The main purpose of the study is to develop scientific and methodological aspects of assessing the transformation of the target indicators of the economic development of countries, the argumentation of the impact of information technology on the economic growth of countries using the tools of multidimensional cluster analysis. The object of the study is the models of economic development of countries and the assessment of the impact of ICT on them. The relevance and necessity of studying this issue lies in the development of scientific and methodological aspects for assessing the transformation of the target indicators of the economic development of countries. The main results of the study are characterized by the following.

The main types of modern economic models are systematized, which made it possible to highlight their features and specifics of application in different countries of the world, depending on the political and socio-economic directions of development; it is substantiated that the key factor of sustainable development of the country is economic growth; for the first time, the specifics of the transformation of the main indicators of the economic development of countries under the influence of innovative information technologies are argued. The presented results made it possible to form the scientific and methodological aspects of conducting a multidimensional cluster analysis of the transformation of the target indicators of the economic development of countries, which ensured the identification of homogeneous groups of clusters of countries by the level of economic development (global indices of economic development of countries), taking into account the peculiarities of their functioning and development strategies. The practical application of the research results will ensure the effectiveness of the formation of economic policies and strategies for the economic development of countries, taking into account the application of the developed scientific and methodological aspects

Keywords: economic development model, innovation technology, sustainability, efficiency, multivariate cluster analysis

FORMATION OF SCIENTIFIC AND METHODOLOGICAL ASPECTS OF EVALUATION TRANSFORMATION OF TARGETS ECONOMIC DEVELOPMENT OF COUNTRIES

Hassan Ali Al-Ababneh
Corresponding author
Doctor of Marketing, Assistant Professor
Department of E-Marketing and Social Communication*
E-mail: Hassan_ababneh@inu.edu.jo

Hel Al-Dhaimesh
Doctor of Economics, Professor
Department of Economic
Faculty of Economic and and Administrative Sciences
The Hashemite University
P.O Box 330127, Zarqa, Jordan, 13133

Ahmad Farhan Alshira'h
Doctor of Accounting, Assistant
Department of Accounting*

Mohammad Haider Alibraheem
Doctor of Accounting, Assistant Professor
Department of Accounting Information System *

Mohamed Ibrahim Mugableh
Doctor of Finance & Banking Science, Associate Professor
Department of Finance & Banking Science *

Amal Alhosban
PhD of Computer Science, Associate Professor
Department of Mathematics and Applied Science
University of Michigan-Flint
P. O. Box 303 E kearsley str., Flint, Michigan, USA, 48127

Paul Katuse
Doctor of Philosophy, Associate Professor
Department of Management & Leadership
School of Business, Skyline University College
P.O. Box 1797, Sharjah, UAE

Liubov Vasylyshyna
Candidate of Economic Sciences, Associate Professor**

Olga Popova
Doctor of Science Economics, Professor**

Olena Mizina
PhD in Economics, Associate Professor**
*Irbid National University
P. O. Box 2600, Irbid, Jordan, 21110
**Department of Management and Financial and Economic Security
Donetsk National Technical University
Sofia Kovalevska str., 29, Lutsk, Ukraine, 43012

1. Introduction

Current trends in global uncertainty that give rise to instability and volatility of the world market determine the conceptual need to ensure the stability of the economic development of the countries of the world on the basis of optimizing economic strategies and development models. This optimization is impossible without the use of innovative

information technologies in modern economic models. Based on this, it is quite relevant and necessary to study modern models of economic development, to determine the main aspects of the transformation of target indicators under the influence of innovative information technologies.

Economic models of development in modern conditions are a key link, including a set of specific examples of the economic development of countries, statistical materials, economic and mathematical hypotheses and forecasts that characterize trends and trends in economic growth. Modern trends in the functioning of the world economy are characterized by the need to constantly search for new approaches, techniques, strategies and solutions in the context of the formation of sustainable economic models. In view of the lack of a unified scientific and methodological approach to the study of modern models of economic development of countries and the assessment of the features of the transformation of key indicators of economic growth, as well as the argumentation of the influence of information technologies on the economic growth of countries, they necessitate a detailed study and study, which justifies the relevance and necessity of this study. The conditions for the formation of models of economic development of countries and regions are a rather important and strategic direction, with the help of which key guidelines and development prospects are determined.

The conceptual necessity and relevance of this study is determined by the current trends of global changes in the world economy, which make it necessary to revise existing models of economic development based on the use of innovative technologies that determine the processes of their transformation in accordance with global trends. The functioning of the world economy is characterized by constant transformation and adaptation of economic development models of countries under the influence of various processes of globalization and integration, on the one hand, and the basic principles of the mechanism of economic evolution using innovative technologies, on the other.

Modern trends in economic development require the search for new approaches and methods of management. Taking into account the existing scientific research and practical recommendations in the field of formation of economic development models, their essence, key elements and factors that have a significant impact in the conditions of the transformation of the world market are not sufficiently disclosed, which requires a more detailed study. There is no single approach and vision of the modern model of economic development, which requires a more detailed definition and implementation in the methodological approaches of management, which confirms the relevance and necessity of this study.

The existing practice of economic development is based on classical management approaches that do not provide efficiency, cause imbalances, crises and generate global instability under the influence of a number of factors that are not taken into account, which requires detailed research and inclusion in the process of forming a model of economic development in modern conditions.

2. Literature review and problem statement

In modern conditions, the choice of strategic development goals and ways to achieve them is possible based on a comprehensive study of the economy and models of economic development of countries, as well as the adaptation of the main theoretical provisions to the specific socio - economic conditions of the country's development. To determine an adequate model of economic development, reflecting a specific theoretical and applied vision of the mutual influence of the economic development of individual countries, the most important task of any economic system is to ensure sustainable and balanced development. It should be noted that in the modern economic space, many scientists have many approaches to the definition of the concept of economic development, sustainable economic development, but there is no single approach, which requires a more detailed study.

A critical analysis of scientific views made it possible to structure the concept of "sustainable economic development", which should be understood as economic growth, which is characterized by its intensity and does not harm the environment, and contributes to the resolution of a number of problems. Critical socio-economic problems, finding the optimal middle between economic, environmental and social development. It should be noted that sustainable economic development, as a concept, was first born in the 1970–1980 s. against the background of the recognition by the world community of the problems of the development of society and science in the face of limited natural resources and environmental conditions. It should be noted that the presence of many studies in the economic literature does not allow to single out a unified approach and method of management to ensure sustainable economic development, which requires a deeper study aimed at solving a number of topical issues.

The main issues of development of economic stability in the world are reflected in the scientific works of many scientists, economists and specialists. The first researchers of economic development were a group of the following economists:

– [1] consider the relationship between the growth of total income and the total product of the country as the basis of its economic development;

– [2] consider the direct relationship between economic growth and the total income of the country. It should be noted that these approaches are classics (considering direct dependence) of economic science and do not take into account current trends in the globalization of the world economy and its transformation. It should be noted that the study [3] is based on the argumentation of the role of the country's total product as a result of economic growth.

The main results of [4, 5] are based on establishing a direct relationship between the country's total product as a result of the country's economic growth. However, these approaches are not relevant in modern conditions, since in the global conditions of the development of the world market, the total income of any country depends on a number of factors that are not taken into account and require improvement.

Of particular interest is the study of a group of scientists:

– [6] are focused on conceptualization and highlighting the special role of short-term planning of the main measures for the distribution of total income within the country;

– [7] which are based on a deep study of short-term problems that are associated with the distribution of income within the country;

– [8] are aimed at studying the theory of costs that are associated with the total income of the country;

– [9] the study argues the general concept of income distribution and cost theory, taking into account population;

– [10] the study pays a significant role to the economic development of the country, which is directly dependent on technological progress;

– [11] considers technological progress as a factor in ensuring the country's economic growth. Conceptualizing all the presented studies, it is worth noting that this approach is fundamental in the field of the formation of economic science and the study of economic development, but takes into account a narrow list of factors in the short term and in the future, which does not correspond to the modern realities of doing business in the context of transformational processes and requires improvement and more detailed study.

It should be noted that a significant contribution to the study of the main aspects of economic development in the world was made by such economists and specialists as:

– [12] it is argued that a significant role is given to the economic development of the country as one of the strategic important aspects of long-term growth;

– [13] the study is aimed at a deep analysis of the factors that affect the process of sustainable economic development of the country;

– [14] a significant contribution has been made to the study of the organization of sustainable economic development of the country on the basis of constant analysis and evaluation of all influencing factors. Proceeding from the presented subtotals, it should be argued that these approaches are based largely on internal factors, excluding the macro environment, which in modern conditions is the most significant factor influencing economic development, which requires more detailed research and improvement of the proposed approaches.

