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THE AFFECTS OF CAPITAL, LABOR, SCIENCE AND TECHONOLOGY ON ECONOMIC GROWTH OF DAKLAK PROVINCE FROM 2011-2016

Thanh-Van Pham

Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam

ABSTRACT: *Nowadays, economic growth is one of the central issues that attracting attentions of many countries in the first development stages (Edelstein Dan, 2015). As one of five provinces in Tay Nguyen, located in the border development triangle of Cambodia - Laos - Vietnam, Dak Lak has a strategic position of three countries in terms of politics, economy, society, national security and defense, ecological environment (Politburo, 2011).In the development process, Dak Lak has been exert to maintain a stable economic growth rate in many years, so it has increased the quality of people's living (Politburo, 2011). However, in the development process, the economic has still grown in width, many potential have not been discovered and utilized effectively, the infrastructure is backward and the competitiveness is very low. In order to help the leaders have general, in-depth understanding about economic growth, the study based on methodology of meta-analysis, descriptive analysis and inferential analysis to evaluate the contribution of capital, labor and science and technology on the economic growth of Daklak province. From study results, the paper suggested some recommendations for promoting economic growth in the province.*

KEYWORDS: Economic Growth, Tfp, Icor, Cobb-Douglas, Capital, Labor.

INTRODUCTION

In the Tay Nguyen development plan from 2011 to 2020, the purpose of Tay Nguyen social - economic development to 2020 is consistent with national strategy of socio - economic development. It is also pertinent, unified with sector planning; exploits and develops effectively Tay Nguyen's potentials and strength to promote the international integration; deploy and employ well all resources for a rapid and suitable development and narrowing gradually Tay Nguyen's socio - economic growth gap with the whole country (Politburo, 2011)

As one of five provinces in Tay Nguyen, located in the border development triangle of Cambodia - Laos - Vietnam, Dak Lak has a strategic position of three countries in terms of politics, economy, society, national security and defense, ecological environment (Politburo, 2011). In the development process, Dak Lak has been exert to maintain a stable economic growth rate in many years, so it has increased the quality of people's living (Politburo, 2011). However, in the development process, the economic has still grown in width, many potential have not been discovered and utilized effectively, the infrastructure is backward and the competitiveness is very low. Moreover, there are many issues affecting economic growth of Dak Lak province, such as global economic crisis, low labor productivity, climate change, pollution, low quality of infrastructure and service. So it can not satisfy the production development and people's living standard. Therefore, it is necessary to evaluate the current situation and identify difficulties in the relation with the growth promoting process.

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Thus, it is essential to systemize the literature review of economic growth theories, the study of current situation, general scientific explanation of the factors affecting on economic growth in Dak Lak province. It will help the leaders have general, in-depth understanding about economic growth to find the appropriate and effective solutions for the development issues not only of Dak Lak but also of Tay Nguyen in general.

LITERATURE REVIEW

Economic Growth

Nowadays, economic growth is one of the central issues that attracting attentions of many countries in the first development stages (Edelstein Dan, 2015). There are various approaches of economic growth concepts and theories. Firstly, according to economic dictionary, economic growth refers to the potential produce increasing over time of an economy (D Jorgenson, FM Gollop, B Fraumeni, 2016). In other words, it is the increase of national produce size or national produce per capita in a specific time (Frydman Carola, Hilt Eric, and Zhou Lily Y, 2015). Moreover, according to the long time approaches of…., economic growth is defined as the increase of produce size or the expansation of produce size of an economy per each year. To sum up, the nature of economic growth refers to the reflection of produce change of an economy (H Van den Berg, 2016).

