009 with the economic growth of 42.8% during this period. (World Bank, 2011)

Industrialization plays a vital role in economic development of the countries, especially the underdeveloped countries. The historical facts reveal that most of the developed countries of the world broke the vicious circle of underdevelopment by industrialization. Industrialization promotes the economic development of a country to achieve a higher standard of living for its masses. It has, therefore, embarked upon various programs of industrialization. The policies of privatization, deregulation, and market liberalization have been pursued. The role of industrialization in economic development has been an important subject of lots researches.

Weidong and Baohua (2011) carried out an empirical analysis to test influences of urbanization and industrialization on the service industries

[12] Dhakal, D. et la. (2010). Urbanization and Economic Growth in South Asia. SCMS Journal Of Indian Management, 7(3), 27-34.

agglomeration with panel data of Chinese provincial regions. The results indicate that urbanization, industrialization, and service industries are all the focus in the economics profession, and service industries have been playing a vital role in the development of macroeconomics. In addition, both urbanization and industrialization have a significant positive impact on the service industries agglomeration, and the final goal is the growth of regional economy.

World Bank (2011) indicated that Vietnam is still in an early stage of industrialization and the role of large cities with better access to the international market is critical for national economic growth. Indeed, the two largest cities of Hanoi and HCMC, and their neighboring areas are vital to maximize the benefits from agglomeration economies, and make Vietnamese industries globally competitive. Industrialization is rapidly progressing in Hanoi and the Red River Delta areas (RRDAs) due to their proximity to the massive industrial bases in South China. Heavy manufacturing industries, such as transport equipment manufacturing, are growing particularly fast in Hanoi and the RRDAs. The review focuses on the road freight transportation with 88% of manufactured goods transported by roads in Vietnam and that urbanization and industrialization closely linked.

Beall and Fox (2009) indicated that city and its development provides a critical exploration of the dynamic relationship between urban development and economic growth, highlighting both the challenges and opportunities associated with rapid pace of urbanization. The prior studies showed that urbanization has a historical relationship with economic development, and plays a role in fostering economic growth of cities. However, accompanying with the opportunities given by the urbanization are challenges and complexities of traffic congestion, urban crime and violence in contemporary cities are escalating and posing a high pressure for the city government.[13]

Shabu also agreed that there exists a relationship between urbanization and economic growth. This relationship, however, is strong or weak depending on the appearance of each country. Many countries have a high rate of urbanization accompanied with a high rate of income per capita and a high GDP growth rate, which shows that the urbanization accompanies with development in some of the

[13] Beall, Jo. and Fox, Sean. (2009). Cities and development. Milton Park, Abingdon, Oxon, New York : Routledge.

developing countries. It means that the relationship is strong. On the contrary, the relationship is weak.[14]

World Bank's review (2011) shows that there is a strong co-movement of urbanization and economic growth in Vietnam. Vietnam's overall urbanization had been in a similar stage to the countries in the Asia area such as China, India and Indonesia until late 1970s, but then it slowed down while China and Indonesia were increasing urbanization and economic growth. On account of Doi Moi reforms (in 1986) and export-oriented industrialization policies, Vietnam's urbanization also started accelerating. In parallel, economic growth, measured by GDP per capita, was strong over the same period. This coinsides with rapid structural transformation from an agriculture-based economy to greater emphasis on the industry and export oriented activity. All these suggests that the urbanization, as an indicator of economic transformation, is linked to the economic growth in Vietnam, as everywhere else.

The urbanization does not guarantee the economic growth and modernization, but it is generally regarded as one of the firm reasons for Vietnam's transition from one of the poorest countries in the world into a lower middle income one. Furthermore, its future effects on the national economy may well depend on how well the transition from a large rural economy to an urban one can be managed - a transition that is now well underway. No country has achieved a status of high-income country and has attained a strong economic growth without urbanization, regardless of its being a motive or result, and nearly most of the developed or fast-developing countries experienced severe urbanization before fully reaching the status of a middle-income country.

The relationship between urbanization and economic growth is perceived by examining the effects of urbanization on the key factors of economic development such as the followings: transport infrastructure, human resources, capital (entrepreneur), technology, information, organizational skills, and negative impacts such as environmental pollutions, congested traffic, etc.

The urbanization brings both positive and negative effects to the economic growth of cities and its surrounding areas. In terms of positive effects, urbanization

[14] Shabu, Terwase (2010). The relationship between urbanization and economic development in developing countries. International journal of Economic Development research and Investment, vol.1 (2 and 3), 30-36.

promotes the economic development, and as a result, the economic growth rate of cities is always higher than the average growth of the whole country. Cities contribute more to GDP than rural areas. Cities are the places to organize the important events of the country, and they play key roles in both political and economic domains. The level of national development can be seen through its urbanization rate. Indeed, the developed countries have level of urbanization much higher than the developing ones. For instance, the developed countries South Korea and Japan have the level of urbanization of 83% and 91% progressively while the developing one Vietnam of 31% in 2011 (WB, 2011).

Glaeser (2007) presents basic facts on two measures of entrepreneurship: the self-employment rate and the number of small firms. Both of these measures are correlated with urban success, suggesting that more entrepreneurial cities are more succesful. Self-employment is particularly associated with abundant, older citizens, and with the presence of input suppliers. On the contrary, small firm size and employment growth due to unaffiliated new establishments are associated with the presence of input suppliers and appropriate labor force. He also finds support for the Chinitz hypothesis (1961) that entrepreneurship is linked to a large number of small firms in supplying industries.

Adam Smith and others argued that transport exerted a strong positive influence on economic development, and that increased production could directly relate to improved transport. Indeed, the quality of transport infrastructure may affect the performance of enterprises through various channels. A lower cost of doing business over distance implies improved market accessibility of firms, potentially leading to greater market expansion, economies of scale and integration across different locations (Lall et al., 2004; Graham, 2007; Holl, 2006 and 2011). Hunter, for example, postulated a causal linkage between low-cost transport and economic growth. The industrial revolution was successful because of the prior revolution in transport technology. Similarly, Owen argued that a widening of domestic markets through improved transport services is a prerequisite for national economic development. Further, most undeveloped countries, for variety of geographical, economic and historic reasons, are dependent upon international trade, and expansion of this trade is an essential prerequisite for the growth.

The improved transport networks are associated with wider economic benefits, more than just the direct benefit from reduction of the transport costs. Major investments to transport infrastructure are associated with general improvements in economic growth, urbanization, trade and international competitiveness, and poverty reduction (Banerjee et al., 2012; Hendersen, 2000; Buys et al., 2010). Banerjee et al., (2012) find that improvement in transport infrastructure leads to larger average profits of manufacturing firms in China.