Features of economic development under the influence of innovative technologies are considered in the scientific works of scientists:

– [15] the main stages of economic development and their dependence on innovative technologies are considered;

– [16] studied the development of innovative technologies as a key link in the modern economic model;

– [17] defines a direct link between the economic development of the country and the application of innovations as inseparable elements.

Based on the considered approaches and studies, it should be noted that the role of information technologies in the economic development of countries and the features of their influence are not disclosed in full, as well as a direct relationship in modern conditions is not always visible and can be applied, which requires improvement of the approach and more detailed study.

In this regard, it should be noted that in the absence of a unified concept of sustainable economic development, the issue of a deeper theoretical analysis and development of a methodological component of the organization of effective sustainable economic development remains relevant.

In modern economic literature, the interpretation of the essence of the concept of "model" has two meanings for understanding, namely:

1) visual reflection and description of any phenomena or processes in society;

2) a template that helps set an example for reproduction and implementation in practice.

The conceptual necessity of studying the models of economic development of countries leads to the identification of the essential characteristics of economic development as

the main driving force of progress, on the one hand, and, directly, the phase of economic evolution, on the other. According to the scientist [14], the economic interests of people associated with property relations, depending on the real forms of ownership of the means of production, are a powerful generator of development. However, this approach cannot be implemented in modern realities, since it does not take into account global macroeconomic factors that affect sustainable economic development.

It should be noted that a more in - depth study of the transformation of economic development is given in the scientific works of a group of scientists:

– [18], who consider the complexity of economic transformations and the specifics of economic development in the key sectors of the country;

– [19] research is aimed at studying profound changes in the technical, economic, social, political, institutional spheres in the field of infrastructure, technology, education, as well as in the field of the main factors of production: capital, natural resources, labor force;

– [20] conceptualize the variability of the technical, economic, social, political, institutional sector of the economy, highlighting the need to determine these changes.

Conceptualizing all the presented approaches, it should be noted that these approaches form the fundamental prerequisites and mechanisms for assessing a large number of factors affecting the sustainability of economic development, however, none of them takes into account the processes of globalization and internationalization, which have a significant impact in modern conditions of functioning, which lead to global change and transformation.

More relevant and closer to the modern realities of economic functioning are the scientific works of a group of such scientists:

– [21] emphasize the need to use innovations and new technologies to ensure the economic growth of the country, region;

– [22] economic development is considered as an innovation or innovation in the field of economics, which generates demand and economic growth;

Thus, the presented approaches and insights in scientific research characterize the diversity of research in the field of economic theory and economic development, which allows to state that today there is no single approach to understanding the economic development model, the features of its formation, assessment and transformation specifics, which requires deeper analysis and research. Economic development is efficient and a growing economy is always in the process of reducing or eliminating poverty, inequality and unemployment.

3. The aim and objectives of the study

The aim of the study is to form scientific and methodological aspects of assessing the transformation of the target indicators of the economic development of countries, which will provide argumentation for the features of the influence of information technologies on the economic growth of countries, will allow them to be structured into homogeneous clusters based on the use of multidimensional cluster analysis tools, which will make it possible to determine practical recommendations for the effective formation and the choice

of a model for the economic development of countries, as well as to argue the role of information technology in this model.

The following objectives have been set to achieve the aim:

– to systematize the theoretical aspects of the formation of models of economic development in the context of the transformation of the world market;

– to substantiate the theoretical prerequisites for the impact of innovative information technologies on the target indicators of the economic development of countries;

– to argue the transformation of target indicators in accordance with modern models of economic development;

– to develop scientific and methodological aspects of multidimensional analysis of the transformation of target indicators of economic development of countries;

– to structure countries into clusters according to the level of economic development, taking into account the specifics of their functioning and development features.

4. Materials and methods

To determine global changes and transformation of target indicators of economic development, a critical analysis of scientific research in this area was justified, which made it possible to determine the lack of a unified approach and confirmed the relevance of this study. Scientific views and studies are structured according to their significance within the framework of this topic, the main groups of studies are summarized, which made it possible to highlight the key theoretical aspects in the formation of an economic development model. The necessity of structuring and considering the economic essence of the concepts of "economic development" and "economic model" is argued; for the first time, their features are defined in the narrow and broad senses. On the basis of theoretical prerequisites, the necessity of conceptualizing and highlighting the main aspects of the transformation of key indicators of economic development is argued.

The main key indicators of economic development are classified, on the basis of which the need for economic and statistical analysis and the use of multidimensional cluster analysis tools is substantiated. The tools of economic and statistical analysis made it possible to determine the main indicators of economic development and the features of their transformation under the influence of global factors of globalization and internationalization in the context of many countries of the world.

This tool is a multidimensional statistical procedure that organizes the selection of objects into homogeneous groups, it gets a set of clusters. The main objectives of multidimensional clustering are: understanding the data with further simplification of processing procedures; data compression and detection of new atypical objects. Currently, the most common are about 50 clustering methods. The implementation of cluster procedures is usually associated with a number of parameters, the most important of which are: the degree of similarity between elements and clusters, the value of the equivalence threshold for this measure, based on which the assignment or non-assignment of an object to a cluster. Also important are the number of clusters and the approach related to the specific approach and the direct value of the criterion that evaluates the quality (efficiency) of clustering.

In order to substantiate the scientific and methodological foundations of multidimensional cluster analysis of economic development of countries in the world are considered as

separate, independent clusters of one element. To determine the key clusters of countries by the level of economic development in the world, it is advisable to use multidimensional cluster analysis and the method of k-means (k-means). This method k-means is an iterative procedure that divides a given set of elements into k clusters, the points of which are as close as possible to their centers, and the clustering itself is due to the displacement of these centers. The method seeks to minimize the total quadratic deviation of the cluster points from the centers of these clusters (efficiency criterion). An important step in conducting a multidimensional cluster analysis of the economic development of the world is to select the right method for calculating the distances between the studied objects (groups). Euclidean distance, which is the geometric distance in multidimensional space and is calculated as follows, is most often used in economic research:

$$d_{ij} = \sqrt{\sum_{k=1}^{m} \left(x_{ik} - x_{jk}\right)^2}, \qquad (1)$$

where, d_{ij} is the distance between objects i and j; x_{jk} is the value of the k-th variable for the i-th object; x_{jk} is the value of the k-th variable for the j-th object.

It should be noted that the Euclidean distance (and its square) is calculated based on the input data and is the standard way to calculate the distance between the studied objects. This method has some advantages (for example, the distance between two objects does not change when a new object is analyzed), but the distance can be greatly affected by the differences between the units of measurement on the axes on the coordinates of which these distances are calculated.

In this case, the Euclidean distance (or the square of the Euclidean distance), calculated on the basis of coordinates, varies significantly, and, as a result, the results of multidimensional cluster analysis may differ greatly from the previous ones.

$$dist(x,y) = \max |x_i - y_i|, \qquad (2)$$

where dist (x, y) is the distance between objects x and y; x_i is the maximum value for the i-th variable for x object; y_j is the maximum value for the j-th variable for the y object.

In the scientific literature, sometimes for the progressive increase or decrease of weight related to the dimension for which the respective objects differ significantly, which can be achieved using a degree distance. When performing multidimensional cluster analysis, the power distance is calculated by the formula:

$$dist = (x,y) = \left(\sum_i |x_i - y_i|^p\right)\frac{1}{r}, \qquad (3)$$

where $dist$ (x, y) is the distance between objects x and y; x_i is the value for the i-th variable for x object; y_j is the value for the j-th variable for the y object; p is the parameter responsible for weighing the differences in each of the coordinates; The r-parameter is responsible for weighing large distances between objects.

The main purpose of multidimensional cluster analysis of economic development of the world is to divide the multidimensional set of input data into homogeneous groups so that objects within the group are similar in terms of economic development, and objects from different groups differ from each other. The formation of the model of economic development of the country

should be scientifically sound and based on the methodological and methodological level. In today's conditions of transparency and large amounts of information, the formation of an effective model of economic development in many cases is impossible without the analysis of its key objects, factors based on the use of multidimensional cluster analysis.