There are many perspectives and theories related with economic growth. The first was classic school built up by William Petty (1623-1687), Adam Smith (1723-1790) and David Ricar do (1772-1823). According to (Adam Smith Frydman Carola, Hilt Eric, and Zhou Lily Y, 2015) and David Ricar do (H Van den Berg, 2016), classic model of economic growth had following characteristics. Firstly, Adam Smith (H Van den Berg, 2016) and David Ricar do (H Van den Berg, 2016) showed that agriculture was the most important economy and the monetary foundation; and the basic factor for economic growth is land. Secondly, growth was the results of accumulation, which is the function of profit. Besides that, profit depends on food production cost, which bases on land. Finally, the classic theory divided society in three groups including landowners, capitalists and workers and the income distribution of three groups depended on their possession of production factors. Adam Smith (1776) argued that the activities of economic agents were governed by the invisible hand (called market mechanism). Moreover, Adam Smith (1776) also denied the role of state because it is an impediment factor to economic development and without the government's interference with production would not only increase the social cumulative rate but also contribute to market expansion. D.Ricardo Manya M. Mooya (2016) inherited Adam Smith’s perspectives but he expanded in to the distribution issues and focused on analyzing the distribution rate of different income types and the influence of private accumulation on economic growth.

Karl Marx (1818 - 1883) was not only a politician, philosopher but also an excellent economist. In the middle of the nineteenth century, the emergence of critical theory of capitalist economic growth was actually a great event. According to K. Marks & Enghens (1993), the most fundamental point of views on economic growth included the following key elements: the relation of production to the development level of the productive force, factors affecting on economic growth were land, labor, capital, technical innovation. Regarding the role of science and technology in economic growth, Marx wrote: "Science and technology is the direct production force" [12, p.234].

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As Marxist economists, K. Marks & Enghens (1993) argued that three groups producing material goods for society were landowners, capitalists and workers. Correspondingly, their income was land, profits and wages. However, this distribution was exploitative because it divided in to two classes: exploiting class and being exploited class. K. Marks & Enghens (1993) also asserted that goods are the dialectical unity of use value and value. So, Marx was the first researcher who introduced the duality of commodity production, built theories of invariant capital, variable capital and completed the division of production capital into fixed capital and mobility capital (16). In additional, Marx formed the first foundation for defining the state's role in supply and demand regulating (K. Marks & Enghens, 1993). So far, Marx's theory of economic growth still has had a great practical meaning, especially in explaining the probles that developing countries face today.

Secondly, let's review the neoclassical model, which was the period marked by the dramatic changes in science and technology in late nineteenth century. As mentioned in neoclassical model, economists rejected the classic view that production required certain proportions of labor and capital. They believed that labor can be substituted for capital and during the production process there were many different ways of the inputs combination. Neoclassical economists argued that technological advancement was the driving force of economic growth. Moreover, the technology change at that time referred to tendency that most inventions to use capital to save labor.

Besides that, neoclassic economists had tried to explain the origin of economic growth by production functions. This function expressed the relationship between the increase of output and the increase of inputs including capital, labor, resources and science and technology, as followings:

$$Y = f(K, L, R, T\ldots.)$$

Notes:

Y : Output (GDP, GNI)

K : capital

L : Labor Quantity.

R : Natural resources

T : Science Technology

According to the neoclassical school, there were many factors involving in the production process, so the production function has many dots. The theory of this school featured the role of the output elements. Each increment of the production elements would increase the output. They argued that each factor plays a role in production growth and they are interrelated. In particular, capitalism was the greatest interest because it went hand in hand with scientific and technological development. Finally, labor is considered as the most essential initial source of growth.

John Mayn Keynes's economic theory which was born in the midst of the world economic crisis (1929-1933) broke the doctrine of the "invisible hand, the general equilibrium" of classical and neo-classicalism school. In addition, in the 30s of the twentieth century, the

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social production force had developed strongly and the socialization is higher than the previous period so it required the state's adjustment on the process of socio-economic development in the capitalist society.

According to Keynes (J McCombie & AP Thirlwall, 2016), an economy is affected by two basic factors: the total supply which means the total quantity of goods sold in the market and the total demand which means the total quantity of goods that people want to buy. The direct determinant of output and employment in the economy is the total demand because the total supply is passive and affected by the total demand. In turn, the total demand depends on factors of individual household expenditures, investment expenditure, government spending, and foreign expenditures on home-made goods (net exports). In the process of economic mobilization, the total demand often does not keep up with the total supply so it affects the production situation, narrowing investment and causing unemployment. To address this situation, the total demand must be greater than the total supply. Thus not only the investment will increase but also the employment and incomes will improve too then national output will increase.

