

THE NEW STAGE OF ECONOMIC DEVELOPMENT

Argumentation is presented for the emergence of a new stage in the development of national economies along with the global technology change and the new social and economic performance challenges. Theoretically, this notion is developed applying Hegel's ideas of economic and social development. In this regard, economic development is defined as a continuous process of change, the quantitative accumulation of which leads to a new stage with a qualitatively different goal, subject and mechanism for achieving it. Arguments for transition to a new stage of economic development are drawn from the analysis of contemporary concepts of innovative development, knowledge economy, circular economy and digitalization of the economy. They are associated with the application of new indicators for targets of economic development and new methodologies for collecting and interpreting new appearances in the real economy. The article also provides arguments for the transition to a new stage of economic development from the practice of the EU concerning the development and monitoring policies for achieving new goals. This is accompanied by rethinking the strategy and developing new alliances. The presented data show an unsatisfactory performance of the development of the Bulgarian economy among the EU member states. Following the above statements, it is assumed that it is necessary to rethink national strategy taking into account the challenges of transition to a new stage of economic development and opportunities, they provide for progressive development based on specific national economy and identity of the society.

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The under determination of economic development, one of the most used concepts in economic studies and in the formation of economic policy, is a barrier to understand the contemporary processes of accelerating changes in technology, economy and society. It has given rise to serious problems as the most diverse content is invested when it is used. An example of these problems is misunderstanding why, with the disintegration of the economic system prevailing in Central and Eastern Europe until 1990, the goal of developing the national economy in the direction of "increasingly satisfying the growing needs of workers and the comprehensive development of the individual" became invalid; or why it was changed and why to the neoclassical understanding, in which the goal of the development of the national economy is associated with the introduction of a market mechanism (which is a mean for achieving, but not a goal), is upheld in the formation and implementation of economic policy after 1990. For the decade after 1990, Ivan Iliev (2004) summarizes that "the links and relationships between the development of the economy and the

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policy pursued by the authorities with extremely complex and diverse”, i.e., there is no vision of a goal for the economic development of the country. At the beginning of the 21st century, scientists from the Bulgarian Academy of Sciences (BAS), united in the teams of Ivan Angelov (2003) and Vassil Prodanov (2004), dedicating their research to the strategies for catching-up development, and more specifically, to define its goal by 2010. This goal is defined as achieving a certain level of some of the most important indicators in order to reduce the distance between Bulgaria and other countries by 2020. Research on the goals of economic development and their possible achievement continues to this day (Angelov, 2020). The question of why these goals of economic development are not accepted by the policy makers arises.

The group developing the Annual report of the ERI at BAS has made the assumption that still, in modern contemporary policies, the most common definition regarding economic development is that it is “a technical problem requiring simple solutions, better management algorithms, better trade and pricing policies and better macroeconomic conditions”. It is reported that, as a result of following the fraudulently simple rules of the Washington Consensus, based on this understanding and the prescriptions for Bulgaria, its economy falls into long-term stagnation instead of growth (see Yotsov, Lukanova et al., 2020, p. 16). It was noted that the crisis of 2007-2009 significantly shook the credibility of the policies offered in line with the traditions of neoclassical thinking (Todorov, 2020, p. 43). Even consultants following the neoclassical paradigm have already started proposing the formulation and implementation of sustainable development policies that integrate economic growth, social development and environmental protection (Fiti, Drangovska, 2020, p. 86). Others have come to the conclusion that “it is elementary and trivial to think that the desired economic and investment activity can be achieved and stimulated only by changing numerical management parameters” (Minassian, 2020, p. 96). But there have been no significant attempts to define a new concept.

It could be assumed that the discussions presented are mainly focused on defining the goal (strategy) of economic development. Arguments for changing the paradigm for the practice of policy formation have been developed on the basis of comparing goals and their achievement by applying the dominant understanding of economic development (Chobanova, 2020, pp. 69-75).

The contemporary globalization of economic processes has placed new emphasis on the discussion around understanding the content of the term “economic development”. Accelerating the transformation of knowledge into an economic resource as a result of digitalization has had not only positive but also many negative consequences for the individual and for society as a whole (global warming, limited resources of vital importance, erosion of social identity and of personal freedom, etc.).

The importance of these problems has generated a growing variety of concepts of economic development, such as knowledge economy, digital economy, circular economy, etc., on the one hand, and the corresponding variety of goals, strategies and policies for their implementation on the other hand. Thus, both researchers and policy makers are faced with the problem of defining the specifics and respective

national priorities. The copying of other countries' or of the EU as such any model¹ does not lead to expected achievement of the goals. In addition, these problems are not sufficiently discussed in the literature.²

Understanding economic development

To overcome the above misunderstandings concerning the insertion of different content in the concept, further economic development is interpreted on the basis of its origin and on the basis of the context of its use in the contemporary scientific literature. A definition of economic development in the tradition of Hegel's historical dialectical thinking is proposed and further applied.

Etymology of the concept of economic development

The concept of economic development refers to the understanding of the content of two related terms: economy and development. The first comes from the Greek word οἰκονόμος (i.e. "household or household management"), a compound word derived from οἶκος ("house; household; home") and νέμω ("territory in which I manage; exchange, distribute; rule, law"). When translated literally, it means "rules for running the household". The second compound concept – development, has a very wide and quite imprecise use. It is most often associated with a continuous process of transition from one stage to another more progressive one, but it can also be used with a negative semantic load, such as in the "development of the pandemic".

This allows us, in etymological terms, to define economic development as a constant process of changing the state of the economy (most often understood as the national economy) from one stage to a new one.

Understanding of economic development in contemporary literature

In the modern scientific literature, the distinction can be made between two main understandings in the widespread use of the concept of economic development. According to the first one, which occurred after World War II, it is a process of transformation of national economies with low incomes (less developed) into advanced industrial economies. Theories of such economic development (see Copestake, 1999) are distinguished according to whether the economies are (a) relatively open or closed to international trade, (b) actively managed by the state (dirigiste) or rely on private activity (laissez-faire). All these theories deal primarily with explaining variations in long-term economic growth.

¹ The lack of comprehensive modern strategy considering country specifics makes policy makers to copy EU, or other countries priorities. For example, is considered that "The analysis of the definitions and main characteristics of the circular economy, as well as the documents of the European Union, makes it possible to determine the main areas of intervention to which they can be attributed ... (biomass and bio-based products, as well as photovoltaics and wind turbines; the aeronautics and defense industry; part of the chemical and pharmaceutical industries)" in national economy. (see Hristozov, Chobanov, 2020, p. 103).

² Additional problem is that the "number of papers, reproducing national policies and strategies or the public documents of international organizations without any critical analysis, specific comments and recommendations is too large" (Chobanova & Nozharov, 2018). Doctoral studies are also shown to deviate from the problems of practice (see Inzalt, Csonka, 2020).