The developed scientific and methodological aspects of assessing the economic development of countries on the basis of a multidimensional cluster analysis, in contrast to the existing ones, take into account the maximum number of objects of the economic development model and factors of the macroeconomic environment that have a significant impact on it. The use of all the tools and methods proposed by the author made it possible to form the theoretical prerequisites and develop methodological aspects of assessing the key indicators of the economic development of countries that can be applied in practice by the leaders of both a separate industry and the country's government in strategic management to predict, evaluate and analyze the impact of macroeconomic factors on model of economic development.

5. Results of the study of modern models of economic development: transformation of target indicators, assessment, multivariate cluster analysis

5. 1. Systematization of the theoretical aspects of the formation of economic development models in the context of the transformation of the world market

The economic growth of the economy of any country is an increase in welfare, per capita income, an increase in the quality of life and a better satisfaction of the basic needs of all members of society. Thus, economic development is a multi-vector process, including the transformation of the entire economic and social system, leading to fundamental changes in social structures, people's behavior, social institutions and, as a result, accelerating economic growth, reducing inequality and eliminating unemployment.

Economic growth in the current conditions of the transformation of the world economy under the influence of the processes of globalization and internationalization is aimed at the following areas:

1) increasing the supply and ensuring the availability of essential goods and services (food, housing, health and safety);

2) raising the standard of living – increasing the income of the population;

3) an increase in the number of jobs – a decrease in the share of unemployment;

4) improving the quality of educational services in the world, as a key factor in forming a literate society;

5) increased attention to cultural and humanitarian values.

Ensuring the directions of economic development presented above will ensure the growth of material well-being, personal and national self-consciousness, providing individuals and society as a whole with a greater choice in the economy and the social sphere in order to reduce their influence and dependence on other people and countries and protect them from suffering. It is important to note that the uneven pace of development of individual countries of the world contributed to the identification of certain ways of their development and the formation of generalized patterns (models), which are understood as the totality of all economic processes carried out in society on the basis of existing property relations and organizational forms.

Arguing the considered theoretical aspects and studies in the field of economic development of countries, it is worth noting that in many studies the concepts of "economic development" and "economic model" are often identified. Based on this, it is worth defining these concepts. Economic development is a broader concept and is based on expanded reproduction and gradual structural changes in all sectors of the economy of a particular country. In modern conditions, economic development includes the entire spectrum of social relations, including the development of economic sectors and the redistribution of public goods.

The economic model is a narrower concept and is based on the formalization and description of the main economic phenomena and processes, indicating the key elements of the economic system. Based on a critical analysis of scientific papers and studies on this issue, it should be noted that the following concepts of "economic development", "evolution", "growth" and "competitiveness of the national economy" are very interconnected, which should also be defined.

Economic development is an expanded reproduction and a gradual qualitative and structural change in the economy, productive forces, education, science, culture, the level and quality of life of the population, human capital.

Economic development includes the development of social relations, therefore it proceeds differently in the specific historical conditions of the technological modes of the economy and the distribution of material goods, which will serve as the information base for the analysis. However, economic development is impossible without the evolution of society, its transformation and change for the better, the development of science, the emergence of new technologies, methods and tools that can be applied in everyday life and allow for the growth of both the economy of a particular country, region, and the global economy.

Economic growth is the process of increasing and improving national production, so that a country can produce more goods and services, as well as improve their quality. Growth in total GDP or per capita is changing, which is a key factor that is taken to analyze the economic development of countries in the world when conducting multivariate cluster analysis.

Economic development and growth provide not only an improvement in national production, but also increase its competitiveness. Competitiveness is the main indicator that reflects the state of the country's economy and the possibilities of its formation, however, this factor is not taken into account when conducting a study of the transformation of modern models of economic development.

After analyzing and considering a large number of scientific studies in the field of economic development and the features of the formation of economic development models, it is worth noting that the very model of economic development was formed by combining such main areas as: economic, social and environmental. From the point of view of economic orientation: long-term economic projects that take into account the laws of nature, as a result, turn out to be more effective than projects whose implementation does not take into account possible environmental consequences.

Economic development should be carried out taking into account many factors of the macroeconomic environment that have a direct impact on its sustainability and presented in Fig. 1.
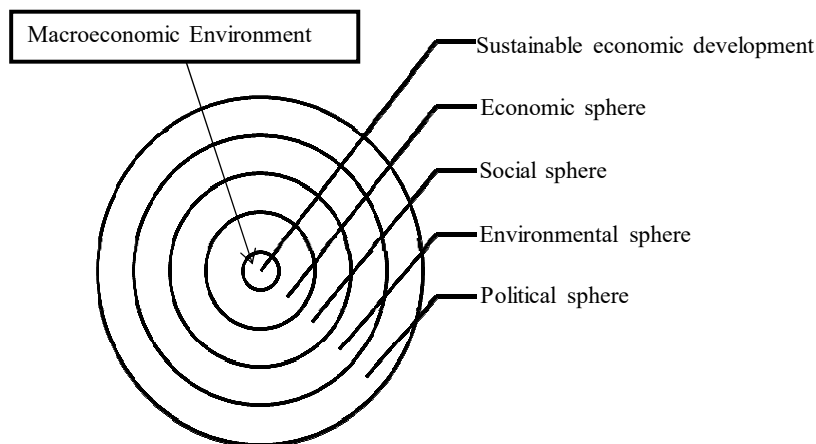
Fig. 1. A modern conceptual model of sustainable economic development, taking into account the influence of the macroeconomic environment

From the point of view of social orientation, it became the impetus for the formation of this concept, aimed at maintaining cultural and social stability, as well as at reducing the number of conflicts that destroy them. Ecological direction, the main purpose of which is to ensure the sustainability of physical and ecological systems. Ignoring environmental needs will lead to environmental degradation and endanger the existence of all mankind. However, the modern model is based on these postulates of ensuring the sustainable development of the economy, but must take into account the risks and factors that are associated with the influence of political factors that exacerbate the macroeconomic impact among the negative impacts on economic processes. A market economy can range from hypothetical laissez-faire and free market options to regulated markets and interventionist options. In fact, this or that model of a market economy does not exist in its pure form, since society and the state regulate the economy to varying degrees.

It is important to note that the transition from an industrial society to a post-industrial one, the formation of an informational mode of production, an increase in the action of a qualitatively new factor of production – information and knowledge, the spread of a new, innovative type of development, as well as a shift in the vector of economic development to the social side, in which a person with new the qualitative characteristics of their activities, such as creativity, the desire for self-expression and self-development – to make adjustments to the model of economic development. So, among the basic models of the development of a market economy, the American (or liberal) model, the model of a socially oriented market economy, the British model and the market model of newly industrialized countries stand out. Taking into account the specifics of changes in economic systems and the impossi-

bility in some cases of applying quantitative assessment criteria, modeling of economic development cannot be determined on an empirical basis, but can be carried out by analyzing its various directions with an emphasis on certain aspects. As part of the review of this study, target indicators of economic development models. The classification of the main development models of a market economy, their characteristics and features are presented (Table 1).

An indicator (from the Latin. Indicator – pointer) in sociology is understood as a characteristic of the object under study, available for observation and measurement, which makes it possible to judge its other characteristics that are inaccessible for direct research. It should be noted that in the economic literature, the indicator is:

1) a tool for qualitative and quantitative interpretation of goals and performance measurement;

2) the parameters of the boundaries in which the system, including organizational mechanisms, technological connections, material and financial flows, can function and develop stably.

A specific feature of indicators is their vector orientation. Given this peculiarity, it can be stated with confidence that the target indicator of economic development models is a certain object (element) of management, acting on which, assistance is made to improve management, which ultimately contributes to the long – term stability and competitiveness of this model. The industrial development model is relevant in the face of large economic problems or the demands of economic goals. The economy is seen as the goal of public policy, and not a means of achieving the main goal – the well-being of citizens. Gross Domestic Product (GDP) in this model is the main indicator of national progress. China is an example of the successful use of the industrial development model at the present stage.