In the logic of anlysis, Keynes argued that to escape from the crisis and unemployment, it required for state intervention in the economy to increase the total demand, employment and income. First of all, he suggested using the state budget to stimulate investment through government orders and capital subsidies for businesses. In order to stimulate investment, the profits had to increase and interest rates had to reduce, by increasing the volume of money in circulation. Keynes also pointed that the necessity to keep inflation at the balance. He appreciated the role of the tax system, the state bonds, in the supplement the state budget. The theory of Keynes proposed reducing the bank's interest rates to encourage investment and conducting progressive personal income tax to make income distribution more equitable. Therefore, the total income that people spend on consumption will increase. Finally, Keynes (J McCombie & AP Thirlwall, 2016) endorsed the government's investment on public works.

Economic growth model of Harrod – Domar

The model was originally developed by Roy Harrod (1939) in England and Evsay Domar (1946) and applied by developing countries. This model appreciated the role of capital in economic growth and suggested a production function as follows:

$$g = \frac{s}{k}$$

Notes:

g: economic growth rate

s: Ratio of saving/GDP [assumpt s = i (i is ratio of investment/GDP)]

k: coefficient of capital increase - output (ICOR)

The ICOR index was suggested as an incremental measure of capital. In other words, to get one more product, it required to invest "k" capital. Thus, to boost economic growth the savings must increase to invest in development. Therefore, this model was particularly focused on the relationship between capital accumulation (capital) and output (output or economic growth). However, saving and investment were just the necessary conditions, not

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sufficient conditions for economic growth. The sufficient conditions were using effectively capital, developing synchronously all kinds of markets includes commodity markets, labor markets, capital markets and having modern and synchronous infrastructure system; political stability and peaceful nature.

The Cobb-Douglas model (1940) examined the role of input resources, including capital and labor. If combining two factors in a certain proportion, it would produce output or economic growth. Cobb-Douglas suggested a following production function:

$$g = A\ K^a\ L^b$$

Notes:

g: Annual economic growth

K: Investment Capital

L: Labor

A: Production efficient (constant)

a: Elascity of capital

b: Elascity of labor

Different from the Harrod-Domar model, which only focused on the capital component, the Cobb-Douglas model considered and assesed the impact of capital and labor on economic growth. The factors of capital and labor factors were interchangeable, combined in any proportion and linked with the elasticity coefficients of capital (a) and labor (b). By those coefficients, the contribution percentage of input resources to economic growth can be calculated and measured. Thus, the Cobb-Douglas model has taken a long leap forward in the study. The previous years had seen a great variety of application Cobb-Douglas model for use in forecasting, developing, evaluating the economic growth; identify which inputs make a great contribution to economic growth and how economic growth strategies need to be adjusted when using both capital and labor inputs.

Modern economic theory

Nowadays, modern economic theory which refered the economic balance based on JM Keynes 1883-1948, explained that the balance of economy is not necessary reached at potential production, still can be under that point. In other words, under the normal economic conditions, unemployment and inflations can be appeared. So it is important that the government must to identify the natural unemployment rate and the acceptable inflation rate. The balance of the economy in this theory was identified at the intersection of the total demand and the total supply. Moreover, modern economic growth models often did not refer the variables of land and resources in the economic growth function. They argued that land is a fixed factor and the role of resources tends to decrease. According to M Skousen (2016), possible resources and land resources can be included in the capital formation element, quoted by “K.”. So three factors directly affect on economic growth including capital, labor and total factor productivity (TFP). While capital and labor are considered as physical factors that can be quantified thier impact on economic growth and can be seen as growth factors in

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width, TFP demonstrated the effectiveness of scientific and technical, management skills or the assessment of the impact of science and technology on economic growth. Besides, TFP is considered a quality factor of economic growth or economic growth in depth. Futhermore, modern economic growth theory held that the market is the fundamental factor regulating the economy. The interaction between the total supply and the total demand which generated real income, employment, unemployment and inflation rates, are the basis for addressing three fundamental issues of the economy. From a modern point of view, the expansion of the market economy required state intervention in the economy not only because of market disabilities but also the unsatisfied goals that society setting for the market.