The second understanding of economic development in the modern literature is that it is synonymous with economic growth, the level of which is measured by the GDP growth. It is used to describe a change in a country's economy over a period of time, including qualitative as well as quantitative measures that lead to an increase in GDP. In some studies, for example, increasing the share of the GDP produced in the services sector above 50% is accepted as a criterion for the development of the knowledge economy. On the basis of international comparisons, rankings of the countries are made based on comparable data and relevant assessments and recommendations are given.

In Bulgarian literature, the concepts of economic development that have been developing since the beginning of the 21st century mainly discuss the goals of economic development. A number of scientists, united in the teams of leading representatives of the economic (Angelov, 2003) philosophical (Prodanov, 2004) Institutes of the Bulgarian Academy of Sciences, have published studies dedicated to the strategies for catching-up economic development. According to them the goal of economic development is to achieve a certain level of some of the most important indicators by 2010 and to reduce the distance between Bulgaria and other countries by 2020. Ivan Angelov (2000) determines the purpose and means of economic development. He also defines a fundamental ultimate goal of economic policy – one that improves people's lives and offers a set of indicators for measuring: the quality of life; income level; consumption of the most important goods and services; consumption structure; structure of household expenditures; income and property differentiation; unemployment rate; access to quality healthcare, education and other public services; healthy ecological environment; lower infant mortality; less morbidity, longer life expectancy, etc. To these are added: participation in the resolution of public affairs; transparency of government; reliable protection of personal safety, dignity and property against criminal and corrupt encroachments, etc. He also determines the means for achieving the goal of improving the quality of life – through monetary policy, budgetary policy, foreign economic policy, income policy, employment and unemployment policy, structural policy, scientific and technical policy, investment policy, institutional policy, etc. Research on the ultimate goal of economic development and the means to achieve it continues to this day (Angelov, 2020).

Another approach to developing strategy has appeared in the report of the Economic Research Institute at BAS to the President of the Republic of Bulgaria, named, "Strategy for the Accelerated Economic Development of the Republic of Bulgaria" (Dimitrov, 2007). There acceleration of the economic development is knowledge and innovation driven (Chobanova, 2007). Another approach to understanding recent development is the one defining it as a process of change in the relations in the production, exchange, distribution and consumption of goods is a result of the fourth industrial revolution has recently been in the process of formation³.

³ The understanding of modern economic development is in the focus of the interest of a number of researchers in the country, mainly from the BAS. The center of these discussions are the national scientific

The concept of innovativeness of the national economy (Chobanova, 2012) as a concept for economic development and policy was broadly discussed and implemented but has not enough positive impact because of objective reasons (Chobanova, 2015).

The vast majority of the recent economic literature is associated with new diverse modern concepts of development, including circular (waste-free) economy, knowledge economy and digitalization.

This growing variety of concepts makes the attempt to define economic development even more difficult. It implies a search for scientific grassroots in the theoretical heritage. As a result of the study, an opportunity arose to define the concept applying Hegel's philosophical interpretation of economic development. Compared to other understandings, it provides arguments for determining the features that characterize the individual stages of economic development, as well as the transition from one stage to another. Its characteristic feature is that it emphasizes the interrelationship between the development of the economy and freedom (Eecke, 1983) and justice (Pinkard, 2017), i.e., between the development of the economy and social evolution. Next, the focus will be placed on the characteristics and interpretation of economic development from the point of view of Hegel's doctrine.

Hegel's understanding of economic development in short

Recently, the connection between the development of the economy and the development of man and society is being discussed more and more often. Hegel's understanding of economic development offers an interpretation of this question. In 1804, at the beginning of industrial development and market relations, in his lecture to the academic staff of the University of Jena, Hegel discussed the influence of the development of the market economy on the freedom of the individual, as well as on social integrity. He concluded that the development of the economy, especially through the division of labour, leads to negative changes – fragmentation and disintegration of society on the one hand, and erosion of individual freedom on the other hand. Hegel provided arguments that market forces do not have enough capacity and that the state must be involved in dealing with the abovementioned social problems, in addition to providing of social self-awareness.

The *stages* of economic development applying Hegel's theory are distinguished based on whether there is a difference in the content of the three components (features) that characterize the economy and its development. In this regard, *each stage differs qualitatively from the previous ones in the content of the goals – object (goal), subject*

conferences on political economy, traditionally organized by the Department of Political Economy at the UNWE. See the reports of Hristo Prodanov, Svetla Toshkova, Vasil Prodanov, Rossitsa Chobanova and Borislav Gradinarov from the 4th National Conference on Political Economy on the topic of "Digital Economy and Challenges to Political Economy", 2019, Sofia: UNWE; also see the materials from the 5th National Scientific Conference on Political Economy, held in 2020, on the topic of "Political Economy and the Future of the World Economy", in the reports of Tatiana Hubenova, Rossitsa Chobanova, Plamen Tchipev and others.

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(state and/or other main player) and means to achieve the goals (instrument – through a free market or with state regulation, etc.)

It could be concluded that in applying Hegel's understanding, economic development can be defined as a process of continuous change, the quantitative accumulation of which leads to qualitatively new characteristics of the goal, subject and means to achieve the goals associated with the emergence of new "stages" of this development.

Another problem discussed by Hegel that is still relevant today is how to overcome the negative impact of the market mechanism for economic development on the development of man (his freedom and community identity) and society (its integrity). The problem of the disaggregation of society discussed by Hegel is analogous to the impact of the consequences of the widespread use of the Internet, the widening gap between national economies in terms of the creation and use of new knowledge as a resource for economic development. The possible solutions to the problems of global warming, the lack of vital resources and the generation of social tensions are similar. A new global colonialism is being formed, emerging on the basis of a largely established technological monopoly in the world economy. In terms of solutions to these social problems, the economy, if left to function only through its inherent market mechanism, is blind to the needs of the social community, according to Hegel.

Logically, the need arises to determine the current state and development of the national economy. From the point of view of the abovementioned interpretation of development, today there is a transition from the stage of economic development the aim of which is to increase the profit at the enterprise level and the GDP at the national/macro level. The means or mechanism for achieving the goal is a free market and the main subject, which is implemented by this development, is the entrepreneur or, the business sector in general.

The need for a transition to a new stage of development is justified by the inability of the goals set within the old stage to be achieved by applying the relevant tools. I.e., it is necessary to change the paradigm for economic development due to the discrepancy between the set goals and the achieved results of the implemented policy (Chobanova, 2020). On the other hand, the development of society faces new challenges, the overcoming of which is vital, and their solution becomes more important than increasing profits. They are accompanied by creating a huge variety of new concepts for development and, accordingly, for economic policy. Furthermore, as summarized in three directions – for innovative economic development based on new knowledge; for the circular (non-waste) economy; and for digitalization – these concepts are characterized in terms of the argument for transition to a new stage of economic development argued here.

The concept of innovative economic development

The predominant concepts of economic development today are related to the renewal and creation, acquisition and application of new knowledge.

