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## **Genealogy of concepts of sustainable development and inclusive economic growth**

**Abstract**

Given the ongoing reorientation of world economic dynamics from a model of sustainable economic development to a more perfect dialectically inclusive growth model, global scientific applied and theoretical thought requires a deeper understanding of the nature of these models of economic dynamics.

Furthermore, a broader understanding of the nature and settings of the model of inclusive economic growth, declared by super-influential world institutions as the key social and economic modus of our time, should contribute to the improvement of its methodological aspect, which determines the success of the implementation of the principles of inclusive economic growth in the policies of modern - both developed and developing - countries, as well as, thus, the level of well-being of the population.

Applying the systemic and evolutionary approach, the author analyzed the interdisciplinary nature of the concepts of sustainable development and inclusive economic growth, as a result of which the multisystem historical origins of these concepts have been revealed and, thus, the understanding of the latter have been expanded.

In particular, using the systemic and evolutionary approach, as well as relying on the works of the scientists mentioned below, specific examples in the development of science have been identified, which demonstrate the formation of a multisystem scientific paradigm in a period that spanned the gap on the historical canvas from the end of the 19<sup>th</sup> century to the middle of the 20<sup>th</sup> century. According to the author, as well as a number of scientists, this paradigm has set the trend towards a multidisciplinary research. Based on the specific facts given in the article, in the author's opinion, it was under the influence of the above tendency that a model of sustainable economic development emerged in the 1970s, and a dialectically more perfect model of inclusive economic growth appeared at the turn of the 20<sup>th</sup> and 21<sup>st</sup> centuries.

**1 Problem statement**

Today – against the backdrop of Industrial Revolution 4.0, globalization and a series of growing crises of a geopolitical, food and environmental nature, as well as in the context of a recession as a consequence of the unfinished post-crisis recovery after the global financial collapse of 2007–2008 and a new economic decline caused by the COVID-19 pandemic - the world is facing with what can be called a search for ways to complete the vital [11] transformation of the global social and economic paradigm from a model of sustainable

economic development to a model of inclusive economic growth.

At the same time, the aforementioned transition from a model of sustainable economic development to a model of inclusive economic growth is impossible without studying the nature of these dialectically related models of economic dynamics, a deep conceptual understanding of which would contribute to the successful implementation of the principles of the model of inclusive economic growth in the policy of a modern state with a subsequent increase in social and economic standards. Therefore, global

**Keywords**

sustainable development concept, inclusive growth concept, economic development model, composite indicator, the inclusive development index

**JEL:** E10, O40

scientific applied and theoretical thought requires a deeper understanding of the nature of sustainable economic development model and inclusive economic growth model.

## 2 Analysis of recent research

An emphasis on the need to move from a sustainable development model to a model of inclusive economic growth as a new vector for the development of economic and social thought, as well as the development of the toolkit of a new declared inclusive vector for the development of economic and social thought is rightly a strategic task of the relevant supranational institutions - The World Economic Forum, OECD, the World Bank, the UN and structures like the International Labor Organization, which functions under the aegis of the United Nations - and a key problem in the research of leading world and Ukrainian scientists and economists at the turn of the 20<sup>th</sup> and 21<sup>st</sup> centuries: In particular, in the works of Daly H., Meadows D., Schwab K., Spence M., Acemoglu D., Nordhaus W., Costanza R., Mantsurov I. G., Libanova E. M., Amosha O. I., Zgurovsky M. Z., Danylyshyn B. M, etc.

At the same time, it should be noted that, according to the aforementioned scientists, the governments of many countries still do not realize the importance of the transition to the model of inclusive economic growth, without which, however, it is impossible to overcome the most acute challenges of our time.

Hence, the goal of writing this article is to consider the issue of the origins of the dialectically related models of sustainable development and the model of inclusive economic growth, as well as to deepen understanding of the broad systemic nature of these two models, without consideration of what - and, according to a number of scientists, overcoming the key problems of our time is impossible without the application of a systemic approach at all levels of

government, which directly corresponds to the multidisciplinary nature of today's era with its synthesis of physical, digital and biological worlds [15] - a full-fledged transition to the model of inclusive economic growth is impossible.

The methodological framework for the analysis is the systemic and evolutionary scientific approach.

## 3 Research results

Since the achievement of the goal of creating this article - it should be recalled that it is to establish a connection between the multisystem nature of the concept of sustainable development and the concept of inclusive growth and the interdisciplinary scientific boom of the first half of the 20<sup>th</sup> century - is impossible without a preliminary consideration of the deeply systemic nature of these models, but the characteristics of these economic dynamics models does not apply to the goals of the article, the author decided to consider the systemic features of these models in the form of a synopsis, relying on periodization and study in the works of a number of scientists. In particular, we're talking about: the works of I. Mantsurov; "The Growth Report. Strategies for Sustained Growth and Inclusive Development" presented by the World Bank on behalf of the Commission on Growth and Development; G. Kaufmann's book "Environmental Justice and Sustainable Development"; the Brundtland Report and the OECD's annual reports on the issues of inclusive economic growth, that have been presented since 2011.