Table 1

Classification of the main development models of a market economy, their characteristics and features

Model	Countries	Characteristic and features of the model
1	2	3
American (liberal) model	USA	– emphasis on freedom of enterprise and the power of competition; – the state regulates those aspects of production that are not amenable to effective regulation on the basis of free competition; – a higher level of private investment in relation to the state; – low proportion of state ownership; – a sharp differentiation of the population between rich and poor; – a big difference in the level of wages; – an acceptable standard of living for low-income groups

Continuation of Table 1

1	2	3
Model of a socially oriented market economy	Germany, Sweden, Japan	German model - "Social market economy": – creation of equal conditions for self-realization of a free, independent, state – abiding, law – abiding and creative person; – presence of a "mixed economy" with a large share of state ownership; – macroeconomic regulation is carried out by such levers as monetary, tax and budgetary policy and structural policy
		Swedish model – "Democratic socialism": – preservation of a market economy based on private property; – powerful socialization of the distribution of national income through the use of the tax transfer mechanism; – development of a system of social support for the population (the expenses for social support of the population are borne by the state; these expenses constitute a significant part of the state budget)
		Japanese model – "Japanese miracle": – the state contributes to the creation of superpower corporations formed around the bank, which became the center of such a group; – concentration of state efforts on the restructuring of the national economy (policy for the development of new industries, labor - intensive and knowledge - intensive production); – important mission of the state to collect and communicate to entrepreneurs a large amount of information necessary for successful business
English or European-Keynesian model	Great Britain, France, Italy	– presence of a significant scale and share of state property (state property for enterprises of capital-intensive and low – profit industries, whose products significantly affect the level of costs in other industries, especially export); – implementation of public procurement in large amounts; significant public investment to maintain employment and accomplishment of social tasks
Market model of new and newly industrialized countries	Republic of Korea, Singapore, Taiwan, Hong Kong, Argentina, Brazil, Mexico, Newly industrialized countries: Malaysia, Thailand, etc.	Asian model: – rapid break – up of patriarchal, feudal structures and the formation of capitalist relations based on the creation of enterprises of the newest high technologies; – direction of entrepreneurial capital mainly in the manufacturing industry and primary industries; – creation of labor – intensive enterprises for the production of mass consumer products; – export-oriented economy; – great attention is paid to education. Latin American model: – balanced combination of import substitution policy; – preferential orientation to the external market

Source: Compiled by the author based on [10, 15]

Today, the Chinese model of development is becoming more and more complex, new guidelines are emerging – innovation, social and regional development, high – quality public services to the population, etc. The model of mobilization development is chosen by countries that are pursuing catch-up development. Track; it can exist in any form of economy – both market, non-market, private and public. Moreover, it is characterized by a multitude of structures, when some sectors of the economy and society come in a state of mobilization, while others do not. The transformation processes of economic development models and its target indicators, which are more fully reflected in the development strategy, determine modern conditions for the functioning of the economies of countries.

Competitiveness model. This model is relevant for the development of countries and regions in the face of increasing external influences and uncertainty. Competitiveness characterizes the integral ability of a territory (country, region, city, etc.) to adequately respond to external challenges and opportunities, maintain systemic stability and provide favorable conditions for the economy and livelihoods of the population.

Competitive models are based on four economic determinants that shape the environment that promotes or inhibits development. These four determinants are: factor conditions; domestic demand conditions; related industries and services; the strategy of firms, their structure and rivalry. In addition to the above, there are two other variables that can either enhance or weaken the synergistic effect of the interaction of these four factors – random events and government actions.

The sustainable development model was ratified at the 1992 United Nations Conference on Development and Environment in Rio de Janeiro. Today this concept is the most widespread and is often referred to as the "global model of the future civilization". The application of a sustainable development model contributes to solving current problems, which should not pose a threat to future generations to satisfy their interests.

Let's recall that the concept of "sustainable development" includes not only environmental and resource aspects, but also socio-economic and political aspects, which has actualized the need for more active use of intersectional and territorial approaches in public policy. Many states have accepted this as necessary for further development.

Smart development model. The smart sustainable development model seeks to ensure that information and communication technologies are used for both development and disaster management to improve the lives of millions of people around the world, which is a resource challenge.

Constraints, international and interregional competition, emerging new technologies, etc. It is based on a com-

bination of innovation and rational solutions for the use of available resources, as well as on the possibilities of increasing productivity without harming the environment and at the same time improving the quality of life.

Smart development model. The smart sustainable development model aims to ensure that information and communication technologies are used for both development and disaster management to improve the lives of millions of people around the world, which requires resources.

Restrictions, international and interregional competition, emerging technologies, etc. It is based on a combination of innovation and rational solutions for the use of available resources, as well as the possibility of increasing productivity without compromising the environment and at the same time improving the quality of life.

The model of inclusive development, the rapid growth of income inequality, both in developing and economically developed countries, led to the formation of this model, in which it is necessary to ensure employment and high social standards based on a harmonious combination of high economic growth rates. Along with the principles of sustainability. Income inequality poses a threat of social tension and a danger of slowing down economic development.

The recognition by the authorities of many countries that an economy based only on material well-being is no longer efficient has led to an increase in the number of studies aimed at finding other non-material factors that affect the patterns of economic development. It is important to note that, depending on the specific use, social indicators should determine certain properties. Social indicators should reflect a specific social perception, be reliable and meaningful, be sensitive to the main phenomenon, be generalizable, be available in the form of time series, be disaggregated, be understandable and easily interpretable and, if necessary, be linked to other indicators.

5. 2. Substantiation of the theoretical prerequisites for the impact of innovative information technologies on the target indicators of the economic development of countries

In modern conditions, the economic development of any country is inextricably linked with a number of key factors that together allow to achieve our goals and ensure efficiency. Recently, global instability and uncertainty caused by a number of factors such as political conflicts, a pandemic, technological and environmental problems have led to a breakthrough transition to innovative information technologies in the field of organizing economic processes, meanwhile accelerating natural progress many times over.

Recent years and the processes that are taking place have further increased the importance of digitalization and reoriented many companies, users and countries to a remote interaction format. New realities and the availability of innovative technologies make it possible to modify skills and increase the efficiency of business processes, including ensuring economic growth.

To determine the impact of innovative information technologies on the development of the economy, the ICT indicator and its impact on GDP in the world were determined. This indicator was chosen because it is a global index that highlights the

role of unified communications and the integration of telecommunications and computers, as well as the necessary enterprise software, middleware, storage and audiovisual tools that allow users to access, store, transmit, understand and manipulate information in everyday life. This index characterizes the concept of the development of the information industry in a particular country. It applies to any product that will store, retrieve, process, transmit or receive information electronically in digital form, which optimizes processes, minimizes costs and increases production efficiency. To substantiate the peculiarities of the impact of innovative information technologies on economic development, it is worth considering the dynamics of the world market of information and communication technologies and GDP in %, which is shown in Fig. 2.
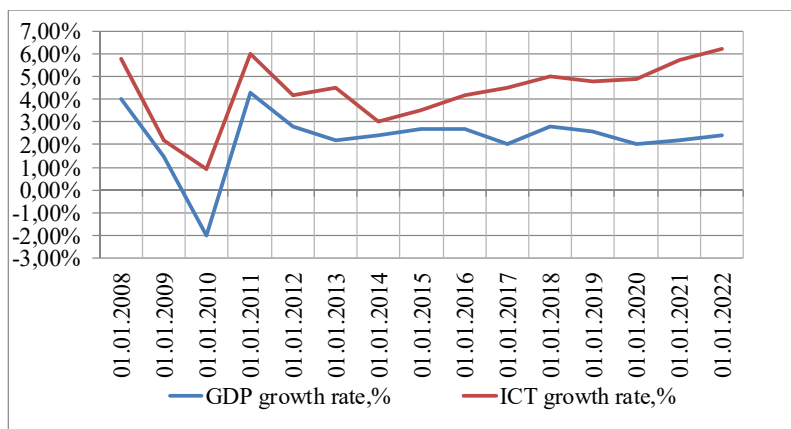

Fig. 2. Dynamics of the world market of information and telecommunication technologies (ICT) and GDP in %, impact assessment and interconnection
Source: Developed by the author based on data from [15–17]

It should be noted that the development of information and communication technologies has a significant impact on economic growth, which can be seen in the presented dynamics. There is also an ICT growth dynamics at the time of the economic downturn, which will soon ensure growth. The growth of ICT has the following impact on economic growth:

1) the use of ICT allows to optimize business processes and increase output at the same cost level by increasing the productivity of production factors;

2) modern ICTs contribute to economic growth through the production of new goods with higher benefit and higher income elasticity;

3) the use of ICT has a significant impact on economic growth, which is characterized by the development of the scientific and technical base of countries and the improvement of educational and qualification potential;

4) the use of ICT allows improving the management and improving the quality of the workforce, which contributes significantly to the economic growth of the country;

5) the use of ICT leads to major changes in the production process and reduces the role of natural materials in economic development and reduces the dependence of the manufacturing industry on minerals.

