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SELECTED PROBLEMS OF ECONOMIC THEORY

Summary

The theory of economics comprises a variety of approaches and schools of thought that result from the range and manner of analyzing economic reality. The diversity of methods used to asses economic processes encourages one to specify a certain number of research methods from the perspective of their essence and significance in the economic theory.

The aim of the paper is to characterize selected aspects of economics in terms of the way in which economic processes are presented. The authors mention three perspectives: institutional, Austrian and neoclassical – all of them crucial for presenting the most important issues in the theory of economics. Obviously, the presented assessment of the importance of these approaches is selective and focuses solely on certain issues. It, nevertheless, seems interesting both because of the used instruments and of its theoretical value.

Key words: local development, management tools, space

JEL Classification: A11, B00, B25

1. Introduction

The growing importance of non-quantitative (quality) factors which determine the rate of growth and the character of economic development as well as the dynamics of economic convergence is a characteristic trait of modern economies. The use of this type of solutions helps to increase the efficiency of production processes and to shift both the directions and methods of competitiveness towards non-market forms.

The Polish economy is undergoing rapid modernization because its structure still differs from the economies of highly developed countries and does not comply with the requirements of international competitiveness, especially because of low efficiency and capital intensity.

The most important challenges of the Polish economy include: increasing the quality potential (both in terms of financing and implementing new solutions) and improvement of competitive capacity viewed as the ability to ensure development in the conditions of an open economy. Poland's economic potential is too low to guarantee greater technological competitiveness. The only chance to increase it is to create conditions for vigorous entrepreneurship, both in the technical and organizational aspect. This process can be facilitated if an external balance is achieved as well as long-term development in selected spheres.

Higher efficiency ought to result in greater capacity to compete, better competitive position of Poland's economy, an expanded base of intra-industry division of labor. The aim of this publication is to provide an answer to the following questions: Does the state of technology transfer in Poland guarantee better dynamics of economic growth and narrowing the gap in relation to the highly developed countries? What possibilities does it offer for improvement of competitiveness?

The authors intend to identify the position and role of various economic factors in economic development processes, including the economy of Poland. The subjective review of development conditions is related to the selected areas of the theory of economics and their importance for the investigated issues. It also results from the range of scientific interests of the authors and concerns the issue of institutions, subjectivism in the Austrian school of economics, and neoclassical objectivism.

2. Analysis of an institution in the theory of economics

The institutional approach is becoming increasingly popular in economic analyses. For almost three hundred years, the category of institution[1] has been present in the deliberations of economists and other social scientists. The elements of institutional analysis can also be observed in the work of the representatives of classical economics. Adam Smith's book *An Inquiry into the Nature and Causes of the Wealth of Nations* was the first publication that included a detailed analysis of the institutional system of economies, comparable with contemporary publications and akin to the approach of the New Institutional Economics [Nelson, 2002, pp. 18-19]. However, it seems that it was only at the end of the 20th century that interest in institutions began to grow noticeably. Ever since, the scale of research into the nature and significance of institutions in the economy has been constantly on the rise. A group of economists and representatives of other sciences have been exploring the importance of the institutional aspects of economic activities in a more systematic way, developing methods characteristic of institutionalism, owing to which

[1] The term was first used in Giambattisto Vico's *Scienza Nuova* of 1727, i.e. long before A. Smith's *Wealth of Nations* or the beginnings of economics as a science [Hodgson, 2006, p.1].

this field of economics is becoming increasingly recognized and discernible. And yet, until the end of the 20th century, it had not become incorporated into the mainstream economics. In fact, it can still be regarded as relatively new to economic research. However, the fact that, for the time being, institutionalism is not likely to be a primary trend does not necessarily mean that it will not play a crucial role in creating enough critical mass to effect change in the perception of economics as a science. Therefore, should a scientific revolution take place, institutional economics will undoubtedly contribute to it [Ratajczak, 2015, p. 124].

Institutionalism first appeared in the United States of America at the end of the 20th century and introduced an interdisciplinary approach to economic analyses. Its proponents attached particular importance to historical and cultural conditions. The study of institutional systems and their influence on people's actions facilitated explanation of economic processes and phenomena in new ways. Researchers analyzed the development of economic orders, as well as both formal and informal rules. For this reason, attention was drawn to previously overlooked factors that proved to be considerably more significant than it used to be thought [Hodgson, 2000, p. 327].

It is possible to indicate at least two reasons for increasing interest in the institutional approach among economic scholars [Ratajczak, 2005, p. 57-58]:

- criticism of economic paradigms, focus on the imperfections of the mainstream: excessive formality (meant to ensure greater simplicity and elegance of models), withdrawal from reality (idealistic premises) and difficulty in finding applicable solutions;
- system transformation and its influence on the economies of particular countries. Such a radical change of the institutional system of economics gave rise to questions concerning the theoretical bases and effects of the observed processes. The transformation generated new problems of economic, political and social character, requiring adequate and relevant solutions, not merely temporary, but likely to last. As a result, rapid progress in economic thought as regards institutional change became necessary.

