NEOCLASSICAL CONCEPTS OF GROWTH FROM THE MIDDLE OF THE 20th AND EARLY 21st CENTURIES

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Abstract. In economic studies, it is accepted as an imperative that achieving growth of the national economy is a prerequisite for a higher standard of living of the population and for development. However, this understanding is the subject of deep debate in scientific circles. One part of the researchers is of the position that growth implies development of the economic system. Other authors share the opinion that economic growth is only one of the components of development, but not sufficient to fully guarantee it. Without claiming a definitive position and comprehensiveness, with the present work we aim to present some of the essential concepts for achieving economic growth, formed in the field of the neoclassical mainstream after the second half of the 20th and the beginning of the 21st century. More specifically, the task is to identify the prerequisites for achieving economic growth, which create opportunities for development and a higher standard of living of the population. On this basis, the guidelines for developing an effective and successful macroeconomic policy are outlined.

Keywords: economic growth; economic development; cyclical fluctuations

Introduction

Early theories of economic growth were formed within the concepts of economic conjuncture and cyclical development. W. C. Mitchell, in his work "Economic Cycles", published in 1930, defined the Contrarian waves as a fluctuation that framed the path of growth. In this sense, according to him, growth is associated with the path to progress. At the beginning of the 20th century, theories of growth and of the economic cycle were formed in parallel. Baseline development are established within the National Bureau of Economic Research in the United States (NBER), under the direction of W. C. Mitchell. The task set by the NBER researchers in this period is to analyze cyclical fluctuations and changes in the business environment. Theoretical concepts of business conjuncture and cycles are associated with the names of prominent economists such ass V. Repke, P. Mombert, G. Kassel, N. Kondratiev and others. A serious influence on their research is the ideas of M. I. Tugan – Baranovsky. It develops and proposes the first overall concept of the industrial

cycle. Within this concept, the logic of cyclical development is explained by changes in fixed capital investment, linking their dynamics to capital accumulation and its impact in the estimated rate of yield. In addition, Tugan-Baranovsky was the first researcher to raise the question of the natural limits of the expansion of production, seeing in the role of such solvent demand. (Tugan-Baranovsky, 1922: 237 - 295)

These ideas had a significant impact on world economic thought since the beginnings of the last century, and especially in the formation of the concepts of economic growth of S. Kuznets and EL. Hansen. (Kuznetsova, 2002: 58 - 62)

Under the influence of the views of Tugan-Baranovsky J. M Keynes developed the concept of the multiplier. It presents the multiplicative relationship between investments caused by national income growth and leading to demand growth and the formation of new sources of investment in the next period.

If Keynes' theory defines recommendations of a generalized macroeconomic nature in the direction of stimulating aggregate demand through the instruments of fiscal and monetary policy of the state, then the theory of industrial cycle of Tugan-Baranovsky offers practical measures with immediate application. Such a measure is aimed, for example, at determining that sector of the national economy, the dynamics of which contribute most to the formation of the business conjuncture. (Tugan-Baranovsky, 1922: 268 – 271)

In this paper we will not dwell on the full review of the early growth patterns formed by neoclassical economists. Undoubtedly, their primary basis is the ideas of Adam Smith, formulated in "The Wealth of Nations". Their real beginning was set by Roger Solow with his model of economic dynamics. It is a simplified two-sector model of economic dynamism in which only households and firms participate. Through it, Solow asserts the understanding that equilibrium volatility results from the non-substitutability of factors of production, he uses the Cobb-Douglas function, in which labor and capital are interchangeable and the sum of the coefficients of their elasticity equals one. In this sense, the focus of attention in the development is placed on modern neoclassical models and in particular – those after the !970s.

1. Conceptual features of neoclassical theories of growth in the second half of 20th century

The theoretical views of economists from the neoclassical direction of economics after the late 1970s on building models for achieving economic growth raise two key questions:

 \checkmark For the endogenous mechanisms formed in the course of business cycle fluctuations;

✓ To remove the constraints faced by earlier growth patterns. (Leonidov, 2003: 3 - 13)

The solutions to these issues are sought through the prism of the role of international competition and the allocation of resources in the global economy, the consideration of a number of institutional factors, overcoming the "neutrality" of significant economic determinants of growth, underlying earlier neoclassical concepts.

