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New Approach to Regional Economic Policy in Vietnam

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ABSTRACT: Regional development theory focuses on the study of the quality of the development structure of regional systems, based on the theoretical analysis of institutional factors (parameters) that determine the technological efficiency of the regional economy. The article aims to clarify the possibility of technological change and economic growth shifts in a specific regional system, especially in the context of strict limits on rapid development, mainly focusing on industrial regions. To achieve this goal, we build structural models to analyze the impact of technological factors on regional economic growth parameters and determine the conditions for industrial sector development. Correlation and regression analysis methods are applied to establish statistically significant relationships between relevant parameters. Econometric models are used to estimate growth parameters through control parameters, including technological factors. The structural aspect of regional economic growth is measured by classifying investments into two groups: old and new technologies. The technological efficiency of the regional economy can be improved by improving the results of old technologies and promoting the adoption of new technologies. This approach helps to refine the regional development priority algorithm and supports the selection of appropriate technology development strategies. However, if resources are only focused on the latest technologies, the imbalance in the development of the regional economic system can increase significantly. Parameters related to the redirection and creation of new resources will determine the regional growth rate.

Keywords: Region; Regional economic policy; Regional system structure; regional growth model.

I. INTRODUCTION

Regional economics, as a field of study, focuses on two main topics: one is to compare economic performance between different regions, treating each region as a homogeneous economic unit, that is, viewing them as a whole; two is to study the location and interaction between regional economic entities, thereby breaking the principle of homogeneity.

The first approach is often referred to as macroeconomics, while the second approach is referred to as microeconomics (with the subject of study being the regional economy). The macro and partly micro elements of regional economics were previously referred to as spatial economic theory, which evolved from applications of economic analysis. Regional macroeconomics focuses primarily on issues such as regional economic policy, the allocation of resources and economic activities in certain regions, as well as the interactions between regions. This approach has similarities with macroeconomic analysis within a country, where the economic boundaries are clearly defined.

Thus, issues such as regional economic growth, unemployment rates, and the movement of factors of production between regions with large distances are all influenced by regional factors.

Macroeconomic analysis with complex econometric models helps to understand the processes taking place in regions and to identify appropriate regional economic policies for each specific situation. These macroeconomic tools are applied to study regional economies. A typical example is the regional multiplier, which was developed from the expenditure multiplier in macroeconomics, and has been widely applied in the analysis of regional development in Western economies. The regional multiplier is used to measure the change in income and employment in a

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region when there is a change in autonomous expenditure. Its mechanism of operation is as follows: when demand increases, regional income increases, leading to an increase in expenditure, thereby promoting economic development. However, this increase in expenditure will encounter saturation due to natural dampers such as imports, differences in tax systems, and investments from other regions in the country. This makes the regional multiplier lower than the macroeconomic multiplier, as the regional economy has clear administrative borders, resulting in relatively high imports and demand leakage from the regional economy.

In terms of policy, in the context of Vietnam, traditional regional economic policies mainly focus on two goals: supporting depressed regions and reducing imbalances between regions. However, Vietnam's regional economic policies need to be adjusted to suit the geographical, historical, and development characteristics of each region. This policy can be divided into three main directions: 1) policies to support regions in difficulty, 2) internal development policies based on the specific conditions of each region, and 3) policies to enhance inter-regional cooperation and interaction, especially between regions from the North to the South. Regional development is not only based on purely economic factors but also must take into account differences in natural conditions, infrastructure, and cultural characteristics between regions, thereby ensuring sustainable and equitable development across the country.

II. THEORETICAL BASIS

2.1. Regional economic policy approach in the world

The neo-Keynesian approach to regional development in Vietnam focuses on correcting regional imbalances by encouraging public and private investment in less developed regions. The government can use tools such as preferential credit, tax policy changes, direct subsidies and initiatives to support small and medium-sized enterprises to promote sustainable development in these regions. Investment in infrastructure, education, health and support for local industries can help improve the quality of life and reduce regional disparities within the country.

The neoclassical approach to regional policy in Vietnam assumes that regions will self-regulate and eliminate differences through increased trade and market cooperation without strong government intervention. However, it should be noted that this approach is difficult to apply purely in Vietnam, where there are still many legal peculiarities and administrative factors that affect the free exchange between regions. Regional policy needs to be adjusted to suit the reality of each region and have certain government intervention to promote equitable development.

The theory of regionalism in the context of Vietnam emphasizes the interaction between political and economic interests of regions. Conflicts and resource allocation between regions need to be resolved through political agencies and close coordination between central and local governments. Regional policies need to focus on the reasonable and equitable allocation of resources to achieve equitable development.

