

Regions as administrative-territorial units (regions) have certain features, which are difficult to study without understanding their role and importance in the development of Russian society.

Particular attention should be paid to the fact that domestic researchers, studying the concept of "functions of the region", do not give their classification. Almost all the authors refer to the fact that the functions of the region as a territorial-administrative entity are identical to the state that provide RF subjects considerable powers in regional governance. One of their main functions in the region is the most complete software of its residents with all the necessary goods and services in a market economy, the division of labor and globalization is achieved within the framework and on the basis of the region of foreign economic activity, which plays a special role in the integration of Russia into the world economy. Therefore, you need as clearly as possible the position of the region is designated as a subject of foreign economic activity and to determine its function.

According to our approach the region as a subject of foreign economic activity – is an independent, territorially separate administrative entities exercising functions in the field of international and foreign economic relations and interactions within the mandate established by the legislation of the Russian Federation aimed at improving the competitiveness and development of the regional economy.

Under Russian law, the members of the Federation have the right for international and foreign economic relations, the regulation of which is the subject of a joint center and the Federation. The regions are not subjects of international law, but behind them is fixed a number of specific functions in the field of foreign trade. Feature of the present stage and prospects of development of the region as a subject of foreign economic activity is the merging of internal functions with external region and the formation of an integrated nature of the functions – complex functions.

That's why we can conclude that regional foreign policy should be implemented with the participation of both governmental bodies of the Russian Federation and the federal government in the interests of all involved in the process entities (people, companies, governmental bodies of the Russian Federation and the Russian Federation). Due to the fact that not all regions have the necessary resources and capabilities to implement foreign trade, an important role in the implementation of foreign policy should play the assistance of the State Federation's subjects, both at the establishment of foreign economic relations and in their implementation.

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## RESEARCH OF REGIONAL GROWTH AND DEVELOPMENT THEORIES

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Regional economics has a long tradition in analytical research modeling, with the aim to enhance our understanding of regional competitiveness conditions and of the emergence, persistence, and mitigation of spatial socio-economic disparities. Unequal regional development in our open economy has prompted a long-lasting debate on the validity and usefulness of economic growth theories in a regional context. This research aims to review various contributions to regional growth theory. It addresses both established regional growth theories and modern growth theories.

Most early theories of regional economic growth were a spatial extensions of neoclassical economic theories of international trade and national economic growth. Together, these early neoclassical theories predict that over time, differences in the price of labor and other factors across regions will diminish and tend toward convergence. This prediction has generated considerable con-

controversy among theorists, particularly in light of the apparent tendency toward international divergence between the per capita incomes of industrialized nations and less developed nations. Early theories of regional economic development emerged out of this controversy and can be distinguished from one another in terms of differences in the theoretical predictions regarding interregional convergence or divergence in per capita incomes and factor prices over time. These theoretical responses are examined in more detail in the next section. First, it is important to look at the interregional convergence hypothesis. Neoclassical trade theorists draw on the Heckscher-Ohlin-Samuelson (HOS) theorem to explain international factor price convergence using static equilibrium trade models. This well-known theory of international trade begins with the following simplifying assumptions:

1. Two regions (1 and 2) trade two commodities (A and B) using two factors of production.
2. The production of A is labor-intensive, and the production of B is capital-intensive.
3. Both regions rely on the same technology in production and have the same production functions.
4. There are constant returns to scale in the production of A and B.
5. Both regions produce some of A and some of B.
6. Tastes are homogeneous across regions.
7. Commodity and factor markets are perfectly competitive.
8. Factors are mobile within nations but not mobile across nations.
9. There are zero transportation costs.
10. All resources are used up in the production of A and B.
11. Trade between 1 and 2 is balanced such that the value of regional exports is equal to the value of regional imports.

With these assumptions, Heckscher (1919) [4] and Ohlin (1933) [10] demonstrate that a factor-abundant region will have a comparative advantage in the production of goods that require the intensive use of that factor. This region will then specialize in and export the factor abundant good and import goods for which factors of production are scarce. Samuelson (1953) [13] elaborates on the Heckscher-Ohlin result to demonstrate how free trade and/or factor mobility equalizes the relative and absolute long-run prices of factors of production among regions involved in trade. The HOS theorem is complementary to David Ricardo's theory of comparative advantage (1817) [12] in that the Heckscher-Ohlin model explains why comparative advantages exist (differences in initial factor endowments), whereas Ricardo's theory only establishes why comparative advantages may lead to specialized production. The HOS theorem also has obvious implications for regional trade and development. In its simplest form, the model suggests that specialization in factor-abundant production combined with free interregional trade will result in equal per capita incomes across regions for workers with similar skills. This hypothesis is a comparative statics version of the interregional convergence hypothesis. Dynamic versions of the convergence hypothesis draw on neoclassical growth theory, particularly the models proposed by Solow (1956) [14] and Swan (1956) [15]. In neoclassical growth theory, there are two different types of convergence. Conditional convergence refers to the convergence toward a steady state growth rate resulting in constant per capita incomes, consumption levels, and capital/labor ratios. This is termed conditional, because savings rates, depreciation rates, and population growth rates are allowed to differ across countries. Therefore, conditional convergence need not necessarily result in equal per capita income levels across countries. Absolute convergence occurs when growth model parameters are equal for all countries, which in turn implies that richer countries will grow slower than poorer countries, and per capita incomes will become equalized across countries over time as in the HOS model of international trade.