The expansion of the object of analysis in modern neoclassical theories of growth has been achieved by taking into account the constrains placed by civilizational and institutional factors of the economic environment. On this basis, the question of the evolution of the internal underlying assumptions in the growth models developed in this scientific direction is identified as important.

The beginning of the process of transformation of neoclassical models of growth can be pointed to the emergence of the development of **R. Nelson and S. Winter** "Evolutionary theory of economic change" (Nelson, Winter, 1982). In it, they critique older neoclassical growth models.

Modern neoclassical growth theories focus on the endogenous mechanisms of economic development such as: the nature of competition, the role of institutions, the behavior of firms, the nature of innovation and the role of money in the economic mechanism. Institutional economics, property rights theory and human capital theory are taking shape within this this research trajectory, outlining the transition to a new way of conceptualizing economic development.

Solow's model of the functioning of the economy and growth in the 1960s found its development in J. Tobin. Tobin removes the assumption on the neutrality of the Solow residual in achieving growth. On this basis, a model is proposed that takes into account the endogenous nature of money as an asset equivalent to physical investment.

The importance of Tobin's theoretical construct for the development of the neoclassical concept of growth and its practical application can be defined as substantial. Moreover, it has been influential in shaping the modern neoclassical concept of the business cycle and the theory of "long waves" in its monetary version (Leonidov, 2002: 3 - 13).

In addition to Tobin, **R. Lucas has contributed to the formulation of a systematic concept of the business cycle and the endogenous preconditions of growth.** In a series of publications, he updated the research of neoclassical economists of previous eras, developing a model analyzing deviations from the trend of economic growth. (Robert, Lucas, 1972: 103 – 124; 1980: 696 – 715; 1982)

The development of the ideas about the role of money as a factor for the functioning of the economic mechanism, first launched by the founders of the monetary current in economic thought M. Friedman and A. Schwartz, is found in the works of **Nobel laureates F. Kidland and E. Prescott.** The tow scholars succeed in analyzing the structure of economic policy and the drivers of business cycles in a novel way. Through their research, they are influencing economic reforms in a number of countries such as the UK, New Zealand, Sweden and the Eurozone.

More specifically, Kidland and Prescott also draw on Solow's neoclassical growth model in their analysis of the effects on the economic mechanism of temporary changes in the technological foundations of production. Positive technology "shocks" induce growth by increasing total factor productivity. Consequently, this leads to an increase in production in two ways. First, factor productivity growth means more output for the same amount of inputs (labor and capital). Second, due to higher productivity, entrepreneurs tend to increase the amount of labor and capital input, which ensures the growth of aggregate income in the national economy. A portion of the income growth covers the return on inputs and the remainder is saved, which provides investment growth in the future. The decision of economic agents on how much of their rising income to consume and save depend on the size of the increment and the duration of technological change. In this way, the two authors provide a graphic example of how changes in the way a country's available factors of production are used could cause cyclical fluctuations in economic activity. (Kydland, Prescott, 1977: 35 - 44; 1982: 42 - 66)

From what has been said, it can be conducted **that the contribution of Kidland and Prescott consists in the formulation of macroeconomic indicators of financial market capacity as a source of resources for achieving economic growth in a cyclical perspective.** In order to maintain a positive trend in the development of the economy, they consider appropriate the application of monetary incentives aimed at achieving sustainability of innovation activity in the country's production complex and realizing economic growth on this basis.

Since the early 1990's, there has been an intensive development in **the theory of endogenous preconditions for economic growth.** This happens with the attempts to reconcile the ideas of the Schumpeterian school with the theory of evolutionary development of economics of Nelson and Winter in the general current of the neoclassical paradigm.

Proponents of the endogenous theory argue that the exogenous scientific and technological progress growth models allow for a conflation of the concepts of scientific and technical knowledge and the results of their implementation. Thus, for example, if the knowledge has a unique character that is re-expressed on the goods produced with its participation, this creates the preconditions for the formation of a monopoly position protected by patents. Ultimately, this brings income to the holders of the knowledge and revenue in the form of economic rent to the producers of such goods.