5. 3. Transformation of target indicators in accordance with modern models of economic development

Conceptualizing the main results of the presented models of economic development, it is worth noting that the main indicators of well-being in the world are: the level of GDP

per capita, life expectancy, civil liberties, a sense of security and confidence in the future, family stability, job security, the level of corruption, as well as categories such as trust in society, generosity and generosity. All presented indicators will serve as the information base of the study for the application of multivariate cluster analysis tools.

However, before structuring data for analysis, it is worth considering the economic essence of the concept of "economic indicators". Economic indicators are macroeconomic indicators published in the form of reports by the government or independent organizations and reflecting the state of the national economy. However, each indicator serves a specific purpose and is useful in its own way.

The main economic indicators include the following: GDP, inflation, foreign exchange reserves, refinancing rate, public debt, balance of payments, unemployment and a number of monetary indicators. It should be noted that the totality of all presented indices, indicators and indicators is a modern model of economic development. In subsequent years, the Human Development Index, with an expanded interpretation of its constituent elements, began to be considered as the Human Development Index.

When it was substantiated, political, economic, technological and legal indicators began to be widely used, that is, an attempt appeared to give the status of a universal indicator of the development of the world system, which ultimately led to a departure from the main idea.

Measuring the development of the quality of life of the countries of the world. In addition, methodologically, it should be noted that the existing difference in the population of countries with the same GDP parameters in absolute terms makes the comparison incomparable. Attempts to smooth them out by statistically calculating the growth rates of the initial parameters and ranking them according to these rates reflect only a statistical trend that has little to do with the development of the quality of life.

As the theoretical generalization of practical experience shows, the process of economic development is dynamic, the model of economic development in a particular country undergoes minor adjustments depending on factors of an objective and subjective nature.

During the intersystem transition in any country, several economic models coexist simultaneously: a model based on the principles of the previous system, and a model that generates the formation of a new system. In view of the above, it is worth noting that economic development in the world depends on many factors and their elements that determine the main trends in the transformation of economic development indicators and determine the constant modernization of economic development models, taking into account the volatility of the world space.

Based on this, it is worth considering the key indicators of economic development and their transformation in modern conditions, which are presented in Fig. 3.

To argue and highlight the main results of the study, it is worthwhile to conduct a multidimensional cluster analysis of the main indicators of the economic development of countries. To analyze and determine the main conceptual aspects of the transformation of indicators of economic development of countries in the world, the following indicators have been selected: dynamics of indicators of the global ranking of countries in terms of GDP, GDP per capita, social progress index and the global index of happiness for people in the world. It should be noted that Gross National Income (GNI)/Gross National Income (GNI) is the total value of all goods and services produced during the year in a state (i. e. gross domestic product, GDP), plus income received by citizens and organizations of countries from abroad, less income taken out of the country by foreign citizens and organizations. One of the key indicators of economic development. Another important indicator of economic development is the Social Progress Index, a composite indicator of an international research project. The Social Progress Imperative, which measures the achievements of countries around the world in terms of their social development. It is important to note that the relative efficiency with which countries use economic growth and natural resources to ensure the happiness of their citizens is characterized by the Global Happiness Index.
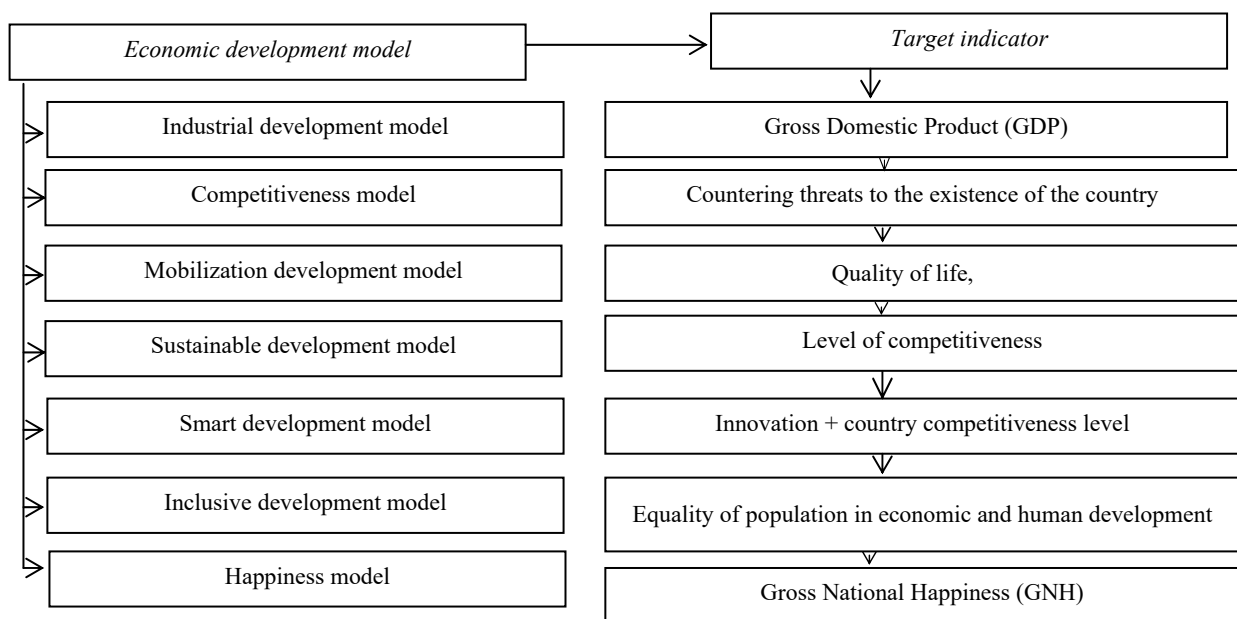

Fig. 3. Transformation of target indicators in accordance with modern models of economic development

5. 4. Scientific and methodological aspects of multidimensional analysis of the transformation of target indicators of economic development of countries

The quality of life is a very real calculated statistical value and, of course, should be expressed in absolute terms and reflect the real spread of the quality of life between developed and underdeveloped countries and contribute to the development of a real policy of the UN and world development institutions to harmonize the dynamics of the global world economy. Urgent and political campaigns are needed to reduce the risks to the global economy and lay the foundations for stable and sustainable economic growth. The dynamism and inclusiveness of the global economy are key to meeting the ambitious targets set by the Sustainable Development Agenda for the coming periods. Policy makers must consider scaling up cases to prevent rising risks of disability, take into account historical and escalating major disputes, and set economic, social and environmental goals as part of a long-term development strategy. Decisive policy visions are based on multi-stakeholder, gathering-based action and are designed to take a long-term approach to global outreach in gatherings such as climate action, sustainable finance, sustainable production and consumption, and addressing inequality. It also requires a move towards a more inclusive, flexible and flexible multi-stakeholder game.

A growing, open and competitive economy is a key means of ensuring continued growth in income and living standards. Without economic growth, the standard of living, or the quality of life that society aspires to, will not improve. Public perceptions of improved welfare have been closely linked to quantitative economic growth for many years. To obtain adequate and reliable results of a multidimensional analysis of the economic development of countries, the following theoretical prerequisites for structuring into clusters of countries of the world according to the following criteria are put forward, which are presented in Table 2.

Developed by the author on the basis of the use of tools for multidimensional cluster analysis of the economic development of countries

5. 5. The main results of the structuring of countries into clusters according to the level of economic development, taking into account the specifics of their functioning and development features

The main results of the multidimensional analysis of economic development of 25 key countries of the world as of 01.01.2021 are presented in Fig. 4, 5, and represent a grouping of countries into clusters according to the level of key indicators.