Unbalanced growth theory suggests that interactions between regions can increase differences in living standards and prosperity, creating regions that thrive while others struggle. To reduce these imbalances, governments need to implement policies that support weak regions, encourage investment in areas with strong growth potential, and promote technology transfer and production improvements in the remaining regions.

An investment programming approach can help develop regional economies in Vietnam, especially in disadvantaged areas. Local governments need to develop analytical matrices, including resources that can be mobilized from the public and private sectors, as well as competitiveness indicators of the regional economy. Through this, investment projects can be identified, creating growth opportunities for the local economy and helping to improve the competitiveness of economic sectors.

2.1. Regional economic policy approach in Vietnam

Regional policies in Vietnam should not only focus on improving the quality of life for people but also ensure the contribution of regions to national economic growth. The government should establish a strong regional cooperation and support system, with a regional development model that coordinates the state, enterprises and import and export flows. This will help build a strong regional economy, while improving self-sufficiency and promoting exports.

Regional development policies need to be based on long-term strategies, in which regions can develop according to their own strengths, but also need coordination between regions to maximize potentials and promote the overall development of the country.

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III. NEW APPROACHES TO REGIONAL ECONOMICS IN VIETNAM

In the context of regional economic development in Vietnam, each region often has its own characteristics, determined by specific conditions and unique factors of the development process. Therefore, the economic strategies and policies of each region may not be the same, with clear differences between regions. However, it is still possible to build a common theoretical framework to analyze these characteristics. We can imagine a regional economy with two key sectors playing a key role in creating products, in which one sector has a clear advantage.

The dominance of one sector in a regional economy can be beneficial, helping to avoid too large a change in the structure of the economy, while reducing the need for fundamental change. However, it can also create disadvantages, as it creates problems in controlling changes in the structure of the sector. This aspect is important in the context of developing a regional economic strategy and explaining the choice of development options. As can be seen from Figure 1, there can be different scenarios of changes in the economy for curve I with directions A, B, C, and for curve II with directions D, E, F. The distance X = dII - dI represents the difference in the proportions of sectors and the degree of change over time (dX/dt) establishing the restructuring regime. There are nine flow scenarios, each representing a specific economic development strategy.

If curve II represents the extractive sector (raw materials), and curve I represents the processing sector (mechanical engineering), or respectively the exports of raw and processed materials or the total imports (II) and exports (I) to the system, then in effect the restructuring problem is the choice of flow strategy (a scenario in the Table), the speed of adjustment of structural imbalances according to political decisions. The definition of such a problem involves the choice between industrialization and deindustrialization. Therefore, it is necessary to define possible scenarios of changes in the regional system (the specific parameters of the flows are related to economic policy instruments) and also take into account the condition of restructuring the system according to the change parameter X(t), which, in essence, will be the formal criterion of industrialization. If the gap shown in Figure 1 is narrowed, while curve II represents the dominance of an undesirable region and curve I represents the dominance of a desirable region, it would mean a positive outcome of the restructuring of the system, and in the case of "unexploitative" development, it would mean its industrialization. All regions of any country can be classified according to the parameters X(t) and dX/dt, as well as nine possible restructuring scenarios.

Thus, structural analysis allows us to solve quite complex problems of inter-sectoral cooperation in the regional economy and to obtain recommendations for improving financial and investment institutions. The impact of regulatory instruments on the sectoral structure of the regional economy should be a central issue in economic policy making. The concept of optimal structure or structural optimization involves reproducing the most favorable development of the entire economic system. Therefore, the optimization problem may involve a number of criteria (objective functions) and imposed constraints, such as the total amount of resources used (including financial resources), expected revenues, environmental damage, etc. In essence, the above basic model gives the most acceptable ratio between the output of the region, in general, of any system, the degree of disintegration, i.e. the openness (closeness) of the system and its dependence on raw materials. After further analysis of the actual data for the regions, we can determine the value $W = y/y -(Z/Z +i^2/i^2)$, that is, determine how far the economy of a region is from this index, which determines a high level of processing with a low dependence on raw material exports. Depending on the factors that determine the location of the region in relation to the specified index, the industrial, scientific and technical policy of the regional government should be adjusted, as well as the general regional policy of the provincial center .

For the presented equations, the first equation describes economic variables, such as per capita gross domestic product or inequality, etc., depending on the parameters of institutional conditions and technological incentives; and the second equation determines government behavior. It is difficult to describe institutional changes, conditions or technological incentives. Most likely, it is necessary to take a set of conditions, incentives, measure each of them and overwrite the model in matrix-vector form. The parameter z can characterize, in particular, the degree of openness (closeness) of the system, and s(x, z, t) is the speed of establishing an operating regime that determines the degree of openness.