According to Wachs, the infrastructure investment prescribed to stimulate its economy in the short term by creating construction employment, and to foster longer-term economic growth by making transport system more efficient and reliable.[15]

Grips Development Forum (2003) showed that development of large-scale transport infrastructure in Vietnam helped in opening up new business opportunities and promoting income diversification and off-farm employment. Such infrastructure facilitated the spread economic linkages between growth centers and their surrounding rural areas, providing a vital importance of connecting remote areas to truck routes with feeder roads to achieve poverty-reducing growth. In a research, Larsen and et la (2004) found that spending 1% of a province's GDP in Vietnam on transport investment will reduce its poverty by 0.5%-1% and that US$50 million transport investment in the fifteen poorest provinces would reduce the poverty by 6-7%.[16]

However, some people argued that the transport sector is now a victim of its own success, with the rapidly increasing demands for transport being one of the main contributors to climate change and increasing polluted emissions. It claimed that the sector is not sustainable and therefore some of the reforms should roll back (Bruzeilus, 2011).

The others argued that the rapid growth in transport has created a rapid urbanization, attracting more rural-urban migration. As a result, the population density in urban areas becomes too high, while in rural regions becomes relatively low. This creates an unequal population density, which is not good for the economic development. Further, unequal population density is a cause of the inequality in the

[15] Wachs, Martin (2011).Transportation, jobs, and economic growth. The magazine of the University of California Transportation Center. Access number 38, Spring 2011.

[16] Larsen, Pham and Rama (2004). The impact of Infrastructure Development on Rural Poverty Reduction in Vietnam.

price of land: urban land price is high and poor urban people could not afford to buy a house in cities.

The above studies and analyses are overall very rich in the contents, reflecting the topicality of the research topic, being valuable legacy and very good reference for the realization of the study outcomes. However, there are developments different from the past analysis and new features to make the realization of the study outcomes become imperative. That is, the study focuses on the subject of economic growth and urbanization in the northern key economic region as well as the relationship among them, in a manner of systemazation of research method, intensiveness to research subject and collection of up-to-date information for analysis. This study requires a systematic, intensive and high topicality as shown in the other recent studies involved directly or indirectly - the ones which examine the same or similar topics as this study. However, those studies do not give an updated picture on the latest situation on the economic growth and urbanization of Vietnam in the present context.

CHAPTER 4 ANALYSIS

4.1. General information about urbanization and economic growth in Vietnam

- The growth and economic restructuring in Vietnam

In pursuit of innovation, the prime economic model for Vietnam is to build a market economy ultimately transitioning towards socialism, Vietnam has escaped the socio-economic crisis successfully by creating the preconditions necessary for switching its economic regime to the one most suitable for a new development period - the period of accelerated industrialization and modernization.

Table 1: The growth rate of GDP in 1986-2012 period

	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011	2012
Growth rate of GDP (%)	4.4	8.18	6.94	7.51	7.01	5.89	5.02
Growth rate of GDP by kinds of economic activity (%)							
Agriculture, forestry and fishing	2.7	4.09	4.3	3.83	3.34	4.0	2.72
Industry and construction	4.7	12.0	10.6	10.3	7.94	5.53	4.52
Services	5.7	8.6	5.75	6.96	7.73	7.01	6.42
Growth rate of GDP by types of ownership (%)							
State	1.90	9.30	7.31	7.46	5.01	4.46	-
Non-State	6.20	4.94	4.96	6.98	7.98	6.84	-
Foreign investment sector	-	31.15	17.61	9.90	8.01	6.29	-

Source: Annual Statistical Yearbook, General Statistics Office of Vietnam

The economic structure has been changed positively in the direction of industrialization and modernization, linking production to market. The proportion of agriculture, forestry, and fishery in total GDP has been declining; the period 1986-1990 accounted for 41.11%, only 31.79% in the period 1991-1995, and continued to decline in the next two stages. Meanwhile, the share of the industry and construction has increased rapidly and continuously: the period 1986-1990 was 25.4%, 27.51% in the period 1991-1995, and 41.36% achieved during the period 2005-2010. The proportion of service sector in GDP increased from 33.49% at the period 1986-1990 to 41.04% at the period 1996-2000, and decreased slightly in the next two stages. The service sector has grown more diverse, and better meet the needs of production and life; tourism, telecommunications development at a rapid pace; the industries of finance, services, banking, legal advice... were developing in the direction of improvement and efficiency.

Table 2: The structure of GDP by sectors in the period 1986-2012

	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011	2012
GDP (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, forestry and fishing	41.11	31.79	25.84	22.30	20.89	22.02	-
Industry and construction	25.40	27.51	33.10	39.47	41.36	40.79	-
Services	33.49	40.70	41.06	38.23	37.75	37.19	-

Source: Annual Statistical Yearbook, General Statistics Office of Vietnam

- Urbanization in Vietnam

Since the "Đổi mới" reforms started in 1986, in Vietnam, two major shifts took place: First, a shift from rural to urban areas. Second, a transition of economy from a centrally planned economy to a market economy. The urban population are increased by about one million people each year that the urban population will double by 2020. The economic opportunities in urban areas are promoting increasingly the migration from rural areas to cities. The proportion of urban population has been increased gradually over time, according to the UN forecasts, Vietnam will have more

than 65.8 million people living in urban areas in 2050, with the urbanization rate will be 59%.

Table 3: Urban popullation and urban population ratio in the period 1950-2050

Year	Whole country population (thousand people)	Urban population (thousand people)	% urban population	Year	Whole country population (thousand people)	Urban population (thousand people)	% urban population
1950	27,367	3,186	11.6	2005	84,074	22,981	27.3
1955	30,052	3,935	13.1	2009	88,069	26,204	29.8
1960	33,648	4,946	14.7	2010	89,029	27,046	30.4
1965	38,099	6,256	16.4	2015	93,647	31,474	33.6
1970	42,898	7,850	18.3	2020	98,011	36,269	37.0
1975	47,974	9,011	18.8	2025	102,054	41,371	40.5
1980	53,317	10,262	19.2	2030	105,447	46,585	44.2
1985	59,789	11,696	19.6	2035	108,091	51,760	47.9
1990	66,247	13,418	20.3	2040	109,986	56,772	51.6
1995	72,957	16,202	22.2	2045	111,164	61,508	55.3
2000	78,663	19,263	24.5	2050	111,666	65,867	59.0

Source: World urbanization Prospectives: The 2009 Revision Population Database.