Schumpeter on innovative economic development

Fundamental to the modern concept of innovative economic development are the works of Josef Schumpeter “Theory of Economic Development”, “Business Cycles” and “Capitalism, Socialism, Democracy”. Central to this is the understanding of innovation (renewal) as the core of economic development, which means economic change. The renewal within this understanding is the result of an entrepreneurial initiative aimed at higher profits. It is not always based on research. It is associated with new combinations of supply-side factors of production. Schumpeter grouped the new combinations of factors of production into five groups (Schumpeter, 1934, p. 66):

- a) introduction of a new product or one that is not known to the consumer, or a qualitative change of an existing product;
- b) introduction of a new method of production which has not yet been experimented within the sector concerned, is not necessarily based on a new scientific discovery and may consist in a new way of commercially applying a given good;
- c) introduction to a new market, i.e., a market in which a given industry has not entered the country in question or a market that has not existed before;
- d) obtaining new sources of raw materials or semi-finished products, whether they existed, or their existence was simply not taken into account, or they were considered unavailable, or they had to be created;
- e) building a new organization in the industry – in a monopoly position (for example through a trust) or breaking the monopoly position of another enterprise.

The reasons why companies undertake the implementation of risky innovation are the opportunities to increase income and improve their competitive position. The main thing, according to Schumpeter, is that companies are looking for economic rents. When upgrading a production process that increases productivity, the company gains an advantage over its competitors due to reduced costs, which allows it to get a better price than the prevailing market price. Depending on the elasticity of demand, it can use a combination of lower price and higher added value than its competitors to gain a market share and generate additional fixed income. In the case of product renewal, the company obtains a monopoly position due to either a patent (legal monopoly) or the delay with which competitors imitate the product. The monopoly position allows the company to set a higher price than would be possible in a competitive market, and thus, to receive an annuity.

Another reason for renewal is its importance for the competitive position. In order to protect their competitive position, as well as to gain an advantage over competitors, companies create, absorb and use new knowledge, which leads to a number of changes in the technologies and raw materials used in manufactured products, in the organization and on the markets. Schumpeter notes that the technical change is not smooth. New technologies compete with existing ones and in many cases replace them. These processes of technological dissemination are often lengthy and usually involve gradual improvements in both new and existing technologies. In the “turmoil” that has arisen, the new companies are displacing the incumbents, who find it more difficult to adapt. Technical change generates a redistribution of

resources, including labour, between industries and between companies. In the modern conditions of accelerated development and introduction of new technologies, especially information and communication technologies, their impact on economic development is increasing. Technical change, in addition to development (creation) can also mean the destruction of the enterprises implementing it. It may also include mutual advantages and support between competitors or between suppliers, manufacturers and customers.

Economic development is based on radical and incremental renewal, carried out through “creation” and “destruction” (creative destruction), or in other words – through the emergence of new economic formations and the development of existing ones, as well as through their destruction.

From a macroeconomic perspective, Schumpeter viewed economic development through the prism of the connection between cycles of economic activity, technology they change speed and in this way innovation. The tendency of accelerating the impact of the processes of technological change on economic development has appeared through the so-called Schumpeter/Kondratieff waves. Modern aspects of innovation waves and economic development are the subject of a study by Carlotta Perez, who in 2002, in her book on financial bubbles, predicted the global crisis in 2007-2008 (see Perez, 2002).

The understanding of innovative development is further explored in the theory of competitive advantage of nations by Porter. It justifies the need for a new theoretical paradigm to “highlight improvements and innovations in methods as its central component” (Porter, 2004, p. 35), as well as the importance of national economic structures, values, cultures, institutions and history for the competitive success of industries and companies (ibid., p. 33). Porter found that “companies will ultimately fail if they do not base their strategies on improvement and innovation” (ibid., p. 45). Based on a study of resource allocation strategies and economic growth in more than 100 industries in more than 10 industrialized countries, he concluded that “the ability of the economy to modernize strongly depends on the positions of national companies in this part, which is exposed to international competition” (ibid., p. 653, 659). However, “achieving competitive advantage in the industries and supporting sectors requires prior created by self from prominent local companies and high levels of technological skills” (ibid., p. 672).

One of the most popular proponents of the concept of innovative economic development and followers of Schumpeter is Marianna Mazzucato, author of the book “Entrepreneurial State”, which emphasizes the inability of market forces to cope with the large challenges of modernity (see Mazzucato, 2013). Her recent book is focused on “mission economy”, or in other words – on the goal and subject of economic development (Mazzucato, 2021). In this school of understanding is the concept of innovativeness of national economy also.

Measuring innovative development

The approach to measuring innovation applied by the European Commission involves subordinating the measurement of research and innovation according to the extent to which they contribute to the achievement of common development

goals, as well as to meeting major challenges. For this purpose, the so-called European Innovation Scoreboard (EIS) is applied. It is an instrument the first version of which was created at the initiative of the European Commission in the framework of the Lisbon Strategy (2000) in order to provide comparative assessments of the situation of the Member States. EIS provides annual estimates for the EU and other leading innovative nations. The estimation is based on a wide range of indicators on structural conditions, knowledge creation, innovation at company level and results in the form of new products, services and intellectual property.

The annual European Innovation Index provides a comparative assessment of the results of research and innovation in EU countries, other European countries and regional neighbours. It allows policy makers to assess the relative strengths and weaknesses of national research and innovation systems, tracks progress and identifies priority areas for enhancing innovation performance (EC, 2020a). In recent years, the question of the context of the analyses has been raised more and more. A set of contextual indicators was presented in the country profiles in the 2017 edition and revised the following year. These contextual indicators include economic, demographic and managerial dimensions such as sectoral employment, population, economic growth and business environment conditions. The latest report is for 2020 (EC, 2020a) the estimates for innovation development for 2020 for 27 separate indicators, including innovation activities in companies, investments in research and innovation and elements of human resources and employment, the EU countries are grouped as: Innovation leaders (Denmark, Finland, Luxembourg, the Netherlands and Sweden), whose performance is well above the EU average; Strong innovators (Austria, Belgium, Estonia, France, Germany, Ireland and Portugal), whose performance is above or close to the EU average; Moderate innovators (Croatia, Cyprus, the Czech Republic, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia and Spain), which show innovative results below the EU average; and Modest innovators (Bulgaria and Romania), whose innovation results are below 50% of the EU average.

Some of the findings regarding the innovative economic development of the EU are, as follow:

Countries that have good overall innovation performance also perform well in most specific areas of innovation. Luxembourg continues to be the best performing country regarding to attractiveness of research systems, followed by Denmark, the Netherlands and Sweden. These countries are open to cooperation with partners from abroad, researchers are involved in well-established networks at the international level and the quality of research results is very high.

In terms of innovating small and medium enterprises (SMEs), Portugal is the leader, followed by Finland, Austria and Belgium. These countries are characterized by a high share of SMEs with innovative products and business processes. Ireland is also a leader in terms of the impact of innovation on employment (followed by Luxembourg, Malta and Sweden) and the impact of innovation on sales (followed by Germany, Slovakia and Belgium).