Economic Growth Measurement

There are many ways to assess the level of economic growth but within the limits of this research, the researcher only applied some basic indicators to evaluate the factors affecting the economic growth of Daklak province.

First of all, the most common measure is the increase in gross domestic product (GDP) per year or per capita GDP growth in a year. Some countries use other indicators to determine economic growth as GNP (gross national product); GNI (gross national income); NNP (net national product) or NNI (net national income). The above indicators are usually calculated in one year and can be used according to the average criteria per capita. Labor productivity can be calculated by ratio of GDP at constant price (constant price) and the number of employees. In addition, labor productivity can also be calculated by the number of products produced in a unit. So, the labor productivity function can be described as follows:

Labor productivity = GDP / number of employees

The ICOR reflects the relationship between economic growth and investment (Harrod-Domar, 1946). This coefficient showed you how many units or percent of GDP the economy need to increase in order to increase one unit or one percent of GDP. This indicator reflected the efficiency of using capital investment to drive the economic growth.It means that if the coefficient of ICOR is low, the efficiency of capital utilization is high and vice versa. In order to calculate the ICOR index, the researcher based on the assumptions as followings. Firstly, the economy is always balanced below the potential output so to mobilize excess resources, it is necessary to invest to expand production. Secondly, with the unchange technology, the combination of capital and labor is excuted by the permanent coefficient. The ICOR coefficient (k) is the index reflecting the effectiveness of capital investment and determined by the formula:

$$k = \frac{\Delta K}{\Delta Y}$$

Notes:

ΔK: change in production capital (ΔK = Kt – Kt-1)

ΔY: change in production result and ΔY = Yt – Yt-1, t: the curent year and t - 1 the previousyear

Today, the TFP (Total Factor Productivity) indicator is used to evaluate the impact of these factors. The total productivity factor is considered as the quality factor of growth or growth in

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depth. If the total productivity factor increases rapidly and accounts for a high proportion of economic growth, it will sustain economic growth in the long run and avoid fluctuations from external factors. The production function Cobb – Douglas is often used to to evaluate the impact of TFP on economic growth, as followings:

$$Y = A. K\alpha . L\beta .$$

Notes:

Y is a variable of production (calculated by GDP with permanent cost)

K is a variable of capital

L is a variable of labor

A: self-determined growth rate

This function can be transformed into a linear function by making logarithms two sides as follows: $LnY = lnA + \alpha \ln K + \beta \ln L$

Notes: Where, α, β, are exponents, which represent the marginal rate of inputs.

This model identified the impact of capital and labor growth on economic growth and the rest of economic growth is evaluated by TFP (the total productivity factor). Normally, the econometric model for the Cobb-Douglas production function is used by Eviews to determine the contribution of each factor in economic growth.

RESEARTH METHODOLOGY

Research Methodology

Based on the methodology of dialectical materialism and historical materialism, the research also used specific research methods: meta-analysis methodology and descriptive statistics method and inferential statistics method.

Firstly, meta-analysis methodology combined the results of several studies to solve a series of hypotheses related to research. More simply, it can be considered as a general measure of the magnitude of the effect, in which the weighted average may be the result of the total analysis. Weighted averages are related to the sample size in each individual study. Although there are differences between individual studies, the goal of the meta-analysis is to more accurately estimate the actual size versus the less effective size of the results in individual studies. In other words, meta-analysis is one of the key components of the system review process.

Secondly, descriptive statistics are methods related to the collection, summarization, presentation, calculation and description of different characteristics to reflect the general object of study. Then, inferential statistics was used for estimating the whole characteristics, analyzing the relationship between research phenomena, predictions or decisions based on the collection of information from sample observation results.