Such a presentation of the systemic features of the sustainable development model and the model of inclusive growth, recorded in Table 1, would logically allow us to move on to establishing a connection between their systemic nature and the flurry of multisystem trends that covered science during the late 19<sup>th</sup> century and the first half of the 20<sup>th</sup> century.

TABLE 1 Features of the models of economic dynamics

Economic growth model (period until late 1950s)	Sustainable development model (1960s–first half of 2000s)	Inclusive economic growth model (Second half of 2000s–present)
1) Economic growth based mainly on intensive growth factors	1) Significant growth rates of the economy and social standards	1) Significantly higher and more stable rates of economic and social development
2) Development based on innovation and modern knowledge	2) Resource-efficient and green - environmentally friendly - production	2) A high level of well-being and involvement in the economic life of the state - that is, in fact, a high level of social and economic inclusion - of all members of society and regions
3) Inadequate attention to the balance between economic growth and depletion primarily of non-renewable natural resources	3) More competitive economy	3) A much deeper focus on the social component of social and economic development

Source of table: the works of the following scientists analyzed by the author: the works of I. Mantsurov; "The Growth Report. Strategies for Sustained Growth and Inclusive Development" presented by the World Bank on behalf of the Commission on Growth and Development; G. Kaufmann's book "Environmental Justice and Sustainable Development"; the Brundtland Report.

As we can see from Table 1, three constants are common for the model of sustainable development that was formed in the period after the mentioned interdisciplinary boom, and over time for the model of inclusive growth: focus on preserving the environment, that is, integration of the so-called green aspect into economic research; deep focus on the social aspect in social and economic development; economic growth itself.

In economics, the aforementioned tendency towards multisystem and systemic consideration of the concept of well-being was expressed in the development - starting from the period of the inception of the model of sustainable development - and the implementation of composite indicators that would allow processing the concept of well-being that received systemic status (again, as we can see, as a multidimensional concept, it began considered since the 1970s).

In the era of the development of the theoretical and practical framework for the sustainable development model such composite tools of economic analysis had become, in particular: developed by William Nordhaus and James Tobin in 1972 [12] Measure of Economic Welfare; proposed by Herman Daly and John B. Cobb in 1989 [7] the Index of Sustainable Economic Welfare; developed with fundamental input from Amartya Sen and proposed in the 1990 UN Human Development Report, the Human Development Index [14]; developed by an American non-governmental organization Redefining Progress, the supplement index [1] to the ISEW known as the Genuine progress indicator, etc.

Today, in a transitional era of transformation of a sustainable development model into a model of inclusive economic growth, the cornerstone of the implementation of the inclusive growth model is the Inclusive Development Index proposed by the WEF experts in 2017. This indicator is compiled on an unprecedented basis of 12 individual indicators and directly reflects the trend towards a dashboard approach in assessment [9].

The question of why exactly the concept of well-being began to stratify - which, over time, served as a theoretical basis for the development of a number of the above-mentioned deeply aggregated indicators - in the years of the emergence of a model of sustainable development, can be spelled out, in the author's opinion, by applying the systemic and evolutionary approach to analysis.

Thus, the period of the 1960s, in the author's opinion, can be characterized as a breakthrough in interdisciplinary research - this manifested itself, among other things, in the synthesis of economics with the natural sciences, - which is confirmed by the works of a number of scientists. In particular, in the book "Conservation and Globalization in the Twentieth Century (Environment in History:

International Perspectives)" written by Wolfram Kaiser and Jan-Henrik Meyer: "Ominous scientific projections of global pollution crises, natural resource shortages, and population explosions formed the starting point for the development-environment debate during the Stockholm preparatory process .... Widely read books, such as *The Limits to Growth*, *The Population Bomb*, and *A Blueprint for Survival* captured the Western public's attention and reinforced the sense of ecological crisis first stimulated by Rachel Carson's *Silent Spring* - published in 1962." [18, p. 105] It should also be noted here that the first in the list of works-catalysts for the rethinking of social and economic dynamics, according to Wolfram Kaiser and Jan-Henrik Meyer, is Rachel Carson's book "Silent Spring", published in 1962. Other fundamental markers are: the declared program of the Club of Rome, created in 1968; Jean Dorst's book "Avant que nature ne meure", published in 1965; P. Ehrlich's book "The population bomb", published in 1968; Nicholas Georgescu-Roegen's "The Entropy Law and the Economic Process", also created in the second half of the 1960s; originally published in French in 1969 Arghiri Emmanuel's "L'échange inégal". In the above-mentioned works, through the interdisciplinary prism of scientific analysis, questions were raised about whether the paradigm of economic dynamics of that period (see Table 1) was the one that would promise a successful future for humanity.