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Austria provides more flexible innovation opportunities, followed by Belgium, Finland and the Netherlands. Research systems in these countries are also aimed at meeting the demand of companies, arguing the private co-financing of public research.

In terms of the other dimensions of innovation development, as classified by the composite performance index, the EU leaders are: Sweden for human resources; Denmark for a financial and innovation-friendly environment; Germany for “hard” investments; and Luxembourg for intellectual assets.

The review of the concept of innovative development and implementation, accompanied by frequent changes in methodologies and specific indicators of measurement in the EU, as well as the demand for a new context, is an evidence of the transition to a new stage of economic development.

The concept of the knowledge economy

New knowledge has always been important in solving the basic economic question: how to meet growing needs with limited resources. But it is only in the last century that questions, such as: which knowledge is of economic importance (especially at the company level); how it affects economic prosperity at the company and sectoral levels; how radical technological innovations affect macroeconomic development; and what are the prerequisites for achieving competitive advantages; have come to the forefront. Some of the problems that need to be addressed are, for example: how to form national strategies for innovative development, in which knowledge is of the greatest importance; how to be able to “mobilize” in order to achieve progress and “creation” and not “destruction”; how to define and measure knowledge as a prerequisite for the formation of a vision for innovative economic development.

Main characteristics of the concept

An important contribution to understanding the role of knowledge in economic and social development was made by the American sociologist Daniel Bell, who in 1973 introduced the concept of “knowledge society” as a post-industrial society (see Bell, 1973). According to Bell, theoretical knowledge and its codification play a central role in the development of society. The availability and access to information are crucial for progress. In this regard, the predominant volume of economic activity in the knowledge society is shifting from production to the service sector. Investing in the creation and use of new knowledge, on the one hand, and the appropriation of economic results, on the other, are becoming a major problem in public-private relations. According to Bell, the main institutions that contribute to the development of the knowledge society are universities and research organizations. The industries that use the latest modern knowledge most intensively form the economic basis for this development. The thesis is formulated that human capital becomes the most important factor for development.

Bell envisions the emergence of a new type of technical elite that will lead to a new stratification based on differences in skills and abilities, on the one hand, and

on access to education, on the other hand. He envisages that overcoming the public contradictions in this area will become a major political problem, which will be resolved through the mechanisms and tools for the formation and implementation of scientific and educational policy. The dynamic changes of the 70s, 80s and 90s of the last century and the beginning of the 21st century confirm his predictions. Bell's ideas find further development and application in defining the specific policies of the leading countries.

At the end of the XX century, the problem of the theoretical understanding of the role of knowledge in economic development was posed by Peter Drucker. He introduced the term "knowledge economy". In his book "The Post-Capitalist Society", published in 1993, the author distinguishes between the capitalist and the post-capitalist society according to the role of knowledge about the economy. In capitalist society, this role is secondary and comes down to solving problems posed by practice. In the knowledge economy, it is not the practice that poses problems for solving to science, but the development of knowledge and, above all, of scientific knowledge that determines the directions and practical tasks for economic development. In this regard, Drucker concludes that neither labour, nor natural resources (the "Holy of Holies" for economists), nor capital will be the main "means of production". "This is and will be knowledge ... and ... the practical application of knowledge in work" (Drucker, 2000, pp. 13-14).

Defining knowledge as an economic resource

Despite its great importance for economic development, the definition of knowledge as a scientific category has not been the subject of discussion among economists for a long time. On the other hand, there are many and varied definitions in the philosophical literature. They are the result of discussions that have not been interrupted since antiquity, when Plato defined the three classical criteria for the existence of knowledge – to have a statement, to have it be proven true, and to believe in it. Without entering into philosophical discussions and by accepting the well-known postulates, further determination will be made about which knowledge is important for the development of national economies and what it is (see Chobanova, 2012). In its essence, knowledge is tested in socio-historical practice as a result of the process of knowledge of material and spiritual processes and phenomena. Cognition, in turn, is a process of subjective reflection of the objective reality, which determines its personification, dependence on access to information and personality traits, as well as its strong sensitivity to risk (ibid., p. 77). The types of knowledge that are important for economic development can be grouped, as follows: life, pre-scientific and scientific; empirical and theoretical; explicit (codified) and implicit (tacit).

Scientific knowledge differs significantly from life or pre-scientific knowledge. Life knowledge ascertains the presence of objects, processes, phenomena and how one or another event takes place. Scientific knowledge presupposes not only the establishment of facts, but also their explanation and comprehension through a system of concepts and categories of relevant science. Scientific knowledge answers the question of how a process takes place and why it takes place in one way or

another. Its essence is in the reliable summary of the facts, which consists of the fact that behind the accidental it finds the necessary, the regular; behind the singular it finds the general, and on this basis realizes the prediction for the development of various phenomena, objects and events.

From a practical point of view, the most significant scientific knowledge is the one that provides arguments for prediction. The progress of scientific knowledge is associated with the growth of the power and range of scientific foresight. The latter makes it possible to control processes and phenomena through conscious actions within certain limits. In this capacity, knowledge is of great importance for economic development, especially in the formation of tools for impact that are necessary in order to achieve certain goals. In economic theory, the thesis is initially accepted that only scientific knowledge is important for economic development. This is expressed in the understanding of science as an immediate productive force, which can be seen in the works of representatives of American, Eastern European (including Bulgarian⁴) and Western European scientific thought. At the end of the 1990s, the understanding that not only scientific knowledge, but also life and pre-scientific knowledge were important for economic prosperity, began to make its way, mainly in Western literature, although scientific and technological knowledge were crucial.

As a resource for economic development, knowledge is characterized by a number of features. The most important among them is that it is a phenomenon inherent only in man, i.e., it is personalized; it exists only through a certain person. Peter Drucker also distinguishes between the educated (or encyclopaedic) person, who was important for social development in the past, and the person with knowledge, in which case the key emphasis is mostly placed on the person himself and not on the characteristics of his own knowledge. In connection with this meaning, there is not so much focus on the characteristics of the knowledge of the individual as on the personality as its bearer.

For the modern knowledge economy, personality becomes the most important resource and source for its development. In this sense, knowledge cannot be exchanged, unlike the information contained in books, databases or computer programs. Knowledge is always embodied in a certain person who carries it inside himself, creates it, increases it, shares it by educating others, uses it or abuses it. Knowledge is personalized and multifaceted and cannot be exchanged, but it can be transmitted and disseminated. The channels and networks through which knowledge is disseminated are determined by the specific social, political and cultural environment. Some of them are regulated and limited by an institutional framework.