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Data collection

The research collected data based on the Provincial Statistical Yearbook, reports from the Department of Education, the Department of Labor, Invalids and Social Affairs; the Department of Natural Resources and Environment; the Department of Health, the People's Committee, the People's Council Provincial People's Committee and final report of Dak Lak provincial departments. Then, the study used Eview software, Cobb-Dauglass to analysize the data and interprete the affecting on economic growth.

RESULTS AND DISCUSSIONS

The growth economic growth situation in Daklak from 2011 - 2016

Accoding to the statistics from 2011 to 2016, the GDP growth of Dak Lak province increased over the years, but the growth rate was unstable. GDP growth in 2012 was only 2.24%, the highest in 2016 reached 7.02% and the average GDP during this period reached 5.26% per year. (Invalids and Social Affairs of Daklak province, 2016)Dak Lak economy is formed of different sectors, including agriculture. Agriculture contributes a great deal of income and is critical to the stability of the economy as most of the population live in rural areas, depend on agriculture, forestry and fisheries. From 2011 to 2016, the agricultural sector developed steadily, grew at a rate of 3.31% per year. GDP of agriculture in 2011 reached VND15,863 billion (accounting for 51.58% of the provincial GDP); in 2016 reached 18,674 billion (accounting for 41.97% of the provincial GDP) (Invalids and Social Affairs of Daklak province, 2016)

During the period from 2011 to 2016, the industrial growth rate increased by 9.13% per year, accounting for 15.08% of GDP in 2016 (Invalids and Social Affairs of Daklak province, 2016). This growth could be reached because of the long-term orientation of the Dak Lak industry which focused on the cutting-edge industries development. Most of cutting-edge industries are planting and exploiting agricultural products, industrial trees; processing and exporting agricultural products (noodles, corn), industrial tree products (coffee, rubber, cocoa ...). In additional, economic sectors such as electricity, construction and other sectors such as health care and education also contributed to the comprehensive development of the province's economy (Invalids and Social Affairs of Daklak province, 2016).

Along with the strong growth of goods production, service sectors have also thrived rapidly. The GDP of service sector grew at an average annual rate of 10.1% from 2011 to 2016. In 2016, the service sector accounted for 41.61% of GDP (Invalids and Social Affairs of Daklak province, 2016). Thus, the propotion in GDP structure has changed in the direction of reducing the rate of agriculture sector and increasing the rate of the industries and services (Invalids and Social Affairs of Daklak province, 2016). However, the erratic changes in GDP structure during this period showed that this shift was slow and unsustainable, and still depended on external factors, especially in the agricultural sector. However, with the tradition of agro-forestry production and the advantages of natural resources, the process of economic restructuring did not necessarily take place rapidly but must be carried out in a sustainability manner and not affect on the environment.

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The factors affectings on economic growth of Daklak province

The capital

If calculating with the current value, the capital investment for economic growth has increased every year. In 2016, the investment capital reached 17,009 billions VND, higher than 1.65 times comparing with 2011(10,365 billions VND). The investment capital increased 10.41% per year from 2011 to 2016. While the great advantage of Dak Lak province is agriculture, the propotion of investment capital for this sector decreased from 34.48% in 2011 to 31.73% in 2017 and increased slightly 32.38% in 2016 so it did not meet the infrastructure for economic restructuring (Invalids and Social Affairs of Daklak province, 2016). Moreover, the investment capital using in Dak Lak province has not been effective.

Table 2.5: ICOR Indicator in Dak Lak province from 2011 to 2016

Year	GDP at constant price 2010 (VND billion)	Total investment capital at constant price 2010 (VND billion)	Ratio of investment toGDP (%)	GDP growth rate (%)	ICOR Indicator
2011	34.371	8.458,763	24,61%	5,58%	4,41
2012	35.142	8.607,239	24,49%	2,24%	10,92
2013	37.583	8.847,428	23,54%	6,95%	3,39
2014	39.121	9.583,930	24,50%	4,09%	5,99
2015	41.509	9.995,258	24,08%	6,10%	3,94
2016	44.421	12.529,972	28,21%	7,02%	4,02

According to the above table of the ICOR indicator, the efficiency of used capital in Dak Lak province from 2011 to 2016 increased unevenly. In 2013, the most effectiveness rate in using capital reached 3,39 and the lowest rate was 10,92 in 2012. The results showed that while the efficiency of using capital improved comparing with 2012, the ICOR indicator was still high. Moreover, in 2016, if increasing one dong for GDP, the investment capital must increase 4,02 dong because of the spread of investment in Daklak province, lacking of focus on the central sectors and the inefficiency in management, monitor and supervision. Those reasons led to the losses, corruption and wastefulness of investment in Daklak province.