Vietnam has been experiencing a rapid urbanization, and the national urban system has undergone many changes in terms of the number of cities. According to statistics of the Ministry of Construction, as of December 2012, the national network of urban areas of Vietnam had 765 cities; urbanization rate reached 32% and expected to reach approximately 45% by next 10 years. Every year, urban areas contributed about 70-75% of GDP to the national economy and increasingly asserted an importance of their role as the most important driving force as well as the nuclear force in promoting the economic restructuring of the regions and localities in the country.

- The characteristics of Vietnam urban regions today

In recent years, the urbanization rate in Vietnam is increasingly accelerated and stronger. The urban system is not only being increased in the number but also gaining linkage among the urban centers to expand their scope of operations and solve the problems caused by socio-economic development, which are related primarily to public services, commercial activities, and environmental protection. The assertion of the urban system in legal documents of Vietnam and the existence of actual development of the Vietnam Urban Association are some of the vivid evidences for this trend. Since the urbanization first started, cities increasingly asserted their role in the governance of the whole country. Many urban areas were not only boast of their long history and cultural elegance that were recorded in the history due to the unique contours of the painting, handicrafts, architecture, and other cultural heritages, but also were determined to host important international conferences and events, sports or cultural events, competing with other urban areas. Vietnam urban areas have now the following key features:

First, urban region is usually a center for politics and economy, center of culture, education, science, and technology, or an important traffic hub of a country, province, district, or region. Urban area is also a place where government agencies from central to local level gather. It also is a focal point of many private corporations where businesses centered. Therefore, any lack of coordination or connection within an urban area or among urban areas in the operation and management activities is detrimental to meeting the requirements of urban administration, failing in the development of the area.

Second, urban area is a place with higher density of population, compared with rural area. A large number of urban people came from various regions, having different objectives and life fairy independent from the others, the situation of which is different from that of the local areas in the countryside.

Third, the population of non-agricultural sectors does not take up a big proportion in the total population of a country.

Fourth, urban area is the hub of important public utilities and infrastructure such as transportation, communication, telecommunication, utilities, construction buildings, and other things. However, the infrastructure of many cities and towns still

is not on par with its economic development, when considering the situations of the developed modern urban areas in the world.

Fifth, urban lifestyle is characterized by joint dwelling, almost no link of parentage, and isolation from the custom and cultural tradition, always respecting the legal standards rather than the rule and standard of community.

Sixth, the residents in urban areas generally have higher education backgrounds and qualifications than the ones in rural areas.

Seventh, dividing the administrative boundaries within cities does not have great significance for inhabitants, and they can live in a place and work elsewhere.

Eighth, urban area is also a place generating many social problems such as unemployment, crimes, social misconducts, and other numerous social problems frequently arise, along with overloaded schools, hospitals, urban transportation, etc.

Considering the above characteristics, on the one hand, each city in Vietnam, whether small or large, is a unified administrative unit, inseparable in terms of territory, infrastructure, and socio-economic activities. On the other hand, the urban areas still have a mix of urbanized areas with the peripheral areas (urbanizing) that still carry many features, rural elements (for infrastructure, architectural, economic and social activities, lifestyle...). Therefore, they need to be distinguished from traditional cities in terms of organizational structure and management practices of urban government apparatus in these urban areas.

In recent years, the number of urban cities and towns in Vietnam has been increased dramatically with their characteristics and scales being developed in a different way, especially in provincial areas near to the big cities and towns. However, the criteria on urban scale, social and economic structure, infrastructure system, etc. do not meet the standard criteria on classification for urban areas. Even in the urban areas with similar development grade, the scale and size of the areas are very different. Many low-grade urban areas[17] have by many times greater than higher-grade urban areas in terms of scale and size.

Similar to China, the industrialization and urbanization in Vietnam during the past years attracted many rural-urban migrants, and urban areas expanded. The number of migrants estimated is shown in the table 4.

[17] Vietnam urban region divided into 6 classes from class I to V and special class.

Table 4: Migration according to the census of population on April 1, 1999 and April 1, 2009.

	Migrants (thousand people)		Rate of migrants (‰)	
	1994-1999	2004-2009	1994-1999	2004-2009
Migration within a district	1,343	1,618	19	21
Migration among the districts	1,138	1,709	16	22
Migration among the provinces	2,001	3,398	29	43
Migration among the regions	1,334	2,361	19	30

Source: General office for population family planning (2011).

The comparison of the two periods of time indicates that the rate of migration within a district was only increased by about 10%, while the increase rate was about 37% among the districts, 48% among the provinces, and the highest rate of migration was recorded up to approximately 58% among the regions. Correspondingly, the increase of migrants were 275 thousand people within a district, 571 thousand people among the districts, nearly 1.4 million people among the provinces, and about 1 million people among the regions.

Data and descriptive evidence

Investing in the transport infrastructure is a controversial issue. On the one side, some people said that Vietnam should not invest too much money on it (over 6% of GDP per year) rather this amount of money should be distributed to other fields such as education, health and welfare. On the other side, people agreed to invest more amount of fund, because the transport infrastructure has played an important role to promote economic growth. The transport infrastructure has made cities closer, created good opportunities to exchange of commodity among the regions, and more importantly to the export, technology transfer, knowledge spillovers, etc., those aim to raise the revenue of the regions, income per capita, and reduce the poverty line.

The table 5 illustrates that Vietnam's total investment and infrastructure investment have been highly relative to other regional countries in the past decade.

The government's focus on infrastructure is illustrated by the fact that about 35% of total state investment was directed to infrasturcture between 1998 and 2003.

Table 5: Investment in East Asia (% of GDP)

	Investment (2003)	Infrastructure (1998)	Infrastructure (2003)
Cambodia	22	2.9	2.3
Indonesia	16	3.1	2.7
Phillipines	19	5.6	3.6
Lao PDR	20	1.7	4.7
China	44	2.6	7.3
Vietnam	35	9.8	9.9
Thailand	25	5.3	15.4

Note: Investment is gross capital formation as a % of GDP.

Source: WDI (2005). The source for expenditure on infrastructure is ADB, JBIC and World Bank (2005), "Connecting East Asia", Appendix A, Table 7.

The below table 6 provided the increasing levels of investment in the different infrastructure sectors. In 2002 and 2003, the greatest investment was in the transport and energy sectors, estimating roughly 3% - 4% of GDP each, while the infrastructure investment of water and sanitation, and telecommunications were 0.5% and 1.4% of GDP respectively.