The main results indicate that in the world global society, countries are divided into 3 main clusters:
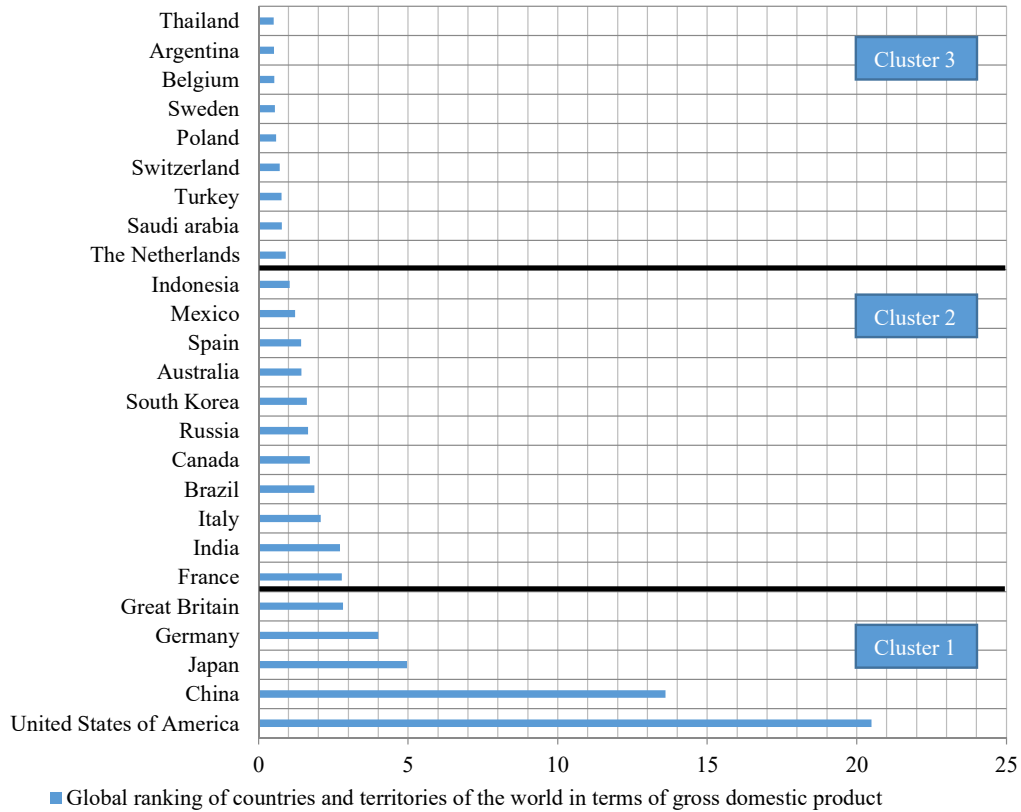
1) high level of economic development and well-being;

2) average level of economic development with prospects for improving the situation;

3) low level of economic development and socio-economic security of the population of the countries. Based on this, it is worth noting that economic growth can occur without any improvement in well-being, and, conversely, improving the quality of life, without any economic growth, is now increasingly accepted by society in various options and scenarios for economic development. From this point of view, the subjective well-being of a citizen is seen as the ultimate goal of the development of society and, accordingly, the economic development of the state, which ensure the well-being of its citizens and increase prospects. Well-being and quality of life should be subjectively perceived by a person who is the best expert in assessing the quality of its life in terms of subjective well-being. This means that the most important indicators of subjective well-being are in fact the indicators of satisfaction and happiness, which are provided by the effective economic growth of the country and the optimal economic model.

Table 2

Theoretical prerequisites for conducting a multidimensional cluster analysis of the economic development of countries

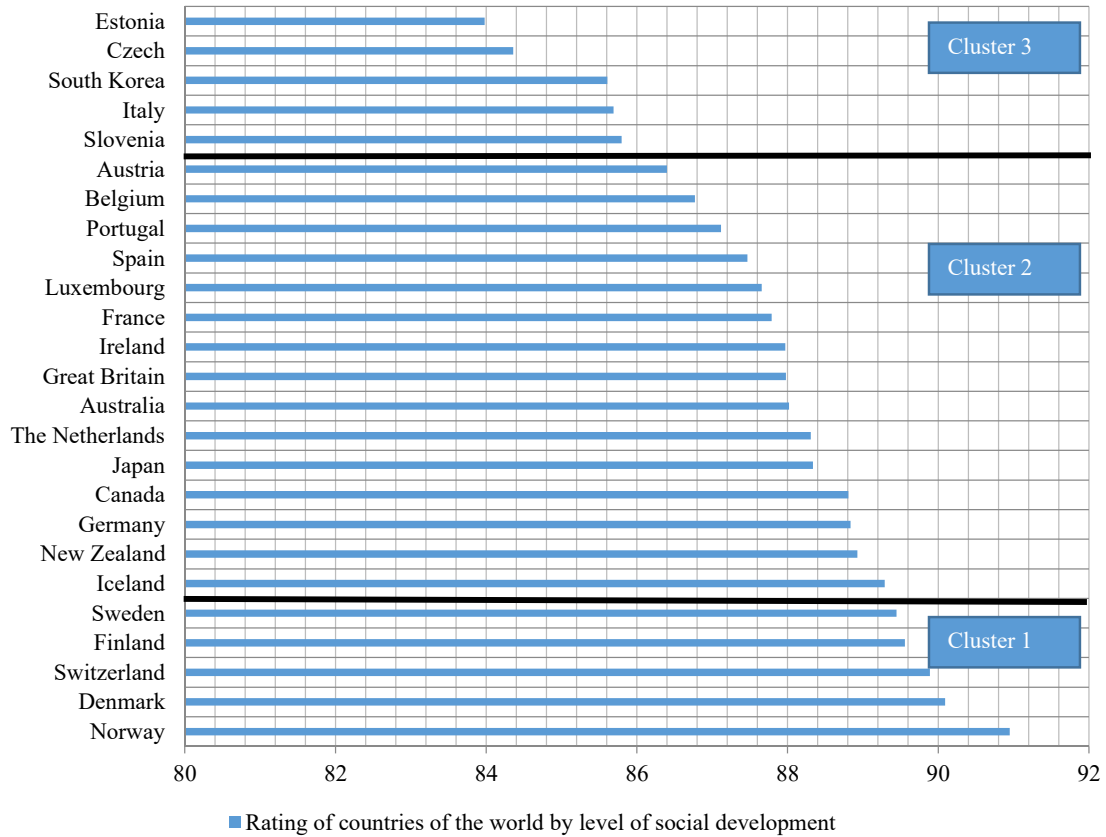| Economic development indicator	Cluster data range	Cluster characteristic
Global ranking of countries and territories of the world in terms of gross domestic product	300–200 billion US dollars	1. Cluster with countries with high gross domestic product
	200–100 billion US dollars	2. Cluster with countries with an average level of gross domestic product
	100–50 billion US dollars	3. Cluster with low gross domestic product countries
World ranking of economies by gross national income per capita	1500–1000 US dollars	1. Cluster with high gross national income countries
	1000–500 US dollars	2. Cluster with countries with average non-gross national income
	500–250 US dollars	3. Cluster with low gross national income countries
Ranking of countries in the level of social development	100–90	1. Cluster with countries with a high level of social development
	90–80	2. Cluster with countries with an average level of social development
	80–70	3. Cluster with low gross of social development
Ranking of happiness countries	50–45	1. Cluster with countries with a high level of happiness
	45–35	2. Cluster with countries with an average level of happiness
	35–30	3. Cluster with low happiness countries