Labor

The 15 years-old and over labor force in the province in 2016 was 1.149,381 thousand people, accounted for 61,32% of population, of which male laborers are 614 thousand people, accounting for 53.34%, female laborers are 536 thousand people, accounting for 46.66% of the total labor force in the province. The growth rate of the labor force in the period 2011 – 2016 was 8.12% per year. According to to the statistics from 2011 to 2016, the labor force of agriculture, forestry and fishery accounted for 71.5% in 2011, down to 66.24% in 2016, the rate labor of industrial and construction increased from 7.8% in 2011 to 8.53% in 2016 and the rate of labor in services and trade increased significantly from 20.7% in 2011 to 25.23% in 2016. Moreover, provincial labor productivity in this period also increased year by year, from VND 33,605 million per person per year in 2011 to 38,648 million VND per person per year in 2016 (Invalids and Social Affairs of Daklak province, 2016). On average, the labor productivity in the province grew 2.84% per year. Although the labor structure of the

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province shifted in the right direction; the rate of change was still slow; the proportion of labor in agriculture, forestry and fishery are still high,so it led to pressure on job creation, income growth, and the shift of economic structure and labor structure within the sector. Labor force in rural areas was high (76.82%) and most in agriculture and rural areas are common laborers; the number of skilled workers was still low. Due to the unequal conditions of socio-economic development in localities, the labor force in mountainous, disadvantaged areas and ethnic minority areas have a low level of culture and capacity work (Invalids and Social Affairs of Daklak province, 2016)

Sciencetific and technology

When analyzing indicators reflecting the effectiveness of used resource, the most important factor must be considered as science and technology and management. Today, the TFP (Total Factor Productivity) is used to evaluate the impact of these factors.

Based on statistics released by the Dak Lak Provincial Statistics Office in 2011- 2016, the study used regression model for Cobb-Douglas production function by Eviews software to calculate and give the results as followings:

LnY = - 13,24168 + 0,178468lnK + 1,1595145lnL (1)

Or Y = 0,000001775 . K0,178468. L1,1595145 (2)

The function (1) means that, with constant factor, if the investment capital increases by 1%, the GDP of the province will increase by 0.19%, and if the labor force increases by 1%, the output will increase by 1.11%.

Based on function (1) and the provincial statistics, the researcher calculated the contribution of capital, labor and TFP factors to the province's economic growth rate, correspondings to 27,48%; 71,56%; 0.96% for the whole period from 2011 to 2016. According to the above results, the role of the total factor productivity index (TFP) for economic growth of the province is less than 1%. Besides, the increase in capital and labor are the main factors contributing to the economic growth. Thus, the economic growth of the province during this time was mainly due to the increase in volume but the quality of the growth reflects the TFP contribution of the province still low. This reflected a fact that the level of science and technology was still backward compared with the average level in Vietnam.

However, TFP was not only determined by technological level but also by non-economic factors such as business environment, management level. Thereby, the results showed that TFP's low contribution to economic growth also demonstrated that the business environment of the province has not supported well for economic growth.