Table 6: Vietnam's investment in infrastructure

	1999	2000	2001	2002	2003
VND billion					
Water and Sanitation	2,132	2,306	2,532	2,778	
Telecommunication					8,422
Electricity			13,517	18,172	19,548
Transport	11,219	11,660	17,871	21,576	

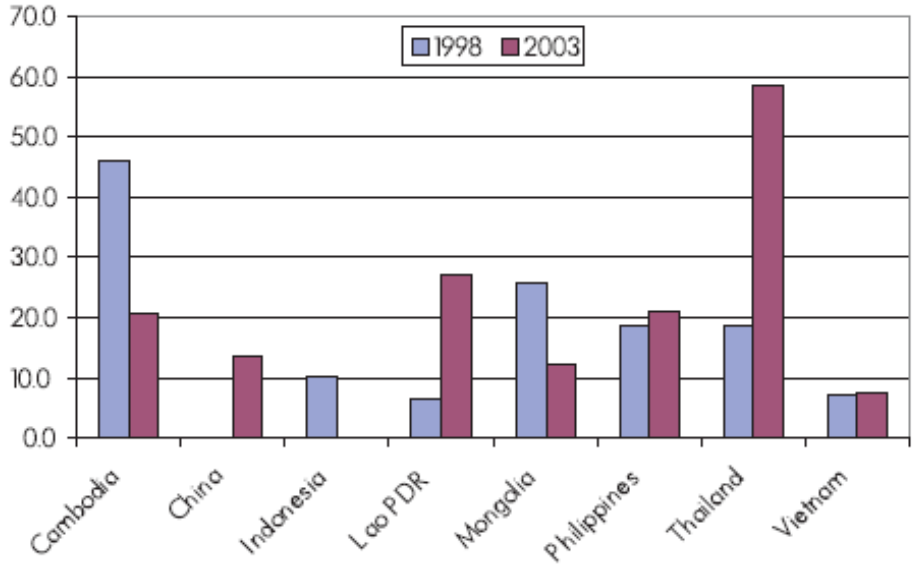
US$ million					
Water and Sanitation	153	163	172	182	
Telecommunication					543
Electricity			918	1,189	1,260
Transport	805	823	1,214	1,412	
% GDP					
Water and Sanitation	0.53	0.52	0.53	0.52	
Telecommunication					1.39
Electricity			2.81	3.39	3.23
Transport	2.81	2.64	3.71	4.03	

Note: Blanks indicate missing data.

Source: General Statistics Office of Vietnam.

However, the figure 1 showed the proportion of road expenditure devoted to maintenance. With 7.1% of total road expenditure in 2003, Vietnam had the lowest maintenance expenditure as a typical sample. Neglect of the maintenace was inefficient since it was like increasing long-term maintenance costs.

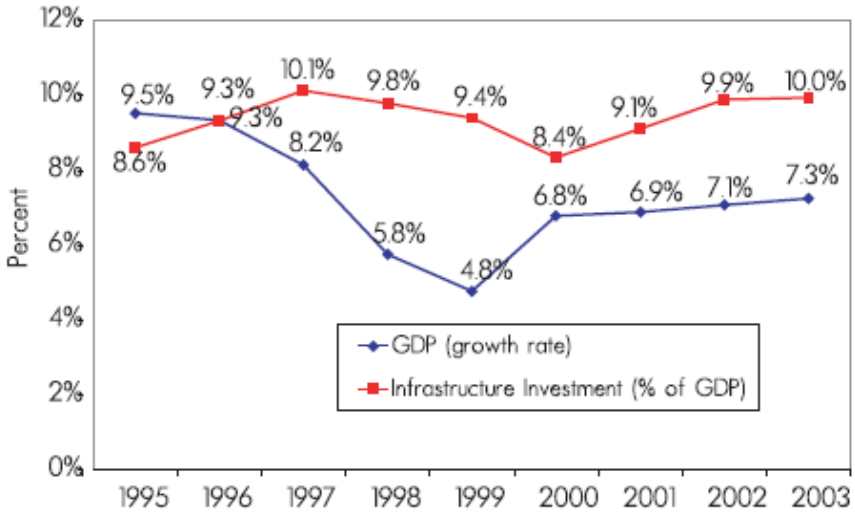
Figure 1: Road Maintenance Expenditure (% Total Road Expenditure)



Source: ADB, JBIC, WB (2005).

As seen in the below figure 2, the infrastructure investment has outpaced the GDP growth since 1997, boosting productivity of the economy.

Figure 2: Growth and Infrastructure Investment, as percentage of GDP



Source: General Statistics Office of Vietnam. Infrastructure investment includes transportation, telecommunications, water, gas and electricity.

Transport infrastructure investment increases economic productivity

The transport investment should be lower than the costs for moving people and goods. If it is achieved, then the desirable level of economic productivity will be attained, which can be measured roughly as a ratio of the output of goods and services to the public investment conducted in the transport.

It is proved that improved productivity led to the economic growth and a higher standard of living. The volume of expenditure and investment in the transport sectors has been controversial and a major concern. However, investment in the transport system with a high productivity increased the connectivity between the cities and local areas, and reduced the traffic congestion, thereby saving the social costs and contributing to the improvement of general and economic well-being of the people.

In short-term, the investment in transport infrastructure creates the employment in constructing the transport infrastructure and the jobs associated with operating it for the public services, but it is long-term effects on economic recovery should not be ignored.

Due to the larger proportion of investment to the transport infrastructure, the condition of the transport facilities has significantly improved, attracting more

passengers and freights. As a result, the demand for transport grew slightly faster than GDP in the period 1999-2005. Over this period, the annual growth rates in demand for transport freight and passenger measured in ton and passenger km were 12% and 10% respectively as seen in the table 7. Road has remained a dominant mode of transport, accounted for 67% of volume of freights but coastal shipping accounted for 71% of all ton-km due to its dominance in long-distance movements.