The personalization of knowledge defines one of its features as a resource for economic development. Apart from the mobility of its bearers, the particular problem with the use of knowledge, as F. von Hayek notes it, is "that knowledge of

⁴ See <http://www.businessdictionary.com/definition/digitalization.html>.

the circumstances we must use never exists in a concentrated and integrated form, but only as scattered particles of incomplete and often contradictory knowledge that all individuals possess. The economic problem of society is therefore not just a problem of how to allocate “given” resources – if “given” means given to a mind that deliberately solves problems ..., it is a problem of using knowledge that is not given to anyone in its entirety” (von Hayek, 1945). Another characteristic of knowledge that is related to its personification and has an impact on its economic realization is the sensitivity to risk. In his research on the sensitivity of knowledge to risk, Ulrich Beck points to a growing inability to create and use knowledge and/or ignore it in societies operating at risk (second stage of modernity). This inability has an increasing impact on the overall activity of the individual, as well as in groups of individuals (see Beck, 1999, 1999a, 1992). Knowledge is increasingly showing other characteristics such as accumulation (which leads to increased returns) and influence on market dynamics.

Knowledge that is important for economic development

Knowledge that has an impact on economic development includes skills acquired both through formal education and training – mostly through lifelong learning and self-learning, and through learning by doing and learning by using. This knowledge relates to management skills acquired through practice and other skills created through research and development activities. The growing importance for the development of the economy of self-education, lifelong learning and self-learning is reflected in the formulation of the concept of the “learning economy”. The learning processes are realized through all economic activities, mainly related to research, marketing, production and development. As a result, tacit or intangible knowledge is becoming increasingly important for the development of the economy through the acquisition of new knowledge (learning economy), rather than formal, codified, structured and explicit knowledge.

In conclusion, it can be summarized that scientific knowledge remains leading to the achievement of real economic and social results, and its carriers are a major resource for economic and social progress.

On the other hand, today the question of distinguishing between scientific and technological knowledge, as well as the distinction between knowledge and information, is becoming clearer. There are differences in the literature regarding the definition of these concepts. Recently, scientists have increasingly turned to the use of definitions resulting from the synthesis of the theories of information economics and technological knowledge at the beginning of the 21st century, which has gained popularity as the Stanford-Yale-Sussex (SYS) synthesis. The main characteristics of this synthesis are the following: recognition of the commonalities between information and knowledge in general and between technological and scientific knowledge in the field of natural and engineering sciences in particular; delimitation of the specific characteristics of technological knowledge according to the way in which it is created and operated in the modern economy; determining common properties of information

and knowledge. The common properties of information and knowledge are reduced to some of their common characteristics such as public goods.

Measuring knowledge

As noted, the importance and specificity of knowledge poses a number of obstacles to measuring it as a characteristic of economic development. In this regard, we will trace the history of the measurement of knowledge, its achievements and omissions.

Historically, the systematic collection of statistics relevant to the state of new knowledge began more than a century ago. In 1905, the American psychologist James McKeen Cattell published for the first time a directory of scientists entitled "American Man of Science" (see Cattell, 1905). On the basis of this directory, for 30 years he published statistical analyses of demography, geography and what he understood about the state of science. In the early 1920s, statistics and their sources were institutionalized, and from the 1940s to the 1950s, new statistics on science, technology and innovation were constructed.

Since the middle of the last century there has been significant change in the collecting of data. Today, not individual scientists but government structures and the national statistical institutes collect the data for statistics on which most of the researchers base their work. These public institutions, unlike the first measurements, focus on the "national budget for science" by calculating the funds allocated to research and development. The focus is no longer exclusively on universities, as with Cattell and other researchers, but on all economic sectors – industry, government research institutions, universities and non-profit (public) organizations. The emphasis is not on the "man of science", but on organizations and their research and development activities. In addition, the focus is placed on the efficiency or "productivity" of the scientific system, defined as the result of research activities. In the process of its development, the statistics of science, technology and innovation increase their quality; their supplement and diversify.

The earliest assessments of science focus on "people of science" because human resources are perceived as "the most basic resource". This resource has the greatest impact on the development of American science. Today, human resources statistics for the development of science and technology is one of its least developed sections. Both national and international organizations are trying to overcome this deficit, but they still do so with very little success. Another neglected opportunity for the development of statistics is in the field of the evaluation of research and development results. Of the existing reviews of cost and performance indicators there are too few that characterize R&D performance. They are mainly economic – indicators of productivity, patents, innovation, trade in high-tech products and services, and technological balance of payments. There is no measurement of the impact of science on the development of society – on the development of education, health care, the environment, quality of life, etc. Cattell identifies these impacts as the main results of scientific activities. For him, economy and industry are a tool, not the ultimate goal of research.

Today, there is a radically different understanding of the results of scientific activities, which consists in the fact that the market and the priorities of governments regarding market development are the ones that determine the directions and scope of the measurements of the state of science, technology and innovation. Admittedly, there are a number of unresolved issues in measuring and evaluating the invisible results of research and development, especially those of a social nature. In this context, initiatives to measure R&D outcomes that are different from economic ones are supported in many countries. These initiatives are not led by statistical institutes, but by other state bodies in order to meet their specific needs. They are not necessarily aimed at developing national and international indicators of a systemic nature. However, the development of such indicators is important for the measurement of social capital, as well as for knowledge management. From the point of view of economic research, today, the main source of data is the comparable data on research and innovation, which are collected by the National Statistical Institute and verified and published by Eurostat.

In order to measure the impact of knowledge on economic development, two indices developed by the Institute of the World Bank are most often used today. The Knowledge Index (KI) is an economic indicator designed to measure a country's ability to generate, absorb and disseminate knowledge. Methodologically, KI is the simple average of the normalized results of a country or region on the key variables in the three pillars of the knowledge economy – education and human resources, innovation system and information, and communication technologies (ICT).

The Knowledge Economy Index (KEI) considers whether the environment is favourable for the effective use of knowledge for economic development. This is an aggregate index that represents the overall level of development of a country or region to the knowledge economy. KEI is calculated based on the average value of the normalized results of a country or region on all 4 pillars related to the knowledge economy – economic stimulus and institutional regime, education and human resources, innovation system and ICT.

The application of these indices is a necessary but far from sufficient condition for understanding the new stage of economic development, as well as for defining the policies in this direction.

The concept for the digitalization of the economy

Digitalization refers to changes related to the introduction and use of new ICT in the economy and its industries, both at the level of the organization and society. As a concept of economic development, it is perceived after its wide discussion and characterization of the development of communications.