The importance of social institutions for economic growth is undeniable (institution matters). The main issues analyzed by institutional research comprise the explanation of the role played by various institutions in shaping appropriate human behavior and the influence that institutions have on economic processes. There have been attempts to create models (including more formalized ones) presenting the institutional changes. However, one needs to be aware that the construction of a universal model reflecting the influence of institutional factors on the economy is, in fact, an unattainable task. Despite certain difficulties with the quantification of the qualitative factors which affect economic performance, institutional analysis makes it possible to reveal institutional indicators of development that are characteristic of economies at different stages of development. Institutionalists attempt to identify the consequences of particular constructions of institutional systems. They realize that universal systems do not exist because each country develops in its own specific way. It is only possible to find similarities between the institutional systems of particular countries that result from their belonging to the same cultural circle, having similar historical experiences or development levels [Hodgson,

1998, p.168]. Such research is focused mainly on two types of issues: the existence of path dependence and the structural obstacles to economic growth (especially ones that hinder the development of countries during transformation periods) [Poirot Jr., 2002, p. 557].

The institutional system of an economy is a multi-dimensional and multi-faceted structure, composed of both formal and informal rules, created by a society. It constitutes the milieu for all kinds of human activity. Owing to institutions, people shape their perception of the world and their attitudes to others. Institutions create patterns of activity and codes of behavior that are considered proper in a given society. They steer people towards more predictable behaviors [Furubotn, Richter, 2000, p.6], helping to extend the area of interaction and increase the benefits of undertaken activities. Particular importance is attached to institutions related to business. They influence people's ability to perceive and assess reality and their predictive capabilities – indispensable components of decision-making. Under a given institutional system, it is possible to achieve creativity necessary for finding solutions to problems, willingness to venture into new spheres of activity, openness to new solutions, and courage to overcome obstacles. The emergence of such attitudes will be favorable to changes in terms of products, technology and other factors. Naturally, such a set of incentives is not always uniform and internally consistent. In reality, the issue of institutional diversification has more fundamental consequences. Such diversified institutional arrangements which can be observed nowadays create a subset of a certain range of potential institutional solutions. [Rodrik, 2011, p. 217].

Institutional economics presents man as an individual who is entangled in a network of interpersonal relationships, which constitutes the essence of functioning in society. T. Veblen remarks that institutions are rooted and universal and that human behavior is strongly dependent on the environment (time and place). According to this representative of the so-called old institutionalism, institutions denote the prevalent ways of thinking, universal customs formed in certain social conditions and resulting from the relationship between individuals and society. In the psychological aspect, institutions constitute mental attitudes or concepts of living, dominant in a given time and place [Veblen, 2003, p. 127]. Similarly, from the perspective of the new institutional economics, individuals should not be observed in isolation, separately from other participants of social relations because such interactions shape attitudes and actions. Institutions are connected with the sphere of interaction, but also with the spheres of culture, material world and human experience. D.C. North wrote that we may not see, sense, touch or even measure institutions as they are constructions of the human mind [North, 2009 (1990), p. 107].

Institutional systems are created over a long time. The existing economic and political institutions – sometimes created during a long institutional drift and at times being the result of different reactions to earlier turning points – are an anvil on which the future changes will be forged [Acemoğlu, Robinson, 2014, p. 129]. Both the stability and continuity of institutions are an effect of their constant adaptation and an outcome of changes caused by introducing new regulations. The anticipated effects of the activity of certain institutions can be either reinforced or weakened by the effects of the activity of others. This is due to the fact that changeability is an inherent characteristic of an institution.

Institutional transformations take varying lengths of time[2] and the processes of their transformation vary as well. This leads to conflicts between elements of the system and to generation of inconsistent incentives. Whenever institutional contradictions arise, i.e. when formal institutions are not adjusted to informal ones, these rules become less efficient. A discord between groups of institutions can be manifested, among other things, in an inconsistent impact on the interactions among entities. The consequences include limited trust in other members of society, including potential contractors, as well as reduced dynamics of economic activity.

There exists at least one common feature of institutions in each society, and namely a shared system of values that constitutes the basis of the society's functioning and the source of fundamental institutions. Institutional limitations accumulate with time, while a society's culture adds layer after layer of rules and norms (including convictions) inherited from the past, shaping the present and influencing the future [North, 2014, p. 6]. At the core of an institutional system is the institutional matrix, i.e. a collection of the most fundamental rules that constitute a community. The most important task of a society is to create a sound institutional basis in order to ensure (for the economy) the ability to recover from shocks and maintain long-term productivity [Rodrik, 2011, p. 32], and then to preserve this effective institutional system. The creation of a proper institutional environment is a condition for achieving a high rate of economic growth [Casson, Della Giusta, Kambhampati, 2010, p.138]. A sustainable system of institutions provides unity among diversity. This is due to the fact that the system comprises various institutions capable of co-operating, thus generating a powerful set of motivations to promote "correct" behavior. Central to this type of balance is the sphere of culture, i.e. the most deeply-rooted institutional element, owing to which it is possible to ensure the continuity of existence, and preserve the identity and cohesion of particular societies and nations [Wilkin, 2016, p. 120].

The acceleration of economic growth in less developed countries does not require such considerable changes in the institutional system. In the first stage, even insignificant institutional changes that will remove basic barriers to entrepreneurship can give an impetus to en economy. However, in order to attain a steady convergence, high quality institutions must be established [Rodrik, 2004, p.13]. It is necessary to identify the conditions under which a country may accelerate the rate of growth in a relatively short period of time, as well as ones that will enable it to maintain long-term growth [Rodrik, 2006, p. 9].