a
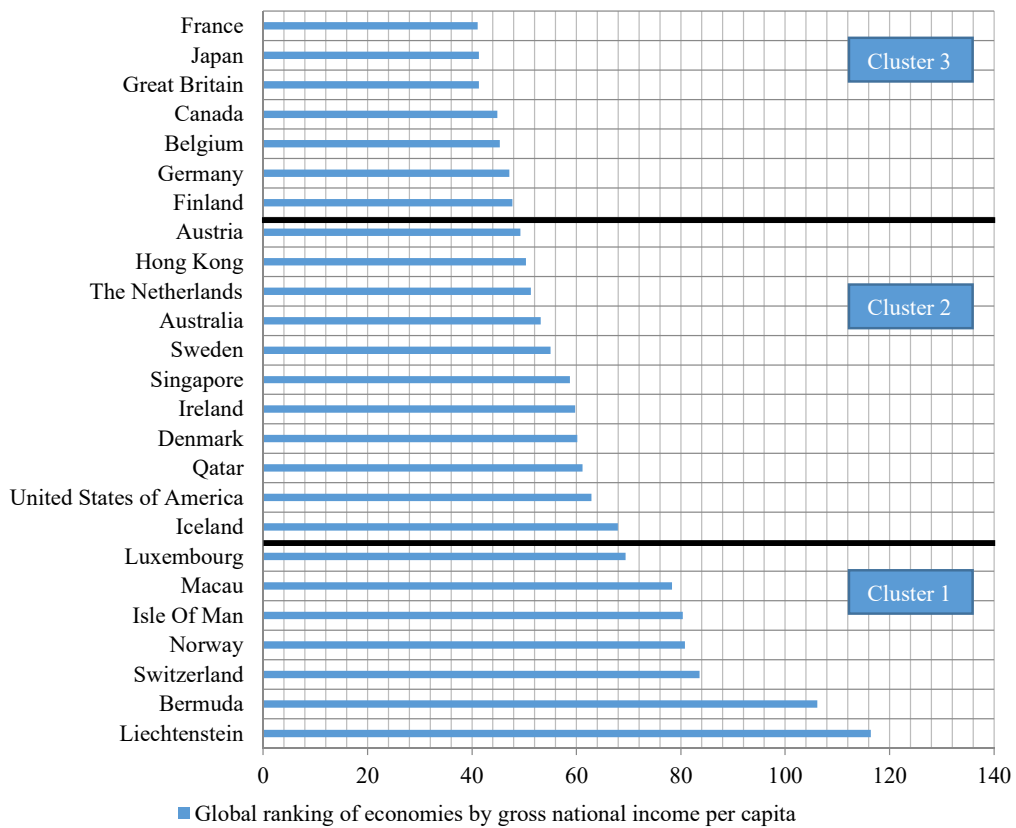
b

Fig. 4. Main results of multivariate cluster analysis of 25 key countries by level of economic development based on key indicators of economic development: *a* − global ranking of countries and territories of the world in terms of gross domestic product; *b* − global ranking of economies by gross national income per capital
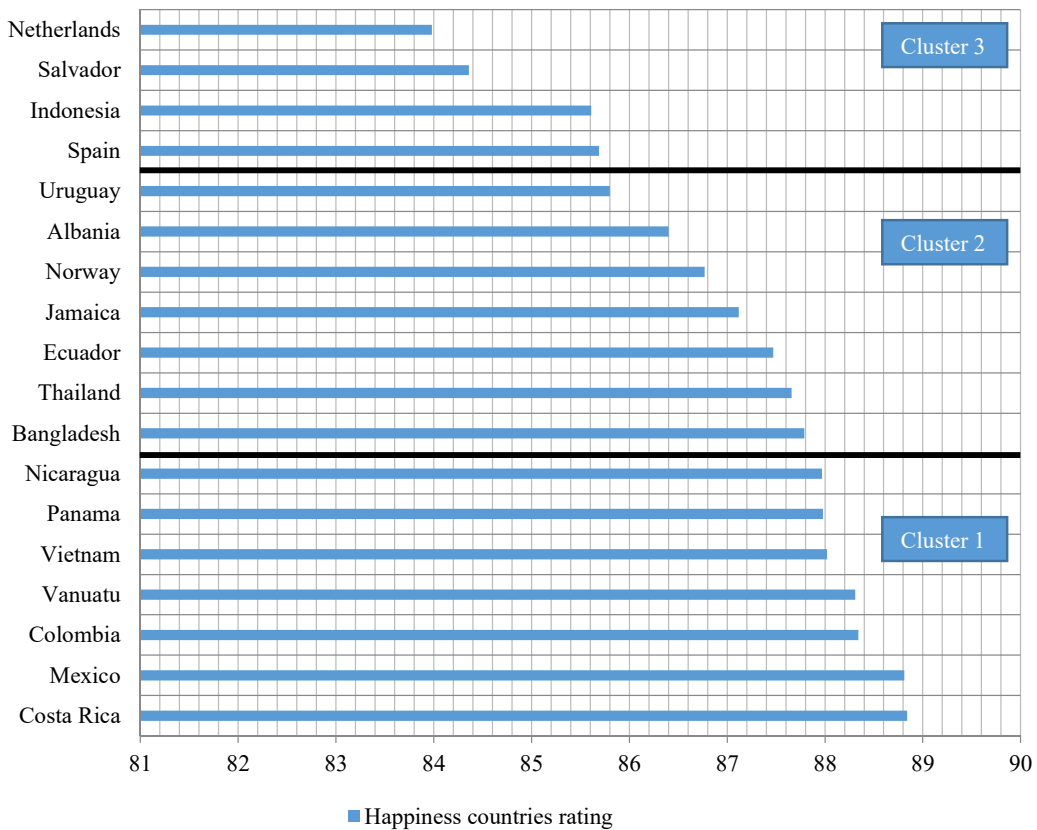
Fig. 5. Main results of multivariate cluster analysis of 25 key countries by level of economic development based on key indicators of economic development: *a* — rating of countries of the world by level of social development; *b* — happiness countries rating

6. Discussion of the results of modern models of economic development: transformation of target indicators, assessment, multivariate cluster analysis

The results of the study, namely the definition of modern models of economic development, have a number of advantages and disadvantages, which should be carefully studied and taken into account when forming a strategy for the country's economic development. The results of the study are accurate and reliable, which is confirmed by the adequacy of the obtained results of multivariate cluster analysis.

The quality of the obtained clusters is confirmed by the obtained values of the distances between each cluster and the quality of the values of the calculated criteria for each of the clusters:

1) with a high;
2) with an average;
3) with a low level of development of key clustering criteria:
– global ranking of countries and territories of the world in terms of gross domestic product;
– world ranking of economies by gross national income per capita;
– ranking of countries in the level of social development;
– ranking of happiness countries.

It is important to state that models of economic development in modern conditions are a key link, including a set of specific examples of the economic development of countries, statistical materials, economic and mathematical hypotheses and forecasts characterizing the trends and tendencies of economic growth, which were the key object of the study.

The study examines the features of the formation of economic models of countries depending on a number of factors, such as socio-economic and political strategies, as well as macroeconomic and global trends in the development of the world economy, which made it possible to substantiate the conceptual features of the transformation of target indicators of economic development models. These results ensured the completeness of this study and made it possible for the first time to highlight the features of the formation of economic models of countries depending on a number of factors.

The key advantage of this study is the substantiated role of innovation and information and telecommunication technologies (ICT) in the economic growth of any country. This rationale is due to the relationship between GDP growth and ICT growth identified by the author, which is typical based on the results of the statistical analysis of indicators. Consequently, in most cases, ICT contributes to a way out of critical situations, allows to eliminate the crisis stages that occur cyclically in the global economy and ensure the restructuring of business processes to ensure their effectiveness.

The main advantage of the study is the argumentation of the key role of ICT in economic development, as well as the structuring of economic development goals, which play a significant role in the strategy and model of economic development of countries. The main results of the study are that the theoretical aspects of the formation and features of the historical formation of economic models of the world in different countries were considered, which provided a classification of the main models of economic development in modern conditions. The lack of a unified approach to the definition of economic growth and economic model in the world literature is argued; definitions of these concepts are developed on the basis of critical analysis and generalization.

Approaches to determining the main directions of transformation of target indicators of economic development are proposed. The key role of ICT and their impact on the economic growth of countries is highlighted.

The formed scientific and methodological aspects of structuring countries into homogeneous clusters according to the level of economic development based on the use of multidimensional cluster analysis tools can be applied in practice when identifying priority areas that should be taken into account in the development strategy of the country and the region. However, this study has its limitations, which are characterized by the fact that this approach is more classical and does not provide a global assessment of all factors affecting economic growth, however, it argues the main prerequisites for identifying key elements that affect the economic development model.

Models of economic development, economic growth and ensuring stability in recent years are quite priority areas of research, which is characterized by the fact that in the conditions of global uncertainty and disproportions, the need to ensure management efficiency and rational economic activity of the country increases.

The disadvantages of this study include the fact that the economic development and stability of the country depend on a wider set of factors that should be studied in more detail in the constant dynamics and volatility of the external environment, assessed depending on their specific role in a particular model of economic development of the country. This fact requires a more detailed study and can be taken into account in subsequent studies and be based on the specifics of the functioning of a particular country, but cannot be considered comprehensively for all countries.

7. Conclusions

1. Theoretical aspects of the formation of models of economic development in the context of the transformation of the world market are systematized. The main scientific researches in the field of concepts of economic development are considered. The main groups of scientific approaches to the definition and formation of economic development models are argued, the advantages and disadvantages of each of them are identified. The results obtained are the theoretical basis for identifying key areas in the formation of a strategy for the country's economic development. The selected scientific areas provide a theoretical basis for the features of economic development, taking into account the current stages of transformation.