Table 7: Domestic Transport Volume period 1999-2005

Mode	1999				2003				2005				Annual increase in ton-km (%)
Goods Transport	1000 tons	%	Milton-km	%	1000 tons	%	Milton-km	%	1000 tons	%	Milton-km	%	
Railways	5,146	2.7	1,445	3.6	8,385	3.2	2,725	4.5	8,838	2.7	2,948	3.6	13
Roads	132,137	69.5	7,160	17.8	175,856	67.3	9,403	15.4	211,556	65	11,262	13.9	8
Waterways	39,887	21.0	3,968	9.8	55,258	21.1	5,141	8.4	69,933	22	4,785	5.9	3
Coastal	13,006	6.8	27,620	68.5	21,811	8.3	43,513	71.3	33,798	10	61,872	76.3	14
Aviation	42	0	106	0.3	90	0.1	211	0.4	104	0	229	0.3	14
Total	***190,219***	***100***	***40,295***	***100***	***261,401***	***100***	***60,992***	***100***	***324,229***	***100***	***81,096***	***100***	***12***
Passenger Transport	Mil pass.	%	Mil pass.	%	Mil pass.	%	Mil pass.	%	Mil pass.	%	Mil pass.	%	Annual increase in pass-km (%)
Railways	9.3	1.3	2,722	8.8	11.6	1.0	4,069	9.2	12.8	1.0	4,582	8.6	-
Roads	588.4	80.9	22,053	71.1	926.2	83.7	29,181	66.6	1,076.5	84.9	34,436	64.6	8
Waterways	125.7	17.3	2,110	6.8	161.7	14.6	3,282	7.5	169.3	13.3	3,420	6.4	8
Coastal	2.7	0.4	4,042	13	4.5	0.4	7,112	16.2	6.3	0.5	10,670	20.0	17
Aviation	1.3	0.1	80	0.3	2.2	0.3	142	0.5	2.5	0.3	189	0.4	15
Total	***727.4***	***100***	***31,007***	***100***	***1,106.2***	***100***	***43,786***	***100***	***1,267.4***	***100***	***53,297***	***100***	***10***

Source: 99 and 03 data from Statistical Year book 2004, 05 data from GSO website.

The table 8 shows that real expenditure on transport increased 21% per annum between 1994 and 2002. The large increase reflects a strong commitment of the government in modernizing the transport system to support economic growth and be consistent with the policy of prioritizing investments in the transport infrastructure.

During this period, transport expenditure grew three times as fast as the economy peaked at 4.5% of GDP in 2002 and averaged 3.2% over the period. The increase of transport expenditures was also an evident in the share of the total government expenditures from 7.8% in 1994 to 17.6% in 2002. The increase in transport expenditures during this period was characterized by tremendous fluctuation from a low rate of 6% in 2000 to a high rate of 50% in the following year.

Table 8: Overview of Transport Sector Expenditures

Transport Expenditure (Billion of real 1994 Vietnamese Dong)	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total Transport Expenditures	3,558	N.A	N.A	6,726	7,362	8,992	9,569	14,360	16,510
- Central Expenditures	2,163	2,857	2,828	4,583	5,047	5,679	6,005	8,325	9,318
- Local Expenditures	1,395	N.A	N.A	2,143	2,314	3,314	3,564	6,034	7,192
- Capital Expenditures	2,538	N.A	N.A	5,550	6,168	7,885	8,338	12,834	14,898
- Recurrent Expenditures	1,020	N.A	N.A	1,175	1,193	1,108	1,231	1,526	1,612
Percentage Growth (%)			94-97 (annualized)		1998	1999	2000	2001	2002
Total Transport Expenditures				24	9	22	6	50	15
- Central Expenditures				28	10	13	6	39	12
- Local Expenditures				15	8	43	8	69	19
- Capital Expenditures				30	11	28	6	54	16
- Recurrent Expenditures				5	2	-7	11	24	6
Percentage GDP (%)	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total Transport Expenditures	2.0	N.A	N.A	2.7	2.8	3.2	3.0	4.2	4.5
- Central Expenditures	1.2	1.5	1.3	1.9	1.9	2.0	1.9	2.4	2.5
- Local Expenditures	0.8	N.A	N.A	0.9	0.9	1.2	1.1	1.7	1.9
- Capital Expenditures	1.4	N.A	N.A	2.3	2.3	2.8	2.6	3.7	4.0
- Recurrent Expenditures	0.6	N.A	N.A	0.5	0.5	0.4	0.4	0.4	0.4

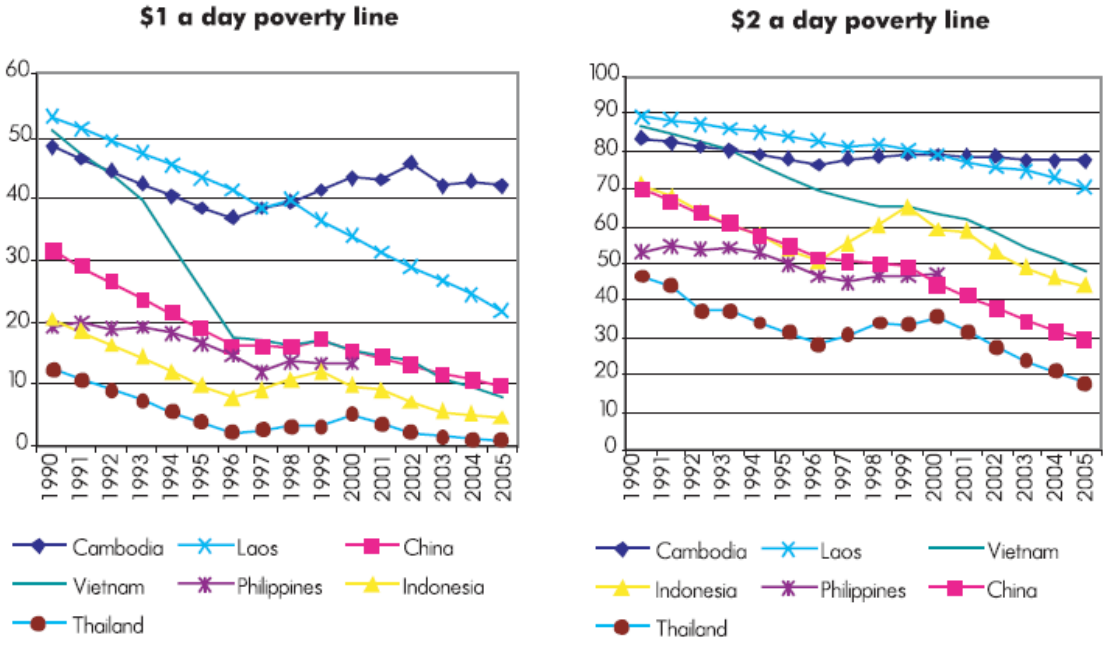
Percentage of Transport Expenditures (%)	1994	1995	1996	1997	1998	1999	2000	2001	2002
- Central Expenditures	61	N.A	N.A	68	69	63	63	58	56
- Local Expenditures	39	N.A	N.A	32	31	37	37	42	44
- Capital Expenditures	71	N.A	N.A	83	84	88	87	89	90
- Recurrent Expenditures	29	N.A	N.A	17	16	12	13	11	10

Source: General Statistics Office of Vietnam.