Research in the field of new institutional economics focuses on explaining the processes of institutional change, their reasons and conditions, as well as the assessment of their intensity. Depending on the adopted approach, explanations may vary. Three types of institutional economics can be distinguished: historical, sociological and rational choice institutionalism [Gorges, 2001, p. 137]. The representatives of historical institutionalism pay attention to the historical roots of institutions. They divide the process of

[2] O. Williamson presented groups of institutions with various rhythms of change: from informal institutions changing within 102-103 years to allocation institutions changing on a regular basis, in response to interactions [Williamson, 2000, p.597].

institutional change into "ordinary periods" and "turning points" in which radical alterations are made to the main institutions. Since institutions are characterized by inertia, they may remain unchanged over long periods of time even if they are not efficient. When this is the case, they have a negative impact on economic growth. Additionally, there remains the question of why not all countries build efficient institutions and what prevents institutions from becoming increasingly socially beneficial.

In the sociological approach, attention is drawn to the role of "silent knowledge" in institutional change. In various situations, people draw from this resource when they undertake activities. They can also adjust other behavior models to their own needs. Institutional changes are more likely to occur when there is a large discrepancy between the ideals and expectations of individuals and the actual quality of organizations. Institutionalists from the rational choice school stress the fact that new institutions are established and the existing ones change is due to the unreliability of the market and limited rationality of individuals. Institutions evolve in a desired direction because the expected benefits of such changes include: greater stability, reduced insecurity and facilitation of solving problems related to collective activities. Institutions undergo transformations in order to reach a state of equilibrium [Gorges, 2001, pp. 139-140].

Institutions are analyzed not only by economics, although it is this branch of science that considers the market to be the most perfect institution. In the twentieth century, interdisciplinary trends emerged spontaneously, combining experiences and research methods of many sciences. Research that combines sociological and economic approaches has proved to be the most prolific. Several categories of study themes can be identified [Szpringer, 2010, p.29]:

- transaction cost economics (e.g. O.E. Williamson);
- rational choice sociology (e.g. G. Becker, J. Coleman, M. Hetcher);
- economics in the context of psychology, sociology and anthropology (G. Akerlof);
- socio-economics (A. Etzioni);
- institutional economics and development economics (G. Hodgson);
- new economic sociology (e.g. M. Granovetter, H.C. White, V. Zellizer)

Although scholars who explore the field in question have been criticized for overemphasizing the importance of institutions and introducing "institutional fundamentalism" [Rodrik, 2006, p.979], their achievements are indisputable. They were the first to take notice of conditions which had previously been classified as non-economic ones. Thanks to their analysis of these factors, it was possible to better understand the mechanism of economic growth and development, and broaden the awareness of the reasons for the underdevelopment of less advanced countries [Wojtyna, 2009, p. 19].

Nevertheless, institutional economics is not yet a fully-fledged branch, but rather one at an early stage of development [Searle, 2005, p.22]. It does not seem to have established any platforms for efficient cooperation with other sciences in order to achieve joint research outcomes. No common language or methods for a more comprehensive application of the contributions of other social sciences have been found, either. Also, the existing instruments for the description, assessment and ranking of institutions are far from perfect. The research tools applied today concern the quantity aspects of institutions, whereas the methods of measuring and comparing the quality aspects (e.g. the influence

of institutions on real economy) have not been devised yet. Despite these analytical difficulties, the results of scientific publications of institutionalists are a valuable contribution to economics. They fill the cognitive gap left by the mainstream economics. It is difficult to imagine solving many economic problems of modern economies without the aid of institutionalism[3].

3. Subjectivism in the theory of economics: the dominance of the Austrian school

The ideas of Austrian economics have been well-known and occupied an important position in science since the second half of the 19th century, when Carl Menger presented the theory of value which provided answers to many previously inconclusive and misguided enquiries of classical economics. What is extremely important from the point of view of research methods, Menger's theory of value had a subjective character because it was based on the law of marginal utility and was expressed by the level of satisfaction that entities derived from using particular goods. Such an approach imposed the rejection of the objective character of value proposed by classic economists.

Friedrich von Wieser and Eugen von Böhm-Bawerk extended, and to some degree also supplemented, the theory of value by including the questions of cost, the role of capital and rates of interest. Wieser indicated the changes of price expectations related to consumption goods produced while using these resources as the factors of both prices and the costs of economic resources. The creation of capital was a kind of circular movement at the beginning of which there are limited resources, while at the end – consumption goods acquired and valuated by households (the theory of imputation). Additionally, it was Wieser who complemented the theory of value with the category of alternative cost, which is a reflection of the "losses" that entrepreneurs sustain as a result of competitive production solutions which fail to be implemented [Wieser, 1889].

The Austrian theory of capital and interest proposed by Böhm-Bawerk is important for the assessment of various aspects of economic development. He defined capital as "a production factor" based on time preference. Böhm-Bawerk also created many substantial concepts regarding saving, investments, prices and economic growth. What seems to be the most interesting part of his analysis is the explanation of the "circular" character of the production process. He claims that it leads to increased productivity, both in quantitative (production capacity) and qualitative terms (better equipment, technologies) because the subsequent stages of this process enable better assessment of the realized undertaking and facilitate its improvement. The time that is necessary for the achievement of the final product is closely linked with the interest rate. This directly results from the fact that it is consumers that estimate the value of purchased goods, manufactured in a certain production process. Strictly speaking, each consumer values present goods more than future ones (assuming their utility does not change), owing to which both

[3] However, institutional solutions are not always efficient even if they prove to be efficient in other countries. As an example may serve the so-called Washington Consensus and its effects in highly developed countries.

producers and investors expect a certain equivalent for the lack of consumption. Despite a number of modifications of various types, the theory of Böhm-Bawerk is still at the core of the Austrian concept of economics [Bohm-Bawerk, 1924, pp. 23-61] and the theory of economic growth in general.