From a technical to an economic understanding of digitalization

Different definitions can be found to explain digitalization. The first definitions are technical and reflect the development of technology in the field of ICT. For example, digitalization is defined as “the conversion of analogue information into any digital

form by appropriate electronic devices so that information can be processed, stored and transmitted via digital circuits, equipment and networks” (see Business dictionary, 2017). On the other hand, digitalization, according to its varying degrees of intensity, is a presentation of information (website), a sales channel function (e-commerce) and an integration of business processes (E-Business) to new business models with virtual products or services (Bauer, Boksberger, Herget, 2008). Digitalization is used to denote intelligent business processes with the use of Big Data, Cloud and Mobile Computing, Internet of Things or Social Software. (see Härting, Schmidt, Möhring, 2016). Digitalization, i.e., the large-scale penetration of ICT in business, raises the question of defining these processes in terms of economic development. It is largely based on both the industries that develop these new technologies and the industries that adopt them, especially in global trade (e.g., agriculture, business services and manufacturing) (see Chobanova, Kocarev, 2019). The concept of a “digital economy” was first introduced in Don Tapscott’s book ‘The Digital Economy: Promise and Danger in the Age of Network Intelligence’ (Tapscott, 1997). Digitalization deepens the globalization processes in the economy, increasing the potential of knowledge to accelerate economic development. In developed countries and regions, this process is accompanied by an accelerated transition from a linear structure of the model of the innovation process, typical for the middle of the last century, to a complex network structure, in which interactions for knowledge exchange are of particular importance.

The state and development of these networks in the most prosperous companies are increasingly being managed because on the one hand, the development of ICT allows for this, and on the other hand, knowledge in companies is already perceived as a specific resource that is increasingly becoming a decisive factor in their competitiveness. The acceleration of interactions in innovation networks and the growing need for new knowledge require a change in the relationship between the models of organization of economic activity. Today, in addition to the market and the hierarchy (company) for the implementation of the innovation process, agreements for joint activity as an intermediate model of organization of economic activity are becoming increasingly important.

The increase in the number of network interactions⁵ is determined both by the need to shorten the business cycle as a result of accelerated technological change and the resulting globalization of competition, and by the need for pre-competitive research and development. In this regard, the development of global innovation networks is accelerating and taking on various forms. One of the forms in which global innovation networks operate are international non-capital strategic alliances, which are the most numerous in the rapidly developing sector of information and communication technologies. Other forms of innovation networks are the memoranda of understanding or contracting and implementation agreements for the development

⁵ According to the French scientist Portnoff, there is a critical limit to the sum of network connections and their quality (Portnoff, 2003).

and implementation of new products and technologies, most often between a large manufacturing company and a research institution.

The need to increase the volume and quality of competitive research and development activities is reflected in the accelerated growth of the number of international scientific communities as another form of global innovation networks and an institutional environment for sharing new competitive and mainly theoretical knowledge (Chobanova, 2003). The intensity of interactions in innovation networks is not evenly distributed on a regional and sectoral basis. The greatest intensity of interactions is in the countries of the triad (the USA, Japan and the European Union) and/or in the areas of the technological frontier, where labour productivity is highest, technological equipment is best used and, accordingly, where the risk of failures is smaller and the potential benefits are greater. This unevenness in the intensity and content of interactions leads to an increase in the gap between economically developed and underdeveloped countries. The fact that the degree of novelty of the knowledge that is transferred is directly proportional to the degree of internalization of transactions also contributes to the strengthening of this trend⁶.

Digitalization and widening of the gap in the territorial development

The tendency to widen the gap in the level of economic development by region is associated with the acceleration of digitalization and is evidenced by the results of recent analyses of the OECD's forecasts, OECD displays the converging trends in policy development as of supply and demand in the field of digital transformation, as well as its impact in the objectives of public policies for the development of economies and societies (OECD, 2020). It is summarized that:

- Increasing connectivity allows many people and societies to adapt to the crisis, but there is a significant difference in access, use and skills to work in a digital environment;
- There is a significant difference between companies in terms of diffusion and absorption of ICT;
- OECD countries have digitalization strategies agreed at the highest state level, which are central to development policies;
- But there is a lot to be done for the inclusion of people and society in the ongoing transformations.

⁶ In theoretical terms, there is more and more research on the nature and characteristics of innovation networks (see von Tunzelman, 2002). E.g., Slavo Radoshevich claims that for the successful development innovation networks must have a coordinator, and Keith Pavit gives facts showing that innovation networks have a life cycle of about 5 years. In Bulgaria, Rossitza Ruseva is defending a dissertation on interactions in innovation networks in the sector of information and communication technologies, claiming that the weak Bulgarian participation in the international innovation networks is an obstacle to the development of business in the country.

Measurement of digitalization

Accelerated digitalization processes are measured by rapidly evolving methodological tools such as the Digital Economy and Society Index (DESI). This index is a composite index that summarizes the contribution of the relevant indicators to the digitalization of Europe in terms of the development of the EU Member States in the field of digital competitiveness.

The main analysis methods include comparing the average of the performance of the Member States of the EU-27 with the presentation of the four leading and the four most poorly represented Member States from each group, with a representative group of four non-member countries (Australia, China, Iceland and Japan). The comparisons refer to the five areas of monitoring the impact of digitalization, namely:

- Connectivity: the deployment of broadband infrastructure and its quality;
- Human capital: skills needed to benefit not the opportunities that offers digitalised society;
- Internet use by citizens: the variety of activities carried out by citizens that are already online;
- Integration of digital technologies: digitalization of business development and channels and online sales;
- Digital public services: the digitalization of public services, with a focus on e-government.

Assessing economic development through digitalization in the EU

In 2019-2020, all EU countries made progress in their economic development, as represented by the DESI index. Finland, Sweden, Denmark and the Netherlands have the highest ratings in DESI 2020 and are among the world leaders in digitalization. These countries are followed by Malta, Ireland and Estonia. However, some other countries, including Bulgaria, still have a long way to go. This also applies to the EU as a whole.

The results of the analysis show that the EU-27 Member States perform well compared to the 18 selected non-EU countries. The best-represented EU-27 countries are at the same or at a higher level than the best countries in the world. Finland is the leading country in the DESI index for 2019 and 2020. The leading country outside of the EU is Iceland. The EU-27 Member States occupy five of the top ten positions in the core DESI index. In particular, the assessment of the EU-27's performance in the areas of digitalization is, as follows:

The connectivity dimension – the introduction and use of fixed and mobile broadband – is an area where the EU-27 average is comparable to that of the selected non-EU countries. The strongest areas in this direction in the EU-27 Member States are Broadband with Mobile Broadband.

The EU-27 Member States perform better than their 18 global partners in terms of skills.

The strongest direction for non-EU countries is the use of the Internet by citizens. The average performance of EU Member States lags behind the observed

non-EU countries. On the other hand, the four best EU Member States perform at a level similar to the four best non-EU countries in this area.

The Digital Integration Division focuses on the digitalization of business. In 2017, the average performance of the EU-27 Member States equals that of the non-EU countries for the first time since 2013. In 2018, the performance of the EU-27 goes back down again. The European Digital Strategy and the Mechanism for Recovery and Sustainability include the achievement of goals such as job creation, competition and economic growth.

Digital public services are an area where the average performance of the EU-27 is significantly below the level of the 18 non-EU countries. However, the four best EU-27 Member States significantly and consistently outperform the top four non-EU countries (EC, 2020).

In conclusion, from the point of view of Hegel's interpretation of development, digitalization is a new tool for economic development and achieving the goals of society, as the subjects of this development are states and socially responsible businesses, but it does not discuss the goals of economic development.