CONCLUSIONS AND IMPLICATIONS

In recent years, the economic growth in Dak Lak has been relatively stable and the economic structure has been shifted towards gradually reducing the propotion of agriculture and gradually increasing the proportion of industry and construction, trade and services. The study showed that three basic factors affecting the economic growth of Dak Lak province during 2011-2016 were capital, labor and total productivity (TFP). In particular, capital was a

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factor directly affecting on the economic growth but was not used effectively. Moreover, labor factor in the province had low professional qualifications, low productivity, and did not meet the demand of the labor market. Thus, in order to improve the quality of economic growth in the province in the future, it requires specific policies on capital, labor and science and technology to improve labor productivity as follows:

Firstly, the most urgent and necessary issue is enhancing the efficiency of the investment capital exertion. It is a fact that the state investment capital exertion in Vietnam in general and in the Daklak province in particular has been ineffective as mentioned in reports and assessments by the Government, the National Assembly and news agencies Therefore, raising the efficiency of state investment exertion plays an significant role for improving economic growth in the Daklak province. The specific solutions for state investment exertion is concentrating on building, expanding and raising the efficiency of software parks and hi-tech parks, concurrently developing a specialized industrial parks such as mechanical engineering industrial parks, chemical industrial parks, specialized industrial clusters for agriculture, agro-forestry product processing ... with favorable conditions in terms of land rent price, services for production. The next solution is active invitation and creation favorable conditions for attracting capble investors in hi-tech industries with high knowledge and added value such as mechanical engineering, electronic information technology, software, pharmaceutical chemistry and new materials. Moreover, it is very well to encourage enterprises to master the product design, actively expand the consumption system and renew and modernize technology, and form high-value added production areas. Besides, the efficient solution can be considered is enhacing activities of advertising and promoting investment. Through diplomatic channels, internet channels, cultural exchanges, tourism activities to promote the image of the province as well as promote the project to attract investment. Finally, the essential solutions that can improve investment capital are developing infrastructure, for such as completing and building industrial parks and tourist areas which ensure infrastructure conditions as electricity, water, transport, schools, hospitals, shops ... for workers, employee commited with industrial clusters.

Secondly, because of a decisive resource and the issues as mentioned in chapter 2, the research suggested some labor resources solutions as follows. With the advantage of a plentiful workforce, the proportion of young people in school age is relatively high (7% of the working age population) so if trained continuously for 10-15 years, they will be the core human resources for the development. The first step required the government complete the legal framework, institutions, policies and administration of the labor market and the information of labor market, recruitment and contracts should be provided to employees and employers. Moreover, long-term measures and strategies need to be taken to attract the labor force back to the province after studying abroad or the other locals. Besides, it is necessary to have a policy for development encouragement, talent attraction and treatment of managers, specialists and skilled workers working in the province. The next solutions need to considered is education management innovation. Some specific solutions are decentralization the management of localities and educational institutions, especially vocational secondary schools and colleges. It is necessary to increase the proportion of spending budget on education and training, expand the training scale satisfied with the market demand by clearly defining the sector currently lacking high skilled and qualified labor. Then, the government needs to have the investment in many forms such as on-site training, combining prestigious training centers or training outside the province. Finally, building rural infrastructure, develop

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living and working conditions in order to develop rural areas as well as to limit the movement of labor from rural to urban areas.

Last but not least, in order to increase the productivity and quality of products in the province, the science and technology plays a decisive role. Therefore, the province needs to implement the following basic solutions as follows. The Sgovernment should adopt policies to support enterprises in technology innovation, new technologies apporoach and give priority to high technologies having high added value with tax policies and preferential land policies. Because of the difficult budget conditions, socialization of science and technology activities is a good solution of mobilizing a large amount of resources to invest in science and technology. The other solutions are expanding and developing science and technology market, completing the mechanism of the "four houses" (scientists - farmers - state - enterprises). Futhermore, scientific conferences should be held to disseminate scientific knowledge, offer a communiation chanel between farmers, enterprises, the state and science. In fact, many scientific and technological applications which satisfied the production demand were derived from the practice of farmers so there should be a policy to encourage all classes of people to study science. Finnaly, in order to invite domestic and foreign enterprises invest in the construction of high-tech agricultural production zones, it is essential to take assistance of the Government and the central ministries and branches.

Future Research

There are many factors affecting on economic growth but according to the research scope and limitation of research knowledge, the study focused on three main factors as capital, labor and TFP. There are many elements not mentioned in researched as institutions, resources, production organization, etc… Moreover, some statistic data were not really fully updated. Based on that, the future researches can focus on how non-economic factors as politics, culture and society affecting on economic growth.

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