When the achievements of the Austrian school of economics are presented, two of its most eminent representatives, Ludwig von Mises and Friedrich von Hayek, must not be overlooked. The former became a recognizable economist in the 1920s, when he questioned the feasibility of a socialist economy. According to Mises, the main reason for the low effectiveness of administrative systems was the lack of market prices, which caused irrational allocation of resources.

Hayek was initially interested in the analysis of business cycles related to the credit expansion of governments and then investigated the use of knowledge and experience in society and the coordination of decisions made by market participants. Hayek and Mises greatly contributed to integrating the theory of the Austrian school of economics. Their achievements were later developed by, among others, Israel Kirzner and Murray Rothbard.

Nowadays, the Austrian School is developing very rapidly. It is the result of "*[…] a backlash against mathematization, the resurgence of verbal logic as a methodological tool, and the search for a theoretically stable tradition in the madhouse of economic theorizing. In terms of policy, the Austrian school looks more and more attractive, given continuing business-cycle mysteries, the collapse of socialism, the cost and failure of the welfare-warfare regulatory State, and public frustration with the big government* [Rockwell].

At the heart of Austrian economics lies the idea of subjectivism, which first came into being as an element of the theory of value,[4] to be later developed by Menger and then by Mises.

Unlike neoclassical economists, the theoreticians of the Austrian school believe that the limitations of economies do not ensue from objective phenomena or material factors characteristic of the external world, but from people's knowledge of business. For this reason, the Austrians believe that production is not a natural, physical or external phenomenon, but on the contrary – an intellectual and mental one [Mises, 2007, pp. 92-96].

Entrepreneurs constantly create new information that is basically subjective, dispersed and difficult to articulate. Therefore, subjective perception of information is a crucial element of the Austrian methodology [Soto, 2010, p. 16].

Another central premise of the Austrian approach is the purely subjective concept of cost. It is frequently claimed that this notion can be easily incorporated into the dominating neoclassical paradigm. This is not obvious, because neoclassical economists include the subjective nature of costs into their models only theoretically, and although they often mention the significance of alternative cost, they always present it as an objectified category. For the Austrians, cost is a subjective value that is ascribed by business entities to the goals that they abandon when choosing to undertake other activities. In other words, there are no objective costs, and each entity needs to find and take into consideration the costs of other solutions and activities.

[4] The theory of value comprised a multi-aspect analysis of prices, also taking into consideration the calculation of costs, capital, wages, investments, and profits.

Economists should always adopt a subjective perspective of an active human being, and the perspective should have an impact on the way in which all economic theories are formulated. With reference to Menger's subjectivist approach, Hayek writes: "*And it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism"* [Hayek, 2002, p. 31].

Hayek adds that subjectivism "[…] *is a development which has probably been carried out most consistently by L. v. Mises and I believe that most peculiarities of his views which at first strike many* readers *as strange and unacceptable are due to the fact that in the consistent development of the subjectivist approach he has for a long time moved ahead of his contemporaries*" [Hayek, 2002, p. 209].

Menger's subjectivist theory claims that people try to attain goals that for them have the highest subjective value and with those goals in mind, they conceive and implement plans of action composed of stages necessary to achieve them. What is more, these stages vary in terms of subjective usefulness depending on the value of the objective that a given individual expects to achieve by using economic goods of higher rank [Menger, 2013, pp. 83-86].

Thanks to Menger's efforts, the theory focuses on the subjective point of view of an entity and a process of acting comprising many indirect stages which the individual initiates and tries to complete, and whose culmination is the attainment of the objective or obtaining the ultimate consumption good.

"*Value is (...) nothing inherent in goods, no property of them, nor an independent thing existing by itself. It is a judgment economizing men make about the importance of the goods at their disposal for the maintenance of their lives and well-being*" [Menger, 2013, p.114].

The measurement of value is, by nature, fully subjective and thus goods administered by people may be viewed by them as valuable in certain circumstances, but less valuable, or even worthless, in others. Therefore, not only the nature, but also the degree of value is subjective. For people, goods always have a certain value which is assessed only by themselves. People tend to pay excessive attention to the needs the satisfaction of which provides fast and intense pleasure but does little to enhance their well-being. They also usually underestimate the value of needs the fulfillment of which arouses less intense emotions but brings longer-lasting well-being. They attach more importance to immediate gratification than to enduring welfare, and in some cases, they cherish the former more than life itself [Menger, 2013, p. 143].

By adopting the marginal utility principle, Menger managed to provide a simple and indisputable solution to the "value paradox" and accelerated the development of the theory of human activity. According to him, "*Under ordinary circumstances, therefore, no human need would have to remain unsatisfied if men were unable to command some particular quantity of drinking water. With gold and diamonds, on the other hand, even the least significant satisfactions assured by the total quantity available still have a relatively high importance to economizing men. Thus concrete quantities of drinking water usually have no value to economizing men but concrete quantities of gold and diamonds a* high *value*" [Salerno, p. 12].