Most current theories of regional economic development can be viewed largely in terms of their criticisms and response to the convergence hypothesis and neoclassical economics more generally. Location theory was developed as an early response to the ignorance of space in traditional economic analyses. Originally developed by Alfred Weber (1929) [16] and later extended by Edgar Hoover (1937) [5] and Walter Isard (1956) [6], location theory has focused primarily on developing

formal mathematical models of the optimal location of industry given the costs of transporting raw materials and final products. Simply stated, firms will tend to locate near markets when the monetary weight (defined as the shipping costs per mile times the physical weight of the item shipped) of the final product exceeds the monetary weight of the inputs required to produce that product. Conversely, firms will tend to locate near primary input sources when the monetary weight of raw materials is large relative to the weight of the final product. Firms may also weigh the relative production cost savings from particular locations with the increased transportation costs to minimize the total costs of production and transportation. Although location theory alone does not provide a theory of regional economic development, the explicit models of transportation costs have been highly influential in later theories of economic growth and development, particularly the new economic geography. Walter Isard (1956) [7] eventually drew on concepts from location theory to develop the field now known as regional science, a branch of the social sciences that examines the impact of space on economic decision making. The analytic methodologies developed by Isard (1960) and extended by Isard et al. (1998) [8] have become standard items in the regional planning professional's toolbox.

An early attempt to bring some of these perspectives together in a more general theory of the spatial location of firms can be found in the work of Christaller (1933) [3] and Losch (1954) [9]. Christaller first formulated central place theory, as it came to be called, to describe the distribution of cities of different sizes within southern Germany. Losch expands on the initial ideas of Christaller and places them into an economic context, introducing the idea of a demand cone into the hexagonal market area framework developed by Christaller. The basic idea elaborated by Losch is that the relative size of a firm's market area, defined as the territory over which it sells its product, is determined by the combined influence of scale economies and transportation costs to markets. If scale economies are strong relative to transportation costs, all production will take place in a single plant. If transportation costs are large relative to scale economies, firms will be scattered around the region. For any given market, free entry among firms drives profits to zero and causes all spaces to be occupied by equally spaced firms with hexagonal market areas. However, due to differences in transportation costs, scale economies, and demand for different products, the size of the individual hexagons will be different for different markets. Central places emerge in locations where market areas for different products overlap. As indicated in the previous section, this process of monopolistic competition in space produces a hierarchically structured system of cities of different sizes and different levels of product diversity. Although location theory and central place theory have each contributed considerably to our understanding of the spatial pattern of firms, their static perspective and ignorance of many important dimensions of regional economic growth, particularly labor migration, has impaired their use as a general theory of regional economic development. Theories of regional economic development incorporate these concepts into more formal expressions of regional growth dynamics.

The complex issue of regional development and growth has been a focal point of interest in recent decades. The great number of relatively new and advanced contributions in the area of regional development/growth theories does not allow us to offer a detailed review of all individual achievements made; moreover, a detailed presentation of all new ideas would probably not be very stimulating. Finally, it is necessary to reflect main tendencies in theories of regional economics. Table summarizes the two main trends that, in our view, largely characterize the theoretical developments over the last two decades in regional economics, and that are common to urban economics and to many other disciplines. These theoretical perspectives are presented in table for both regional growth and regional development theories. The former aiming at explaining the aggregate growth rate of income and employment in a formalized and quantitative way, the latter oriented towards the identification of all tangible and intangible qualitative elements of the growth process of regions.

The first tendency which has accompanied the theoretical development in the field is the *need for more realism* in sometimes rather abstract conceptual approaches, by relaxing most of the glaringly unrealistic assumptions of the basic theoretical models. This tendency is justified by the need to broaden the interpretative capacity of the theoretical toolbox in this research field by searching for theories that are better able to reflect issues and policy strategies for the real world. Table

Main Tendencies in Theories of Regional Economics

Tendencies in theories	Regional growth theories	Regional development theories
More realism in theoretical approaches	Endogenous growth determinants	Reasons for success and failure of clusters of small and medium enterprises (SMEs), local districts, milieus.
	A role in growth models for the complex nonlinear and interactive behavior and processes that take place in space	Non-material resources as sources of regional competitiveness
	Imperfect market conditions in growth models	An active role in knowledge creation
	Growth as a long-term competitiveness issue	
	Technological progress as an endogenous factor of growth	
Dynamic rather than static approaches	Evolutionary trajectories of non-linear interdependencies of complex systems	Dynamic rather than static agglomeration economies

Source [2].

In recent years, more realism has been required to insert into growth models the complex nonlinear and interactive behavior and processes that take place in space, and to understand regional competitiveness in terms of endogenous factors.

A second clear mega-trend in theoretical developments – typical only of regional development/growth theories – has been the attempts to move towards *dynamic approaches*. Time matters, as well as space, in regional science, and this also holds in regional economics. The effort to encapsulate time in spatial analyses has been accomplished in two different ways, according to two different meanings of time applied in the two fields of analysis: a more traditional chronological time; and time as the rhythm of innovative phenomena which occur in the territory which has been applied in regional growth models all over the world.

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