In all cases, some causal relationships can be identified between sets of individual variables.

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In addition, the possible structure of the regional system can be determined.

The emergence of new combinations in the economy and the promotion of this process by including the necessary elements of regional development require the formulation of appropriate economic structure management objectives. Designing the ratio between industries, activities, available production and actual technological factors and resources is a way to facilitate the emergence and replication of new combinations. This process takes place in the interaction between old and new technologies.

The existing institutional and structural constraints of the regional system determine its competitive advantage, as well as its ability to develop and cooperate with other regions. A particularly important factor is the speed of development of certain sectors and activities, the supply of resources and the interaction between regions, which is predetermined by distance, i.e. proximity and expansion. The availability of resources determines specialization, and distance forms the pattern of competition and coordination of regional development. Let us introduce a set of simple symbols. If r is the per capita natural resources of the population living in a particular region, g is the standard of living (quality of life, not taking into account the quality of functions), P is the per capita income (product), S(t) is the efficiency function, converting resources into products, N is the population of the regional economic system, i is the symbol of a particular region

We will present empirical results for the Vietnamese economy over the period from 2008 to 2013. This was a period strongly influenced by the 2008 global financial crisis, when the Vietnamese economy experienced a sharp decline in GDP and other economic indicators. Therefore, the data were processed through a smoothing process using a simple moving average method to minimize the impact of short-term fluctuations.

The function representing the investment-GDP ratio is defined as follows: $\sigma(t) = -0.001t + 0.164$ (with Pearson correlation coefficient $R^2 = 0.728$; Student's t-test value $t_R = 3.27$ exceeds the critical value of 2.45 at the significance level of 0.95; Fisher's t-test value FR = 10.70 exceeds the critical value of 7.71). The derivative of this function is $d\sigma/dt = -0.001$.

The expenditure function for old technology is $Is(t) = 64.56\ t^2 - 519.1t + 6774$ (Pearson $R^2 = 0.920$; Student's t-test value tR = 6.78 exceeds the critical value of 2.45 at the 0.95 significance level; Fisher's t-test value FR = 46 exceeds the critical value of 7.71). The derivative of this function is $dIs/dt = 129.12t - 519.1$.

The GDP function is determined as $Y(t) = 222\ t^2 - 1473\ t + 42221$ (Pearson R^2 coefficient = 0.780; Student's t-test value tR = 3.76 exceeds the critical value of 2.45 at the significance level of 0.95; Fisher's t-test value FR = 14.18 exceeds the critical value of 7.71).

Based on the regression relationships obtained from the above functions, we can graphically represent some possible combinations of influencing factors and theoretical economic growth rates for the period 2008-2013. From there, we can determine the theoretical curve that best fits the empirical data on economic growth in Vietnam during this period (see Figure 3 on the left and right).

The problem of restructuring the regional economic system in Vietnam can be solved by building competitive cores in key industries and developing appropriate infrastructure to support these cores. Institutional adjustments need to be designed to facilitate the restructuring process, encourage the strongest possible development, and at the same time aim at the common development goals of each region, such as reducing the development gap between regions and limiting imbalances in regional economic development. Each region, despite its own specialization, needs to create conditions for the development of its own specific advantages, as this will be the foundation for a sustainable development strategy.

The Vietnamese government's economic policy should encourage changes in the cost structure, in particular increasing the share of labor costs, reducing material production costs, and shifting taxes away from labor to other factors such as capital, banking transactions, and real estate. This will require a fundamental change in the way budgets are mobilized at all levels, thereby improving the allocation of expenditure, focusing on creating incentives for productive activities, and achieving new development outcomes.

Vietnam has strong regional differentiation, not only in terms of resources and population density, but also in terms of cooperation and competition between localities. These characteristics require regional development strategies to be flexible and clearly differentiated. Regions such as the Northwest or the Central Highlands, with their unique geographical and climatic conditions, often face challenges such as low population density and high production costs. The economic development of these regions can be

promoted through large-scale infrastructure projects of national importance, which aim to connect these regions and promote cooperation between regions. These projects may include the development of transport corridors, the deployment of key industries under specific state programs, and the development of sectors related to transport, energy, and processing industries.

The basis for the development of these areas will depend on a workforce that is locally trained and has a long-term commitment to the region. Key projects will need to focus on providing essential facilities and infrastructure such as housing, transportation and information. Human resource policies need to provide appropriate incentives, including living conditions and wages, to attract and retain workers, especially in disadvantaged areas such as the Northwest, Central Highlands or the Northern mountainous provinces, as a foundation for technological and industrial development in these areas.

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