Therefore, the subjective theory of value is based on the type of satisfaction derived from consumption. Menger defines value as the significance attached to goods and the amounts of goods needed to satisfy needs. The value of goods is equal to the importance imputed to them [Menger, 1985, p. 21]. Menger's distinction of the value of a thing from

the thing itself is a means for explaining the relationship between cognizable reality and the world of objective causal processes that exist as a result of valuation and economizing. "*The value of goods is […] always the necessary consequence of human knowledge that the maintenance of life, of well-being, or of some ever so insignificant part of them, depends upon control of a good or quantity of goods [...] it is a judgment made by economizing individuals*" [Menger, 1985, p. 23]. It is valuation that eventually leads to the determination of the desired amount of particular goods and services. This is a result of the occurrence of the law of diminishing marginal utility, which implies that each subsequent unit of good is less important for the consumer than the previous one.

Menger's theory unequivocally identifies consumer evaluation as the main reason for determining the value and prices of consumer goods, but it does not explain the mechanism of pricing particular production factors. This ensues from the adopted assumption that goods of lower order may be produced solely thanks to the "complementary" amounts of goods of higher order. Menger concludes that production must include more than one type of production factor. It seems impossible to ascribe partial values of goods of lower order to each good of higher order that participates in the production process. However, Menger solved this problem by using the law of diminishing marginal utility.

In most production processes, goods of higher order must not be combined in fixed proportions. *"If one of the* complementary factors *that cooperates in the* production *of grain, let us say, fertilizer, is partially or completely withdrawn, then there will result a reduction of the output of grain rather than a nullification of the entire production process* [Menger, 1985, p. 26]. Therefore, Menger believed that the share of a certain amount of goods of higher order can be distinguished in the summary value of complementary goods combined in a given production process.

Menger sums up the general principles of determining the value of a specific amount of a good of higher order as follows: "*Assuming . . . that all available goods of higher order are employed in the most economic fashion, the value of a concrete quantity of a good of higher order is equal to the difference in importance between the satisfactions that can be attained when we have command of the given quantity of the good of higher order whose value we wish to determine and the satisfactions that would be attained if we did not have this quantity at our command"* [Menger, 1985, p.28].

Considerably expanding the concept and range of the notion, Mises claimed that subjectivism is not limited to a particular technical problem within a field inside of the discipline of economics; it represents a fundamental approach to social theory in general [Mises, 2007, pp. 293-294]. Under such an approach, one can ascribe the most important role in an economy to consumer decisions and associate the process of economic development with individual decisions of entities. Mises had no doubt about the social nature of the economy, i.e. the role that subjective valuation decisions play in it.

Mises' approach to development based on "the subjective value" was reflected by his understanding of the meaning and objectives of social sciences (*verstehen* approach),

derived directly from the tradition of German economics[5]. He introduced the concept of "*verstehen*" into Menger's theory of value, using it to explain the essence of the price mechanism. While criticizing the theory of objective prices, Menger claimed that prices enable the market participants to understand and properly interpret the economic situation in the conditions of reduced availability of diverse and subjectively valued goods [Boettke, Lavoie, Storr, 2001, p. 4]. Mises expanded and supplemented Menger's theory of diminishing marginal value.

Mises claimed that economics is not interested in items and particular material objects, but in people, their intentions and actions. Goods, commodities and wealth, as well as all the other concepts related to human activity, are not elements of nature but of the sphere of the senses and human activity.

Prior to the margin revolution, classical economists believed that prices resulted from utilization of labor resources. The prices of goods, wages and interest rates stemmed from the unchangeable law of supply and demand. Prices decided upon the course and efficiency of the production process by transferring production activity between sectors. The decisive factor for the selection of the type of activity was economic calculation based on comparing prices and average costs of production (intersectoral competition). Changes in the volume of profit and supply-demand relationships occurred until all the average rates of profit became equal (sectoral equilibrium). Therefore, according to classical economists, both price and production were changing in accordance with the laws of causality. Prices affected the market in such a way that the current price of goods expresses the temporary balance of supply and demand [Salerno, p. 10]. Thus, the allocation of resources in production resulted from calculation, choices and search for profit made by entrepreneurs.

By means of the price system, the relative importance of particular resources and consumption goods is expressed in a monetary form. Money enables people to make economic calculations because the total amount of goods and services available on the market can be converted into specific amounts of money. Monetary prices are not a measurement of value, but exchangeable relationships expressing (in terms of value) the satisfaction with goods and services acquired at a given moment. Prices enable the preservation of the continuity of market exchange because the subjective assessment of value expressed by consumers, as well as the amount of goods supplied on the market, are changing. People's willingness to interpret these changes makes it possible to improve production processes and derive greater satisfaction from consumption in the conditions of price stability.

Economic calculation includes both retrospective and prospective monetary calculation. Retrospective calculation is determined by earlier profits, or losses, and by income, i.e. by the results of previously undertaken activities. It enables the identification of the future by making decisions about production and income possibilities (continuation of or withdrawal from certain activities).

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[5] German social thought and the ***verstehen*** tradition was related to phenomenological criticism of the objective approach (subsequent Heideggerian tradition). The representatives of this trend included: W. Dilthey, H. Rickert, J. G. Droysen, M. Weber and A. Schütz. Further: [Weber, 1920; Weber, 1947; Dilthey, 1977; Truzzi, 1974; Oakes, 1977].

Prospective calculation, which may be a result of retrospective calculation, enables the anticipation of the profits or losses that can be an outcome of undertaken activity. Both types of calculation are focused on the future. Each step on the road to the utilization of resources has a prospective orientation [Salerno, p.26].