These theoretical models also **emphasize the role of information as an endogenous growth factors. The Dutch school of economic dynamics** under the leadership of G. Silverberger, Director of MERIT (Maastricht Institute for Economic Research, Innovation and Technology), not **only recognizes the need for creative Schumpeterian destruction, but also reconciles the techno-economic paradigm with Kondratieff cycles.** In this context, **the representatives of the school raise the question of the causes of the unevenness of growth.** (Silverberg, Lehnert., 1994: 74 – 108)

In this search for the reasons for the uneven growth rates, Dutch economics criticize the method of accounting for the so-called Solow residue. The part of the increase in the volume of output produced in the economy that remains after accounting for the impact of labor and capital factors in the overall growth rate is said to be due to changes in the technology of production. The assumption of a constant rate of technological change makes this model inapplicable in periods of slowing growth rates and in the downward phase of the Kodratieff cycle. (Silverberg, Verspagen, 2003: 270 – 285) Taking this view into account, it can be concluded that the Solow residue is only used as an indicator of the exogenous impact of technical progress in achieving economic growth.

In addition to this line of research, G. Silverberger also **attempts to refine and build upon Solow's model by applying nonlinear variants of the Cobb-Douglas function**. On this basis, the macroeconomic dynamics of the endogenous growth models is developed taking into account the process of technology substitution in the phase of creative destruction and technological saturation of production. Thus, the modified model represents, on the one hand, growth as a result of technological saturation of production and, on the other hand, the mechanism of transfer of production potential from the old to the new technology. (Silverberg, Verspagen, 1996: 29 - 47)

From what has been said so far, we can conclude that the last decade of 20th century was the time in which an impulse for convergence of growth theories with economic conjuncture theories emerged from alternative currents in economic thought such as evolutionary theory, institutional theory, etc. The development of theories and models of growth in the early 21th century shows that in its most general form the business cycle can be explained by multiplier mechanisms operating in the economic system. The factor structure of growth is not limited to the elementary interaction of labor and capital or to the synchronization of the products of new technologies and solvent demand.

Growth as a macroeconomic phenomenon, in our view, could have as its source both the propensity of entrepreneurs to innovate and changing consumer tastes and preferences for continuously produced technologically and functionally new products. This gives us reason to emphasize that the accumulation of a theoretical stock of methods for achieving growth in economic science allows us to develop effective tools for regulating growth at the national, sectoral and industry levels.

The theory of competitive advantage, growth poles, cumulative theories and technological diffusion have been given a special place in economic thought since the late twentieth and early twenty-first centuries. These concepts can be defined as the basis for the design and implementation of development strategies for individual countries or entire regions. At their core are competition and local technological determinants of development. According to them, each country should identify and make the most of its productive, intellectual, technological, natural and other developmental advantages.

M. Porter has made a major contribution in conceptualizing and giving an applied aspect to this scientific field. He developed the so-called "national diamond", which presents the features of the national economy, included in a system of key factors for the realization of its potential advantages. These factors are divided into three groups: traditional (labor, land, capital, entrepreneurial skills), knowledge and infrastructure. (Porter, 2004: 690 - 698)

An important condition for the effective use of these factors is the degree of development of institutional, entrepreneurial, socio-economic and social infrastructure. According to the representatives of the neoclassical doctrine, the more developed are these aspects of the environment, the more serious are the opportunities for unleashing the potential of human capitals as the main productive factor in modern economic conditions. Determinants of economic growth are resource – innovation factors, including elements that objectively realize the qualitative changes of the economic system.

These factors are primarily endogenous to the development of the economic system. Alongside these, however, the political and economic institutions, the forms and types of ownership present in the national economic complex, the specifics of social relations, the religious and cultural peculiarities of the nation, etc. have a significant impact on economic development. The level of social division of labor in production achieved today is of great importance, as are the respective economic forms in which economic processes are implemented.

2. Features of the concept of economic growth in supply-side theory

The analysis of the opportunities for economic growth carried out by the representatives of the supply-side economics, also known as the co-players, deserves attention because it reveals a number of recommendations for concrete measures to stimulate the growth of the economy and trigger the development of society. This gives them a deserved place among the many theoretical concepts of growth in economic science.