The concept of circular economy

By 2050, the world will be consuming as if there were three planets (OECD, 2018). Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double in the next forty years (OECD, 2018). On other hand annual waste generation is projected to increase by 70% by 2050, (World Bank, 2018). Several global initiatives have taken place to meet those challenges.⁷ To deal with

⁷ Goal n.12 of the 2030 Agenda for Sustainable Development aims to ensure sustainable consumption and production patterns. Paragraph 28 of the 2030 Agenda reads: *"We (Countries) commit to making fundamental changes in the way that our societies produce and consume goods and services. Governments, international organizations, the business sector and other non-state actors and individuals must contribute to changing unsustainable consumption and production patterns, including through the mobilization, from all sources, of financial and technical assistance to strengthen developing countries' scientific, technological and innovative capacities to move towards more sustainable patterns of consumption and production. We encourage the implementation of the 10-Year Framework of Programmes on Sustainable Consumption and Production. All countries take action, with developed countries taking the lead, taking into account the development and capabilities of developing countries"*. As defined by the Oslo Symposium in 1994, sustainable consumption and production (SCP) is about *"the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations"*. The Johannesburg Plan of Implementation also called for all countries to promote sustainable consumption and production patterns, with the developed countries taking the lead and with all countries benefiting from the process, taking into account the Rio principles, including, inter alia, the principle of common but differentiated responsibilities as set out in Principle 7 of the Rio Declaration on Environment and Development. Furthermore, the Plan called in its Chapter 3 "Changing unsustainable patterns of consumption and production" for governments, relevant international organizations, the private sector and all major groups to play an active role in changing unsustainable consumption and production patterns and more specifically, through its Paragraph 15, to *"Encourage and promote the development of a 10-year framework of programmes (10YFP) in support of regional and national initiatives to accelerate the shift towards sustainable*

such challenges is the target of the concept of the circular economy. It defines the new target, associated with the core of the new stage of economic development (Chobanova, 2020a). This concept emerges as an alternative to the linear economy, in which secondary resources are rarely used. Even more: "The transition to a circular economy is not limited to adjustments aimed at reducing the negative effects of the linear economy. Rather, it is a systemic change that builds long-term sustainability, generates business and economic opportunities, and delivers environmental and societal benefits" (EMF, 2013).

The basic concept for the development of the circular economy refers to the system of production and consumption, which relies on recycling, reuse, repair, processing, product sharing, changing consumption patterns and new business models and systems. There are many concepts of circular economics and of solving the problems of development, which are widely reflected in the academic literature, including modern academic reviews, official documents of the European Commission (see EC, 2018), OECD, G-7, etc., as well as the work of non-profit and non-governmental organizations, primary among which is the Ellen MacArthur Foundation.

Policy for the development of the circular economy in Europe

The transition to a more circular economy in Europe has been accompanied by the implementation of several specific policy measures. In 2015, the EC adopted the first action plan to accelerate Europe's transition to a circular economy (EC, 2015). It is aimed at strengthening global competitiveness, promoting sustainable economic growth and creating new jobs. This action plan contains 54 measures for "closing the chain" of the product life cycle – from production and consumption to waste management and the market for secondary raw materials. Five priority sectors have been identified to accelerate the transition along the value chain: plastics, food waste, critical raw materials, construction and demolition, biomass and bio-based materials.

The strategic documents of today's EU institutions include: a clear program for efficient use of resources; a roadmap to Europe with an efficient use of resources; the package for circular economy; changes in renewable energy policy aimed at addressing resource issues. In March 2020, the European Commission adopted a new plan focused on the design and production of a circular economy, ensuring that the resources used remain in the EU economy for as long as possible. The plan aims to reduce residual consumption in the EU, double the percentage of circular use of materials and contribute to economic decarbonization by reducing carbon and material waste in the EU (EC, 2020b).

The transition to a circular economy is also on the agenda of world forums. This was the focus of discussions during the 2019 Annual Meeting in Davos. The four key priorities that emerge for the coming year are the following:

- Leadership is crucial;

consumption and production to promote social and economic development within the carrying capacity of ecosystems".

- Use the potential of the Fourth Industrial Revolution;
- Supply and value supply chains;
- Cooperation is key.

The problems of digitalization and circularity in development will be at the centre of discussions at the forum in 2021.

The implementation of the developed visions, strategies and relevant policy measures requires the development of appropriate tools. In the first place, they concern the definition of appropriate indicators.

Monitoring of circular economic development

The monitoring of the development of the circular economy in the European Union is based on the identification of the main areas of manifestation of the circularity of the use of resources and on the determination of available indicators for its measurement. This approach enabled evaluation process of monitoring, developing a strategy and implementing policies.

The following areas have been identified as areas of economic and social development that are characterized by circularity: sustainable resource management, social behaviour and business operations.

The content of the indicators and the interpretation of their contribution to the understanding of the circular economy are grouped according to the areas of occurrence of circularity, as follows (European Commission, 2018):

- *Sustainable resource management* – indicators that examine the performance of the EU Member States in transforming their economies into a circularity by reducing the demand for resources, thus increasing resource security and reducing environmental pressures at home and abroad.

- *Social behaviour* – indicators reflecting the awareness, commitment and participation of citizens in the circular economy. Citizen engagement, behaviour change and social norms are an integral part of the success of the circular economic transition. This means that people are involved in new forms of consumption (e.g., sharing, product service systems, willingness to pay more for sustainability), re-use (requires a change in attitudes towards repair and renovation), disposal (separation of waste streams) and delivery of “waste” to recycling/sorting sites).

- *Business operations* – indicators that depict eco-innovation activities to change and adapt business models according to the principles of the circular economy. Business activities and their digitalization are the engine of the circular economic transition. They promote circularity throughout the life cycle of the use of materials, starting with how and what materials are delivered (quality, environment and health standards). The design stage of business operations is especially important for the possibility of reuse/re-production/recycling and increase the durability of goods for longer retention in the economy. Recycling is a key business operation that is crucial to increasing the circular economy. The monitoring and evaluation of circularity have become the basis for the development of the vast majority of economic development policy measures.

Indicators of circularity as indicators of economic development

From the point of view of the circularity of resources as an indicator of economic development, an economy is more developed and becomes more efficient when it reduces the absolute level of resources it consumes to produce a unit of production, or when it increases the production produced per unit of resources, consumed by it. *Resource efficiency* is usually measured by the “resource productivity indicator” – the leading indicator of the Resource Efficiency Index, which shows the use of material resources in terms of economic growth. *Resource productivity* is defined as the ratio of gross domestic product (GDP) to the domestic consumption of materials, which measures the total amount of materials that are directly used by an economy. It is measured in EUR per kilogram. If the GDP grows faster than the material consumption, resource productivity improves and the dependence of economic activity on material consumption weakens. In other words, the economy is able to produce more without a proportional increase in resource consumption. It is also known as the “relative weakening of dependence”⁸.