Precise economic calculations do not exist because the future is saturated with various types of market activity. No entity is capable of precisely estimating future consumer preferences, changes in technology, activities of other entities, or external factors that may affect this activity. Collecting and classifying empirical data is not sufficient for specifying the objectives of business activities on the market. Empirical research implies a homogenous character of the events taking place, whereas the activity of entities is not homogenous. Thus, entrepreneurs need to insure against any additional costs. The activity of economic entities involves the elements of risk and insecurity [Knight, 1964, pp. 201-217].

However, praxeologists are genuine empiricists because they recognize the unique and heterogenous nature of facts. According to Mises, it is the self-appointed "empiricists" who violate history by reducing it to quantitative laws. "*There are, in the field of economics, no constant relations, and consequently no measurement is possible. […] Different individuals value the same things in a different way, and valuations change with the same individuals with changing conditions. [...] [T]he impracticability of measurement is not due to the lack of technical methods for the establishment of measure. It is due to absence of constant relations. Numerical data is the information for historians describing a certain state in the future*" [Mises, 2007, pp. 55-56].

Importantly, according to the Austrian economists, exchange is the same element of the causal process of satisfying needs as production. Menger argued that "*the effect of an economic exchange of goods upon the economic position of the two traders is always the same as if a new object of wealth had entered his possession […]. For the end of the economy is not the physical augmentation of goods but always the fullest possible satisfaction of human needs*" [Menger, 1985, pp. 113-156].

Subjective valuations of goods constantly fluctuate owing to the changes in consumer tastes and production methods, as a result of which new conditions of exchange constantly arise. However, this does not constrain Menger's analysis because in order to limit a particular act of exchange, it is necessary to capture temporary equilibrium. "*[…] the foundations for economic exchanges are constantly changing and we therefore observe the phenomenon of a perpetual succession of transactions. But even in this chain of transactions we can, by observing closely, find points of rest at particular times, for particular persons, and with particular kinds of goods. At these points of rest, no exchange of goods takes place because an economic limit to exchange had already been reached*" [Menger, 1985, quoted after: Salerno, p.9].

4. Objective patterns of economic process. Dominance of classical and neoclassical theory of economics

Economic growth is a long-term process. Institutions constitute its essence. They are also instrumental to education, upbringing of youth, and conducting scientific research, which naturally cannot be a single activity.

Economic progress determines the rate of production growth, incomes and demand for work, as well as social moods and the level of social security.[6] Therefore, the main purpose of institutional development is to shape the attitudes and minds so as to make them sensitive to such general issues as universal progress, freedom to choose one's life path, equality, fairness, and social security.

A scientific intellectual formation based on economic sciences ought to emphasize: 1. The laws of economic development, including systemic issues and the institutional environment of the economy; 2. Problems of technology and technological progress; 3. Problems of economic growth in the conditions of open market; 4. Problems of the methodology of economic research.

Therefore, the presented knowledge needs to be consistent and ordered within the framework of a certain main function of the economy. It is assumed that these requirements are met by the optimal development path.

The theory of economic development formulates general laws which are especially useful in times of intense and profound structural changes. Not only economists but, in fact, also all educated people ought to study this theory. Otherwise, natural social tensions will decelerate progress.

Meanwhile, the theory of development defines the structure of the main function of social change along with its parameters. Hence, it stresses the importance of the institutional milieu of an economy in the process of social change, determining the long-term approach. In other words, the first step of analyzing the laws of social development should involve constructing a functional relationship between a certain strategic value and its main parameters.

The realities of social and natural processes create chaos in the system. For this reason, scientific research in the broad domain of social sciences constantly encounters considerable difficulties in accumulating and processing information.

For example, traditional analysis of the economic process does not comprise non-market variables, such as culture or the natural environment, or the related outlays and effects. It does not even take into consideration the outlays and effects inherent in economic processes, in the past extending the market horizon of economic activities. Conventional analysis overlooks the long-term relations between the outlays and the effects, even though we are aware of their existence. As a consequence, there emerges the problem of intergenerational responsibility which consists in lack of strategic responsibility, neglect of savings and accumulation, as well as excessive debts. All of this affects people's trust in state institutions and political structures and their confidence in the future.

Apart from the general theory of social development, the education of economists also requires profound understanding of the mechanism of technical changes in the economy. In terms of models, they combine two main streams of capital, human capital and material capital, into one analytical system.

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[6] Thus, the constant decline of the development dynamics affects each of the economic categories, although to a varying degree. Within a short-term perspective, the incomes of population and the unemployment level are significant. Meanwhile, in the long term, what matters more are the negative institutional and psychological effects such as lack of faith in the future or insufficient trust among people.

Therefore, the model explains (both in strategic and operational terms) the structural changes in the economy related to: organization, technology, production, and effectiveness. It is the effectiveness that determines the dynamics of economic progress. The laws of technical advancement also explain the dynamics of incomes, the prices and costs of production, the structure of the labor market (including wages), as well as the directions of changes in the sectoral structure of production.

Despite the fact that the theory of technological advancement was developed basing on the experience of the industrial economy, it still remains the universal *analytical instrument* in our modern economy dominated by services. What changes are the forms and proportions of the capital used. For example, the services absorb non-material capital to a much larger degree than an economy dominated by material goods. However, this does not invalidate the principle of effectiveness.