2. Theoretical aspects and prerequisites for the formation of economic development models in the context of the transformation of the world market are systematized, which made it possible to substantiate the impact of innovative information and telecommunication technologies (ICT) on economic growth. It is substantiated that ICT has a direct impact on the target indicators of economic development of countries, in particular GDP. In many life cycles of the global economy, ICT has a significant impact and contributes to increasing production volumes, reducing costs, optimizing business processes and much more. On average, according to the results of the study, the relationship between the development of GDP and ICT in the world is from 0.5–1.5 % according to key development criteria. The features of the impact of ICT on the economic growth of countries are considered and

substantiated, which served as the basis for the formation of the prerequisites for the need for constant modification of approaches to the formation of an economic growth strategy.

3. Theoretical prerequisites and substantiation of the impact of innovative information and telecommunication technologies (ICT) on economic growth made it possible to argue the processes of transformation of target indicators in accordance with modern models of economic development. Key indicators of economic development have been identified, such as: the global ranking of countries and territories of the world in terms of gross domestic product; world ranking of economies by gross national income per capita; rating of countries by the level of social development; rating of the countries of happiness. The specificity of their definition is presented, which served as an information and analytical basis for creating a methodology for multidimensional cluster analysis of countries by the level of economic development based on the application of the k-means method.

4. Argumentation, systematization and generalization of the theoretical aspects of the formation of economic development models in the conditions of market transformation. Features of multidimensional cluster analysis are structuring countries on homogeneous clusters to ensure economic development according to the specified criterion:

– group of countries with a high level of the target indicator;

– group of countries with an average level of development of the target;

– group of countries with a low level of the target. For each group of countries, quantitative criteria were devel-

oped: millions of USD and in %. The list of key indicators is presented in the previous paragraph. The main results are the developed methodology for structuring the countries of the world by economic development with specifications of functions. This is a procedure for the accumulation and gradation of countries within the corresponding cluster according to the criteria of economic development.

5. Scientific and methodological aspects of multidimensional cluster analysis of the transformation of specific indicators of economic development of countries have been developed, which makes it possible to distribute countries according to established criteria and calculate indicators of economic development. For each cluster, 3 groups of countries are formed according to the level of development:

– group of countries with a high level of development;

– group with an average level of development;

– group of countries with a low level of development of key indicators: a global ranking of countries and territories of the world in terms of gross domestic product in billions of dollars. USA; world ranking of economies in terms of gross national income per capita, billion USD; ranking of countries by the level of social development, %; rating of countries of happiness, %. Clustering was carried out on the basis of global indicators of economic development of the leading 25 countries of the world. The main results of the study made it possible to conceptualize the main aspects of economic development models depending on the homogeneity of the cluster of countries. The practical value of the results will ensure efficiency in the formation of economic policy and strategy for the economic development of the country, region.

References

1. Beaussier, T., Caurla, S., Bellon-Maurel, V., Loiseau, E. (2019). Coupling economic models and environmental assessment methods to support regional policies: A critical review. Journal of Cleaner Production, 216, 408–421. doi: https://doi.org/10.1016/j.jclepro.2019.01.020

2. Crespo del Granado, P., van Nieuwkoop, R. H., Kardakos, E. G., Schaffner, C. (2018). Modelling the energy transition: A nexus of energy system and economic models. Energy Strategy Reviews, 20, 229–235. doi: https://doi.org/10.1016/j.esr.2018.03.004

3. Galbusera, L., Giannopoulos, G. (2018). On input-output economic models in disaster impact assessment. International Journal of Disaster Risk Reduction, 30, 186–198. doi: https://doi.org/10.1016/j.ijdrr.2018.04.030

4. Coyne, M. (2020). Three Sticks Wines: Digital Marketing, Branding, and Hospitality During a Crisis. Wine Business Journal, 4 (2). doi: https://doi.org/10.26813/001c.22071

5. Gründler, K., Krieger, T. (2018). Machine Learning Indices, Political Institutions, and Economic Development. SSRN Electronic Journal. doi: https://doi.org/10.2139/ssrn.3171982

6. Dzionek-Kozlowska, J., Kowalski, K., Matera, R. (2018). The Effect of Geography and Institutions on Economic Development: The Case of Lodz. The Journal of Interdisciplinary History, 48 (4), 523–538. doi: https://doi.org/10.1162/jinh_a_01198

7. Roorda, N. (2020). Fundamentals of sustainable development. Routledge, 438. doi: https://doi.org/10.4324/9781003052517

8. Lara, J., Weichold, M., Linke, P. (2020). Work in Progress: Incorporating Sustainable Development Fundamentals in the First-year Engineering Program. 2020 ASEE Virtual Annual Conference Content Access Proceedings. doi: https://doi.org/10.18260/1-2--35651

9. Arsentieva, O., Klius, Y. (2020). The Legal Fundamentals for the Sustainable Development of the Industrial Enterprises while the Introduction of the Innovative Functional Units. European Journal of Sustainable Development, 9 (2), 451–466. doi: https://doi.org/10.14207/ejsd.2020.v9n2p451

10. Al- Ababneh, H. A. (2019). Concept of Internet Marketing as a Modern Organization Development Paradigm. International Journal of Innovative Technology and Exploring Engineering (IJITEE), 9 (1), 2654–2661. doi: https://doi.org/10.35940/ijitee.L3394.119119

11. Ndubisi, N. O., Lai, K. H. (2021). Small and medium manufacturing enterprises and Asia's sustainable economic development. International Journal of Production Economics, 233, 107971. doi: https://doi.org/10.1016/j.ijpe.2020.107971

12. Kostetska, K., Khumarova, N., Umanska, Y., Shmygol, N., Koval, V. (2020). Institutional Qualities of Inclusive Environmental Management in Sustainable Economic Development. Management Systems in Production Engineering, 28 (1), 15–22. doi: https://doi.org/10.2478/mspe-2020-0003

13. Gryshova, I., Kyzym, M., Khaustova, V., Korneev, V., Kramarev, H. (2020). Assessment of the Industrial Structure and its Influence on Sustainable Economic Development and Quality of Life of the Population of Different World Countries. Sustainability, 12 (5), 2072. doi: https://doi.org/10.3390/su12052072

14. Galkina, E. E., Sorokin, A. E. (2020). Quality Management and Sustainable Economic Development. Russian Engineering Research, 40 (7), 577–578. doi: https://doi.org/10.3103/s1068798x2007014x

15. Gross Domestic Product 2020. The World Bank. Available at: https://databank.worldbank.org/data/download/GDP.pdf

16. Huang, R., Kale, S., Paramati, S. R., Taghizadeh-Hesary, F. (2021). The nexus between financial inclusion and economic development: Comparison of old and new EU member countries. Economic Analysis and Policy, 69, 1–15. doi: https://doi.org/10.1016/j.eap.2020.10.007

17. Pulido-Fernández, J. I., Cárdenas-García, P. J. (2020). Analyzing the Bidirectional Relationship between Tourism Growth and Economic Development. Journal of Travel Research, 60 (3), 583–602. doi: https://doi.org/10.1177/0047287520922316

18. Huy, D. (2021). Banking Sustainability for Economic Growth and Socio-Economic Development – Case in Vietnam. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12 (2), 2544–2553. doi: https://doi.org/10.17762/turcomat.v12i2.2208

19. Crudu, R. (2019). The Role of Innovative Entrepreneurship in the Economic Development of EU Member Countries. Journal of Entrepreneurship, Management and Innovation, 15 (1), 35–60. doi: https://doi.org/10.7341/20191512

20. Pradhan, R. P., Arvin, M. B., Nair, M. S., Hall, J. H., Bennett, S. E. (2021). Sustainable economic development in India: The dynamics between financial inclusion, ICT development, and economic growth. Technological Forecasting and Social Change, 169, 120758. doi: https://doi.org/10.1016/j.techfore.2021.120758

21. Bakar, H. O., Sulong, Z. (2018). The Role of Financial Inclusion on Economic Growth: Theoretical and Empirical Literature Review Analysis. Journal of Business & Financial Affairs, 07 (04). doi: https://doi.org/10.4172/2167-0234.1000356

22. Dahiya, S., Kumar, M. (2020). Linkage between Financial Inclusion and Economic Growth: An Empirical Study of the Emerging Indian Economy. Vision: The Journal of Business Perspective, 24 (2), 184–193. doi: https://doi.org/10.1177/0972262920923891