The endorsement of resource efficiency is one of the European Commission’s flagship initiatives in the framework of the Europe 2020 strategy. It is measured by the Resource Efficiency Index, a set of indicators regularly published by Eurostat since December 2013. The index includes a leading indicator – resource productivity, an indicative table of indicators covering water, land, materials and carbon, as well as thematic indicators assessing priority policy areas.

The Circular Economy Monitoring Framework established by the European Commission covers four areas of circular economy development and their respective indicators (European Commission, 2018):

1. *Production and consumption*. This area includes four indicators:

- Self-sufficiency of raw materials for production in the EU;
- Green public procurement (as an indicator of aspects of funding);
- Waste generation (as an indicator of aspects of consumption);
- Food waste.

2. *Waste Management*. This area includes two indicators:

- Percentage of recycling (the share of waste that is recycled);
- Specific waste streams (packaging waste, bio-waste, e-waste, etc.).

3. *Scrap*. This area includes two indicators:

- Contribution of recycled materials to the demand for raw materials;
- Trade in recyclable raw materials between EU Member States and the rest

of the world.

⁸ The relative decoupling occurs when the growth rate of resource use is lower than the growth and economic growth, so that resource productivity increases. The absolute reduction in resource consumption is a consequence of the weakening of dependence when the growth rate of resource productivity exceeds the growth rate of the economy.

4. *Competitiveness and innovation*. This area includes two indicators:

- Private investment, jobs and gross value added;
- Patents related to recycling and secondary raw materials as an example of innovation.

The logic and structure of the monitoring framework broadly follows the logic and structure of the European Circular Economy Action Plan.

Assessing the circular nature of European economic development

Analyses of the data for the ten indicators of the monitoring framework provide a broad picture of the increasing circular nature of the EU economy (see European Commission, 2018). The areas of European economic development where circularity is important can be characterized, as follows:

Production and consumption: progress towards more circular trends in production and consumption can be observed, e.g., regarding waste generation; significant room for reducing the efficiency gap between Member States and different materials. The EU is largely self-sufficient for most non-metallic minerals such as building materials and industrial minerals; for EU critical raw materials (European Commission, 2015), the EU relies heavily on imports, which emphasizes the need for secure access and diversification of supplies. The generation of household waste in the EU per capita fell by 8% between 2006 and 2016 to an average of 480 kg per capita per year; there are large differences between Member States (between 250 and 750 kg per capita per year) and the generation of household waste is still increasing in several Member States.

The trend outlined in the data on total waste generation (including industrial and commercial waste but excluding large mineral waste) per unit of GDP is positive, showing a decrease of 11% compared to 2006. According to preliminary estimates by Eurostat, food waste in the EU decreased from 81 to 76 million tonnes (i.e., by about 7%) between 2012 and 2014, which is equivalent to a decrease from 161 to 149 kg per capita.

In terms of waste management: between 2008 and 2016, the EU rates for recycling municipal waste increased from 37% to 46%. Five Member States recycle more than half of their municipal waste, while some countries are approaching the 2030 recycling target of 65% proposed by the Commission (European Commission, 2015), however, five Member States are still below 25%.

The concept of the circular economy marks the features of a new stage of economic development, where the aim is to meet the challenges of tensions in a globalized world, which are strongly related to resources in limited quantities. The content of the goal is a transformation aimed not only at productivity and resource efficiency, but also at minimizing waste and many other areas of the cycle. Analyses show that market forces do not have enough potential to deal with these important issues, which are vital for its future.

Conclusion

The recent economic development is characterised as a process of transition to a new stage of economic development. The introduction of an improved understanding of the content of the concepts of “economic development” and “stage of economic development” are an important step towards a better monitoring and predicting new processes in the real economy, and better defining respective policies for economic development.

Economic development is defined as a process of change, in which quantitative accumulations lead to qualitative changes, forming separate stages of economic development, determined by the purpose, the subject and the mechanism of economic development. In this regard, the growing diversity of concepts of economic development reflects the multifaceted nature of changes in national and global economies and societies and is an expression of the transition from one stage of development to a new one. A stage of economic development is defined as a period of time with approximately constant aim, subject and means for achieving the aims. Transition to a stage is a period of accelerating changes of aims, subjects and means. It is characterised by rethinking goals and strategies, by developing alliances for cooperation, following common goals and values.

Applying the above definitions to the modern concepts of economic development the following assumptions could be formulated:

In the framework of the concept of circular economy, the change in the purpose of economic development is to maximize the profits of companies and maximize the GDP growth at the national level to a cost/waste-free and secondary use of resources, especially those whose depletion threatens the lives of humanity, such as limited amounts of water, soil, air and water. I.e., moving towards an economic development goal aimed at creating ecosystems that overcome the causes of new global social tensions. Regarding the subject and the mechanism for achieving this goal, the literature review shows that current circular economy concepts discuss the new use of resources, but not how and by who such changes will be ensured.

Within the concept of the knowledge economy, the goal of the development of the national economy is to solve the current and meet the new challenges to the mobilize a national and attracted from abroad resource of knowledge to identify the problems of the development of society and generate ideas for solving them.

The concept of digitalization highlights a change in the way national economies function. Digitalization as a new phenomenon in the development of the economy and society is associated with accelerated quantitative and qualitative changes as a result of the creation, implementation and use of new ICTs, as well as their combination with other technologies in the economy. New raw materials, new products, services and technologies appear; the organization of production changes, and so do business relations. New industries are emerging, transforming or disappearing. The digitalization of public services has an impact on public relations. The countries and the European Union are drawing up policies aimed at meeting the new challenges. Due to the variety of opportunities, the dynamics of their change and the emergence of new

ones, as well as the ambition to use all opportunities, there is a risk of losses. Both at the business and at the national and international levels, development strategies need to be rethought with particular urgency.

In summary of the presented study, it could be stated that all national economies and the world economy are in a process of transition from one stage of economic development to another. The period of transition is accompanying with rapid changes in the target, subject and means for achieving the target. Along with this, rethinking of strategy and its priorities for development on different levels is taking place. New alliances are developed and are developing in order to achieve common goals. European Union plays important role in this respect.

Regarding contemporary national economy, it can be concluded that it is in a period of transition from one stage of economic development to another, being unsatisfactory performed according to the average level in the EU. Neglecting the need of rethinking the strategy, better defining priorities and of including in alliances are among the reasons for such performance. If a respective change does not take place, the tendency for lagging behind will become constant. If clear well defined priorities will not be argued, difficulties in finding partners for developing alliances within the EU will lead to self-isolation.

The question now is whether in choosing alternatives (provided that they are available) for transition the human mind will prevail and choose the free development of the individual in a democratic, integrated society, or whether it will take the path of a new kind of colonialism – technological, economic, social and personal, based on totalitarian organisation for mobilising knowledge for achieving the societal purposes. Future will tell, but until then, it is necessary to concentrate the knowledge resources for establishing worthy alternatives, corresponding to the new stage of economic development challenges.

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