It is, therefore, vital that the values of the streams of monetary and material capital, as well as human and institutional capitals, be taken into consideration not only in the clearing systems of individual companies but also in national systems (!). All the streams of capital, with no exception, need to be created, as well as taken and recovered. Otherwise, the entire economy suffers.

In other words, economic principles ought to be applied to all capital resources, including those which are unusually durable, difficult to measure and unaffected by market mechanisms.

In this context, the didactic and academic tendency to distort or even ignore the theory of technical advancement causes some concern.

The theory of technical progress, supplemented by the laws governing the processes of saving, investing, accumulating and distributing capital, comprise the theory of economic growth.

The process of economic growth, supported by the market mechanism and theory adjusted to the local situation, has created a standard of living unprecedented in the global economy. But there are those who believe that the golden era is coming to an end. After decades of dynamic development, came a continued slowdown of the rate of economic growth in developed countries.[7] It seems necessary to explain the mechanism of this downturn and to formulate and substantiate the dependencies that generate this mechanism. A permanent economic slowdown causes negative, widespread and far-reaching consequences of social, political and economic nature, which, as a result of a feedback loop, reinforce the mechanism and consolidate barriers to efficiency.

The theory of economic growth and capital accumulation still remains valid in analytical terms. What changes is only the structure of the economy and capital itself. Thus, an analysis of processes related to growth must not be confined to examining the creation and accumulation of material capital, but should refer more frequently to the virtual capital embedded in the institutions of the economic environment. Hence, the importance of the R&D sector is increasing. In fact, this is because the statistical data confirm

[7] The Polish economy in the years 1996-2008 recorded high institutional efficiency by reaching a relatively high rate of GDP growth. It was possible owing to the use of simple systemic reserves of organizational and technical nature.

that rate of growth in this sector, as well as its share in the economy, is relatively high in developed countries.

The market mechanism is not always effective. For example, the commercialization of scientific research and writing papers in haste, merely in order to increase one's score for research performance, is counterproductive unless a market with a dynamic demand for creative imagination emerges. In Poland, with its large scale of scientific activity[8] and the relatively low technological and organizational level of the economy, such a market may function efficiently. Therefore, it is not accidental that the attempts to implement it are deleterious for the academic ethos: an institutional system regarded as tremendously important for the efficiency of the R&D sector.

Academic teachers and students, as well as government administration workers, need to become aware of this *state of affairs*. Therefore, the state instead of striving to commercialize the sector, which would lead to financing unnecessary forms of scientific activity, should give priority to refurbishing expenses connected with editorial activity, reviews and promotion of the published works. Publications should not be reviewed by the authors' colleagues so that the outcomes of published studies can be absorbed in a manner unhindered by the market, both in time and space.[9]

Underestimation of expenses related to sectors that are promising but inefficient in market terms due to their high institutionalization levels leads to tangible losses. While market is an efficient mechanism for the coordination of economic activities in the mid-term, it does not operate well in short and (especially) long terms. Hence, the market mechanism is devoid of the *element of rational choice*.

For instance, the capital accumulated by past generations is dramatically underestimated, which, in terms of costs and prices, distorts the structure of production, outlays, and labor market. This regards, above all, institutional capital, whereas human or material capital to a lesser extent. In any event, the market mechanism reduces or even ignores the value of these streams, thus lowering the efficiency of the economic calculation system. If the current value of resources and the structure of capital streams are unknown, also their estimates remain distorted, while their applications in production processes remain ineffective.

However, if one assumes that it is probable that the non-market long-term value of particular elements of capital is a function of voluntary (informal) institutions instead of formal ones, their stability as well as their importance in strategic terms will prove to be dramatically underestimated. It is, after all, the informal institutions which over time are a vehicle for transferring the value of human, institutional, and even monetary and material capital. And yet, they are frequently underestimated and overlooked in typical

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8 In this context, the share of expenditures on the R&D sector in the Polish GDP is mentioned somewhat reluctantly and with embarrassment.

9 The quality and value of scientific and artistic creation is not measurable with conventional measurement units used in the market, such as millimeter, gram, second, cost, or price, because it intrinsically exceeds the universally accepted system of values. Therefore, it frequently happens that a work of art achieves a high value after a certain period of time. And, conversely, some works might achieve success that is merely apparent, not permanent.

clearing systems. All this in spite of the fact that they relay considerable market value in the long term.

Furthermore, similarly to production structure, the distortion of the prices of production factors makes investment inefficient. If the market mechanism and the administration system do not include the effects and expenses (cost-effectiveness calculation) related to a certain sphere of society's life, the effects and expenses will always be distorted in relation to the real needs and possibilities. This is how the notorious inefficiency of healthcare systems, research and development sectors, and the underestimation of culture and education arise and are reinforced. Even in the OECD countries, the financing of public education and school systems is inadequate [OECD, 2017].

As a consequence, entire institutional systems become inefficient. For example, it is incredibly difficult to organize a self-financing scientific conference.

The quality of scientific research, the intensity of education of new generations of citizens, as well as the efficiency of academic institutions and organizations depend not only on the awareness of *what needs to be done* but also *how to do it*. In terms of procedures, the key to success is therefore the method of action (organization) and the methodology of scientific research. However, both the organizational problems of academic institutions and methodological awareness ought to be permanent elements of system awareness. Naturally, in the process of education, there may be limitations as regards the content, instruments and disciplines that constitute the basis of this awareness, i.e. philosophy, logic, mathematics, etc. Meanwhile, regardless of the subject of scientific research and intellectual creations, explanation and solution of actual problems depends on the establishment of such institutions and organizations which, irrespective of the present political situation, would enforce successful completion of undertaken activities.