Their views on economic growth are distinguished by their critical orientation and focus on the factors hindering the development of economic processes. They use the method of opposition inherited from the neoclassical tradition. In this way, for example, they discredit Keynesian regulation or social policy of the state, using them as arguments to support their views.

Central to the concept of co-movers for growth is **the problem of national savings**. They use their scarcity as the main reason for the economic slowdown. Obviously, thus approach to savings is diametrically opposed to Keynesian notions. For proponents of the supply-side theory, **the savings deficit is caused by imperfections in the tax system.** High tax rates, for example on profits, distort market processes, causing a dangerous reduction in the marginal efficiency of investment. This in turn negatively affects savings, investment and GDP growth. When after-tax income declines, a mechanism is triggered to reduce personal savings, undermining the financial basis of capital accumulation in the economy (Feldstain, 1982: 3 – 46) The supply siders also report such an effect from the social policy implemented by the government. According to them, it not only stimulates an increase in current consumption at the expense of savings, but also causes a decline in labor supply, an increase in unemployment, a reduction in labor income and as a final effect – a reduction in savings in the national economy.

According to the proponents of the supply-side theory, **inflation**, provoked by an increase in nominal interest rates and thus making credit more expensive for entrepreneurs, also **harms economic development**. Combining inflation with extraordinary high levels of taxation on profits causes a decline in dividends that limits shareholders' incentives to make new capital investments. This creates the perception of taxing the entrepreneurs with the so-called "inflation tax" – the sum of tax payments to corporations multiplied by the rate of inflation (Feldstain, 1982: 153 – 168) The supply siders prove that in the face of constant price increases, the duration of capital use in the production process also increases. This process causes the obsolescence of equipment, hinders the use of state-of-the-art STP and slows down economic growth.

The main scientific contribution of the creators of the supply-side theory is in the presentation of the mechanism of the negative impact of the budget deficit on the processes of reproduction in the economy. Covering the deficit with government debt triggers negative phenomena in financial markets. Focusing its efforts on curbing the rate of inflation, the state is selling its debt instruments in these markets. It thus becomes a competitor for the financial resources of private businesses. This limits the ability of entrepreneurs to make capital investments in new production facilities. The resources drawn by the state are primarily used to secure its non-productive consumption. The government's actions to cover the budget deficit cause an increase in the demand for money by private businesses, which leads to an increase in lending rates. Ultimately, this narrows both the financial and material basis of private productive accumulation. Credit becomes more expensive and investment in the economy is restricted.

The beginning of the creation of the creation of the theoretical foundation for the explanation of these processes was laid by the econometric research of R. Barrow. It defines the so-called "crowding-out effect" on private demand for credit resources from the state. In his works, Barrow defends the thesis that in order to prevent the negative impact of the budget deficit on the processes of reproduction, government revenues and expenditures must be balanced. This will lead to a neutral budgetary policy, which is a guarantee for the free functioning of the market system. (Barrow, 1981: 264)

Taking these ideas into account, the supply siders suggest that governments should get rid of the Keynesian "fear" of savings and work to increase them through tax reforms, limiting social spending and neutralizing the budget deficit. To intensify production, they recommend applying the practice of accelerated depreciation.

On the basis of the above, it can be concluded that the measures recommended by the proponents of the supply-side theory open the way for overcoming the distortions of market processes and are the key to solving the problem of stunted economic growth.

Conclusion

In conclusion, from the brief review of the ideas of neoclassicism of the late twentieth and early twenty-first century on economic development and growth, we can say that they are mainly oriented to the internal preconditions of development and growth. The changes in economic reality in the last few years have shown the shortcomings of the free market and the inapplicability of growth models based primarily on the construct of perfect competition. Economies today are dominated by imperfectly competitive market structures that inhibit the rational behavior of economic subjects. Increasingly, the state's presence is needed to support the market, correct its imperfections and mistakes, and create the conditions for exiting a crisis situation. The presence of monopolistic and oligopolistic entities in the markets excludes price mechanisms as a regulator of economic processes and as a guarantor of the achievement of market equilibrium with full and efficient use of resources.

As a result, today we increasingly have to look to those economic thinkers who offer ideas for mitigating the effects of the downward phase of the Condratiev's cycle through active cooperation of state macroeconomic policy with the market.

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