Transport investment reduces the poverty

The robust growth has played a crucial role in lifting millions of people out of the poverty. Among the nations named in the figure 3: Vietnam has performed the best in reducing the poverty, at $1 a day Vietnam lifted 43% of the population out of the poverty and the poverty rate fell at 8% in 2005. The poverty headcount ratio at the $2 a day fell by 39%, the second-best reduction after China with 40%.

Figure 3: Percent of Population Living in Poverty



Source: World Bank (2004). "East Asia Update, November 2004". Missing data has been interpolated.

Vietnam needs to invest more to transport infrastructure

Percentage of paved national roads is an useful indicator for the quality of a nation's road network. As seen in the table 6: 84% of Vietnam's national roads were paved in 2004, increased from 61% in 1997. This indicator is also reasonable by standard applicable to the regions. The condition of road network has also been significantly improved with the percentage in good condition increased from 37% in 1999 to 45% in 2002. The quality improvement of the road network relied on the new constructions rather than the maintenance of the existing roads because the expenditures of the periodic and routine maintenance for national roads between 1998 and 2002 were less than a half of the estimated maintenance needs.

Table 9: Percentage of national roads that are paved in selected Asian coutries

Country	Length (kms)	% Paved
Phillipines[1] (2004)	28,266	70
Phillipines[2] (1981)	23,835	44
Vietnam[3] (2004)	17,295	84
Vietnam[4] (1997)	15,100	61
Thailand[5]	51,544	98
Thailand[5]	28,790	80

Source: 1.Phillipines 2003, DPWH website; 2.National Transport Planning Project, 1981; 3.Vietnam Road Authority; 4.VITRANSS; 5.ASEAN Statistical Yearbook 2004.

The role of the NKER in the national economic development

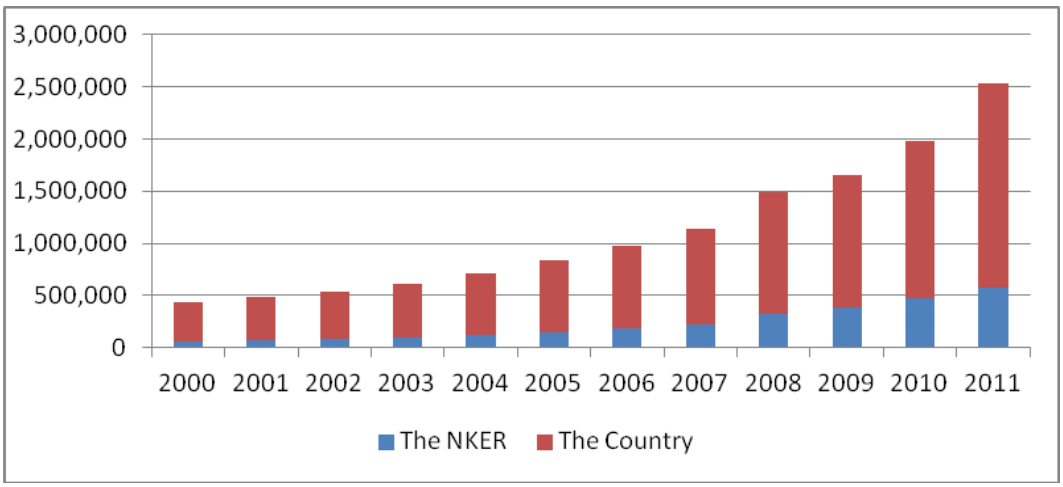
The NKER has played an important role to promote the economic development of the country. The empirical evidence is the percentage of GDP contributed by the NKER to the country as shown in the table 10.

Table 10: The percentage of GDP contributed by the NKER to the country

Year	The NKER (billion dongs)	The country (billion dongs)	NKER/Country (percent)
2000	65,043	441,646	14.73
2001	73,725.3	481,295	15.32
2002	86,431.7	535,762	16.13
2003	101,479.8	613,443	16.54
2004	121,345.4	715,307	16.96
2005	149,875.6	839,211	17.86
2006	181,861.9	974,266	18.67
2007	220,797.4	1,143,715	19.31
2008	325,238	1,485,038	21.90
2009	383,320.4	1,658,389	23.11
2010	470,536.6	1,980,914	23.75
2011	573,284.9	2,535,008	22.61

Source: General Statistics Office of Vietnam.

Figure 4: The GDP contributed by the NKER to the country (Billion Dongs)



Source: General Statistics Office of Vietnam.

As seen in the table 10, the GDP of the NKER was 65,043 billion dongs in 2000, equal to 14.73% of the nation's GDP. This figure has significantly increased to 573,284.9 billion dongs in 2011, equal to 22.61% of GDP of the whole country. It is clear that the urban region has contributed a large proportion to the nation's GDP.

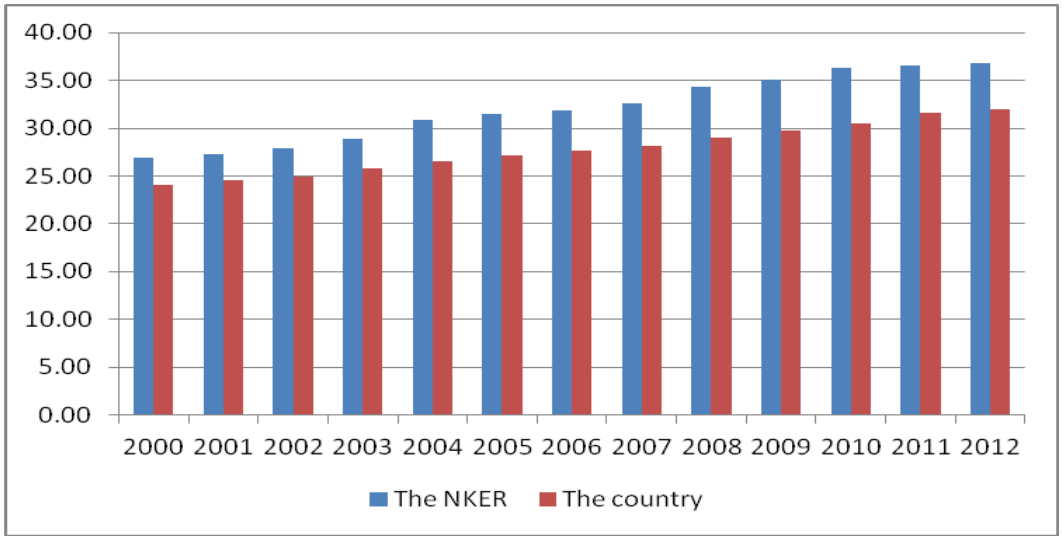
Table 11: The rate of urbanization between the NKER and the whole country