And this is not about a *single method*, a certain universal mode of action, but about a comprehensive methodological reflection.

For example, a reliable diagnosis of both the reasons and mechanisms of certain development tendencies in the economy is impossible when only empirical analysis is used as its basis. This ensues from the natural and discontinuous nature of changes in their structure. It is, obviously, related to the character and evolution of the very value of the function of production and with the structure of the factors (*variables*) which define this value.

Thus, with regard to massive, natural and chaotic aggregates of the social and environmental kind, the hypothetical-deductive approach seems to be a more efficient epistemic instrument. In any event, it gives more likelihood of finding at least partial answers to certain questions.[10] For example, it is possible to answer the question regarding the direction in which the value of a function is changing only when an interdependence is identified, i.e. when the independent variable is known, although the value of the function itself cannot be unequivocally defined [Blaug, 1995, p. 144].

Additionally, solving economic problems *stretched* over time involves overcoming information barriers, i.e. lack of quantitative data, both natural and value-related ones, which enhance the understanding of economic processes. Methodologically speaking, research

[10] In fact, absolute truth, i.e. complete adequacy of thought and action, does not exist.

projects are developed which are characteristic of empirical sciences, but their procedures remain incomplete; there is no tangible information regarding the investigated problem. Hence, empirical analysis is impossible, whereas the value of a project depends solely on the value of the formulated assumptions, just as is the case in formal sciences. Therefore, there remains the hypothetical-deductive approach, with its inevitable verification instrument, i.e. exemplification.

Empiricists draw attention to the weakness of the deductive approach by emphasizing its *impracticability* and *abstractness*. They are wrong, however, as both in science and teaching, abstractions and bold intuitions are more significant than *practice*. Students, particularly those of social sciences and humanities, must appreciate the importance of bold abstract thinking and research intuitions. After all, they constitute the basic component of academic curricula, while *learning of theory* has always been at the core of university education.

In order to clarify, or even solve, the problem of economic problems that are *stretched* in time and space, one requires not only detailed analysis of the analyzed issues but also *ingenuity* and *creativity*. In research practice, this means the necessity to propose a possibly innovative and attractive theory, as well as a reasonable and well-organized plan to verify the suggested ideas.

Admittedly, the hypothetical-deductive standard does not provide unequivocal and truthful answers to all the questions regarding natural processes, but the process of verification and falsification of particular detailed functions, i.e. specified, realistic relationships, at least makes it possible to reduce the number of mistakes and amount of ignorance.

5. Conclusion

The above review of selected trends in the economic theory shows that there are a number of factors and approaches that help us identify the main development conditions of economies. The analysis of institutional environment, subjectivism and neoclassical equilibrium conditions have all considerably contributed to the theory of economic, enabling scholars to better assess growth conditions, economic development, and economic convergence.

In the economic literature, there is no universal and precise formula for measuring economic development. Therefore, an empirical assessment of the entire set of phenomena resulting from development is impossible. Because of this limitation, development is frequently perceived not as an effect of the influence of real factors, but as "faith in their efficiency". Objective opinions regarding this process are formed on the basis of economic, social and political conditions, and not by adapting certain normative concepts.

The current economic development, relying on international economic flows, has caused their dynamic growth. International financial markets have gained importance and, what is more, domestic economic systems (based on institutions and entrepreneurship) must comply with the efficiency requirements of large companies willing to use foreign financing. This manifests itself in changing accountancy standards, implementation of external

assessment of profitability, as well as in increasing rates of investment and values of companies.

The achievement of competitive advantages in the conditions of market globalization is inextricably linked with innovative potential and institutional capacities. International technological capabilities of companies are crucial for economic growth in the conditions of open economies. Internationalization of technological activity is indispensable, even though it does not always bring benefits. On the contrary, it is frequently associated with potential hazards. This is a significant argument in the debate concerning not only the process of development, but also the possibility of creating institutional conditions that could boost entrepreneurship and innovativeness.

Two contradictions exist in the global economy. First, the success of global capitalism underlies the effectiveness of the mechanisms of the global markets (both financial and scientific ones), which reduce transaction costs and have an impact on the changes in the economic structure. Second, the role of governments in stimulating social change and protecting national economies against the negative effects of globalization is very limited.

Unlike in the first decades of the market economy, nowadays development relies, above all, on intellectual capital and knowledge incorporated both in material and human capital, as well as in tangible and intangible assets. Additionally, there is an evident spatial concentration of economic activity of various types, considerable economic openness, greater entrepreneurial cooperation (between companies and within them, as well as between companies and institutions), and an increasing number of strategic alliances.

Another characteristic trait of the contemporary global economy is the variety of modes in which economic systems operate (e.g. the Japanese economy differs considerably from the German economy, whereas the economy of Chile is very much unlike the economy of Taiwan). They all form a kind of patchwork with its unique institutional, cultural and regional elements which comprise the globalization process.

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Robert W. Ciborowski, PhD, Professor of the University of Bialystok – development of the research concept, carrying out the research, developing results, literature analysis, preparation of the introductory section and the summary – 40%

Ewa Gruszewska, PhD, Professor of the University of Bialystok – development of the research concept, carrying out the research, developing results, literature analysis – 30%

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