Year	Rate of urbanization (%)	
	The NKER	The country
2000	26.87	24.12
2001	27.32	24.55
2002	27.94	24.99
2003	28.94	25.76
2004	30.89	26.53
2005	31.47	27.10
2006	31.91	27.66
2007	32.66	28.20
2008	34.34	28.99
2009	35.07	29.74
2010	36.31	30.50
2011	36.50	31.56
2012	36.76	31.94

Year	The urban population (thousand people)	
	The NKER	The country
2000	3414.0	18725.4
2001	3523.4	19299.1
2002	3655.9	19873.2
2003	3842.3	20725.0
2004	4161.8	21601.2
2005	4296.0	22332.0
2006	4402.8	23045.8
2007	4549.2	23746.3
2008	4869.4	24673.1
2009	5021.7	25584.7
2010	5264.7	26515.9
2011	5367.9	27719.3
2012	5480.4	28356.4

Source: General Statistics Office of Vietnam.

Figure 5: The Rate of Urbanization (%) of the NKER as compared with the whole country



Source: General Statistics Office of Vietnam.

The table 11 and figure 5 indicated that the urbanization rate was always faster in the NKER than the whole country. This rate of the NKER and the whole country reached 36.76% and 31.94% respectively in 2012.

4.2. The relationship between economic growth and urbanization in the NKER.

- Urbanization has been associated with economic growth and enhances the economic density of the region

Economic development makes lives of people better that are a mainstream and positive aspect of urbanization in the NKER. In particular, Hanoi capital is one of the localities received the largest amount of FDI with 1,681.2 million US dollars and 290 projects in 2012. Furthermore, this city is also a place gathering 1,600 foreign representative offices, 14 industrial parks with 16 thousands of industrial manufacturing facilities. Along with the areas with a high-speed urbanization, the economic indicators such as population, per capita income, and GDP growth… reflect positive dynamics of the growth (see the table 12).

Table 12: The economic indicators of the NKER

Criterion	Unit	2005	2009	2010	2011	2012
1. Population						
- The whole country (a)	1,000 persons	82,392	86,025	86,932	87,840	88,772
- The Red River Delta (b)	1,000 persons	18,976	19,618	19,803	20,021	20,236
- The NKER (c)	1,000 persons	13,651	14,322	14,502	14,710	14,907
c/a	%	16.57	16.65	16.68	16.75	16.79
c/b	%	71.94	73.00	73.23	73.47	73.67
2. GDP growth at constant prices	%	10.2	11.5	11.2	11.5	12.0
3. Per capita income	Million VND /person	10.33	20.5	22.2	22.8	23.5

Source: Calculation from data of MPI.

The economic indicators in the above table show a positive trend of the NKER. The NKER always has a developmental pace faster than the average of the Red River Delta and the whole country. Economic density, it is based on the criteria of GDP/km^2 reflecting the economic concentration also tends to increase significantly, higher than the level achieved in the country. In 2012, the per capita income of the NKER reached 23.5 million dongs, while the criterion of the whole country only reached about 17-18 million dongs.

As reported by the Foreign Investment Agency (FIA) in the period 2006-2012 (as of November 2012), four key economic regions had 8,126 projects with total registered capital of USD125,604.2 million, in which the NKER occupied 2,790 projects with total registered capital of over USD33,788.8 million. There were 60 countries and territories in the worldwide invested in the NKER, however, the biggest investors came from eight countries and territories including South Korea, Japan,

Hong Kong, Malaysia, Singapore, the Netherlands, Cyprus and the United States sorted in descending order of amount. While Central key economic region (CKER) had only 38 countries and territories; Southern key economic region (SKER): 70; and the Mekong River Delta: 20. Thus, in terms of partners, the NKER ranked at the second largest after the SKER.

Table 13: The countries and territories invested a large FDI to the NKER

(As of November 2012)

Country/Territory	Number of project	Amount of registered capital (Million USD)
South Korea	854	5,845.2
Japan	515	5,701.8
Hong Kong	114	3,683.9
Malaysia	77	3,597.9
Singapore	152	3,087.3
The Netherlands	28	2,307.1
Cyprus	3	2,176.0
The United States	70	1,500.2

Source: Reported by the Foreign Investment Agency (FIA), 2013.

- Urbanization associated with a process of industrialization and economic restructuring towards modernization

First, there are thriving industrial parks, processing zones and service centers in each region, and Hanoi is one of the regions attracted the largest number of industrial parks in the NKER. Most industrial parks located in the favorite positions with facilitating traffic, in fact there were many industrial parks staying along highway roads such as highway 5 (from Hanoi to Hai Phong), highway Thang Long - Noi Bai, highway 2 (from Hanoi to Lao Cai) due to attractiveness of the traffic and location. The industrial parks in Hanoi always occupies the superiority in every aspects compared to the ones in other cities, its occupancy rate reached 85.1%; its capital-labor ratio reached USD34.3 thousand/labor.

Second, contributing to economic restructuring towards gradually reduce a proportion of agriculture, forestry, and fishery, but increase a proportion of industry, construction, and services in GDP.

From 2001 up to now, an economic structure of the NKER had a positive shift. The service sector reduced its proportion, reflecting a growth trend of the industry. With a proportion of the service sector accounted for 53.61% in 2009, while the one of the non-agricultural sectors (industry and services) accounted for approximately 56%, the NKER's economy was considered at relatively high level of development. This was a significant contribution for the urbanization process closely linked with industrialization.

- Urbanization of the NKER associated with the expansion of Hanoi creates a favorable space to ensure a sustainable process of the urbanization

Along with a process of urbanization of the NKER, the spatial expansion of Hanoi occurred repeatedly in 3rd Session of the XII National Assembly, adopting the resolution of expanding the Hanoi's administrative boundaries. Accordingly, Great Hanoi after its expansion, covered a natural area of 334,470.02 hectares (equal 3,344.7 km^2) and its population of 6,232,940 people, became one of the thirty biggest cities in the world. This expansion of Hanoi is necessary for its sustainable development, especially for the needs of industrial development and environmental protection issues: the Great Hanoi possessed a radial axis and green strips interwoven, will allow Hanoi to develop new urban areas away from its center, and create a green buffer zone between the new and old cities. The green bands will be a corridor of leading wind, contributing to the protection of ecological environment. If the green bands are narrow, they are merely bands of isolation, anti-noise and dust. If the ones are larger, they can be a fruit farm, or organic vegetable production zone, fresh flowers, ecotourism areas or satellite towns.

- Urbanization associated with the spatial expansion through a formation and development of Hanoi capital as a "platform" for its development

The development and spatial expansion of Hanoi capital is always along with a nucleus urban area and surrounding area - called counterweight region. The counterweight regions of Hanoi (range from 30 to 60 km) were formed with three major sub-regions: (1) Hoa Binh province in the West of Hanoi; (2) the East and Southeast of Hanoi including the provinces transited between the Red River Delta and

the Northern Coastal Areas such as Bac Ninh, Hung Yen, Hai Duong, and Ha Nam; and (3) the North and Northeast of Hanoi such as the Northern Red River, along the road corridor 18, mainly mountainous provinces of Vinh Phuc and Bac Giang, Thai Nguyen and Quang Ninh provinces. All these sub-regions will support Hanoi - the heart of NKER to develop its economy and link with other regions.

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

5.1. Problems need to solve

1) The process of urbanization has not facilitated yet the region's economic development towards the modernization and sustainability in the future

The urban system of the NKER has not been formed in a reasonable manner. The placement of the industrial parks, centers of trade and services, high-tech zones, research agencies have not based on signs of the comparative advantages of each region. Most administrative units as well as residents are still concentrated at the traditional urban areas and do not tend to be moved to the new urban areas, making the traditional urban areas overloaded.

In new urban areas, most of the land was dedicated to the housing fund development, construction of service works for sale and for rent, while the green areas and public recreation areas were shrunk maximum. Infrastructure in the urban area was generally asynchronous, its traffic network inside and outside was underdeveloped, hindering an alliance between the urban area and its neighborhood as well as activities of the city-dwellers.

2) Development of human resources has not kept pace with an urbanization process

- *Regions have been bearing an overload of population*, pressure of creating jobs, housing for poor people, and improvement of quality of living environment.

- *Process of urbanization has not associated with and strongly affected the agricultural sector*. A lack of employment and labor surplus, a division of income and difficulties of famers' life were increasingly clearer.

- *Lack of high-quality human resources*, therefore, it has not met the Employer's requirements, and the trend of high-technology development, especially in Hanoi.

3) Urban infrastructure has not ensured the standards of modern urban development

- *Road network was irrational* due to lack of organized traffic lanes; rapid growth of personal vehicles were not properly controlled; consciousness of a number of people in traffic was limited; thus, traffic jams, road traffic accidents, environmental pollution took place repeatedly.

- *The inadequacy of infrastructure*, water supply and drainage, water supply system does not guarantee the requirements of quality; the percentage of old pipes are being used in water supply pipe network in the area is high.

4) The increase of urban environmental pollution hindering the NKER's economic development

- *Water pollution became extremely serious:* the system of sewerage, rainwater was weak compared with its scale of urbanization. This regularly caused flooding in rainy season.

- *Solid waste pollution was increasing* due to an expansion of industrial parks, urban areas, and an increase of residents' consumption.

5.2. Conclusion and recommendation

1) Developing an integrated urban system

- Rate of urbanization will reach about 59% in 2050.

- Harmonious development of satellite urban areas around major city associated with its industrial parks.

- Urbanization process has to be based on regulating the economic and social development in a stable manner. Therefore, the speed of urbanization must be equivalent with the fastness of the economic growth and development for the purpose of avoiding quick and ineffective decision making and massive urbanization in a short time, leading to making urban project ineffective or unfeasible. The researchers and economists indicated that an increase of 5% in the GDP growth makes an increase of 8% in the urbanization.

2) More efficiency in attracting FDI

- *Need to build an overall planning of FDI projects for the NKER*: A planning of FDI projects by forming industrial parks, industrial clusters, services, separation of

production areas from residential areas, synchronization of investment and pollution treatment.

- *Developing and upgrading the infrastructure system in the direction of a modern society, creating attractiveness for the foreign investors.* Localities need to coordinate in building and improving a quality of the road infrastructure; synchronization of the power and water supply systems, roads, communication in industrial clusters. On the other hand, pay attention to systems of schools, hospitals, clinics, cultural centers, amusement parks, cultural tourist, residential and urban areas, and the like.

- *Development of the human resources to meet requirements of attracting FDI:* the quality improvement of the human resources does not only focus on the labor force who are working directly in the FDI sector, but also really interest in the officials of the state administration. Furthermore, it needs to improve professional skills, foreign language capability for policymakers, business executives, professional ethics, sense of responsibility towards work, communication skills...

3) Policy of developing a transport infrastructure and an urban housing

+ Focus resources to invest in upgrading and building new traffic projects in modern and synchronous manner, logical links between modes of urban transport and rural transport, to meet the needs of the localities, the country, and the international.

+ Policy of building urban housing network should focus on: (i) the reduction and the end for the new construction of condominiums in the downtowns; (ii) for the old apartment buildings, when renovating, should comply strictly requirements of the regulations, standards of the urban construction such as the building density, land rate for traffic and trees, etc. to gradually improve the civilized and modern urban areas; (iii) encouragement of synchronous investment in the projects: high-rise buildings, hospitals, schools in new urban areas.

4) Investment policy focuses on urban development and sustainable economic growth.

Investment policy in the NKER needs sustainable development of economy and urbanization in order to improve the educational level of people and development of human resources, and improve urban management and urban services. To achieve those objectives, the promulgation of the decisions, programmes and policies must be synchronized, effectively combine the socio-economic elements and the cause for

environmental protection to ensure wide participation of the community in the urbanization. The authorities must monitor continuously the activities of urban planning and construction, renovation under planning, training and development of human resources coupled with improved organizational system planning and management of urban economic development and urban sustainability in the region.

5) Policies to improve the quality of human resources

- *Diversifying forms of training the high-quality human resources*, this should focus on investing and developing the high quality training centers, including quality universities, research institutes, high-tech zones... Appreciate and extend the forms of vocational training with linking between the local authorities and industrial zones.

- *Policies to attract the high-quality human resources from outside the NKER:* priority policies to create better conditions to attract good managers, scientific professionals, skilled workers and experienced labors... come to work.

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APPENDIX

The Hanoi Construction Master Plan to 2030 and vision to 2050