All of the above, finally, allows the author to move on to realizing the goal of this article: the author's attempts to establish a connection between the systemic nature of uniform models of sustainable development and inclusive economic growth and the shift towards interdisciplinarity in cognition, which began at the end of the 19th century, ended at the end of the first half of the 20th century, and which ultimately manifested itself, in the author's opinion, at the level of multidisciplinary in theoretical and applied research, which laid the foundation in the 1960s for the transformation of the model of economic dynamics towards a model of sustainable development. (For more specificity, in the author's opinion, it's necessary to recreate the context of a historical era of mentioned shift, when the problem of systemic and structural analysis of objects that are characterized by a complex nature begins to occupy a special place [5, p. 182], by bringing some point examples of the movement of science of this period to deeply systemic cognition).

In the field of exact sciences, which interests us primarily, such examples of the changes in the nature of scientific knowledge are:

- the Erlangen programme of F. Klein;
- the theory of relativity [5, p. 182];
- A. Bogdanov's tectology, which can be

considered as the first attempt to develop a general theory of systems with aspects of pre-cybernetics [5, p. 183];

- cybernetics of N. Wiener [5, p. 183];
- J. von Neumann's theory of self-reproducing automata [6, p. 85];
- development of the apparatus of system dynamics by Jay W. Forrester.

As we can see, among other things, one of the forms of this scientific shift was the formation in the late 1940–1950s of the apparatus of system dynamics - an approach to understanding complex systems, founded by the American engineer Jay Forrester. Subsequently, this approach would play a key role in the development of mathematical arguments that would be adopted by the first theorists of the concept of sustainable development.

In particular, we're talking about the fact that the mathematical basis for Meadow's report "The Limits to Growth", the first work of the above-mentioned Club of Rome, which acquired the status of a programmatic for the theory of sustainable development, was developed by Dennis Meadows on the basis of scientific materials of Jay Forrester and with the direct participation of the latter, the WORLD-3 model. This model had become the third example of a global development model in history and a variant of the synthesis of economic, social and environmental problems. The previous models, in turn, were developed by Forrester himself in 1971 and 1972 - also at the request of Aurelio Peccei, the founder of the Club of Rome, who invited the founder of system dynamics to the Club conference in Bern, Switzerland in 1970, - WORLD-1 and WORLD-2, respectively [3].

Another confirmation of the connection between the aforementioned interdisciplinary shift and the synthetic nature of sustainable development and inclusive growth models is the emergence in the 1980s of the field of ecological economics - one of the priority links of economic knowledge for adepts of the concept of sustainable development. The founder of ecological economics, the American ecological economist Robert Costanza, noted what a significant role in the formation of this field was played by the synthesis of economic science with physics and natural sciences in general, which became possible only after the described evolutionary processes in theoretical and applied research.

For example, Costanza wrote the following: "Like any field of scientific inquiry, ecological economics has evolved along several different fronts. ...the history of the field, which is characterized by interwoven strands from ecology, physics, the physiocratic and classical schools of economics, and other fields in the social and natural social sciences." [10, p. 1].

It is also important to add that the interdisciplinary boom in scientific knowledge at the end of the 19<sup>th</sup> century—the first half of the 20<sup>th</sup> century became the basis not only for the emergence of a number of synthetic scientific directions, but also for the relativization of the scientific - in particular, economic - vocabulary.

Thus, summarizing all of the above, we can say that the scientific systemic shift of the late 19<sup>th</sup> century – the first half of the 20<sup>th</sup> century expanded the field of research directions, which, in turn, highlighted a number of non-economic problems - although those problems, however, directly affected the level of human well-being, - calling into question the adequacy of the intensive model of economic dynamics established in that era (see Table 1). In the author's view, it is this logic of cognition that has led to the gradual transition of mankind to a model of sustainable development, the deep ideological continuation of which would be the model of inclusive growth.

Every day the world delves into a web of consistency: complex problems that require complex assessment and complex solutions; complex synthetic scientific discoveries. In the voices of the world's leading scientists, the era itself with its multifaceted challenges suggests that the trend towards deeply composite indicators will only grow stronger.

In particular, back in 2000, scientists led by Robert Costanza in their work called the polyvector indicator the ability to most optimally assess the nature of a certain conflict: "Since multicriteria evaluation techniques are based on a 'constructive' rationality and allow one to take into account conflictual, multidimensional, incommensurable and uncertain effects of decisions, they appear to be a promising assessment framework for (micro and macro) environmental policy. Multicriteria evaluation techniques cannot solve all conflicts, but they can help to provide more insight into the nature of conflicts and into ways to arrive at political compromises in case of divergent preferences, thereby increasing the transparency of the choice process." [10, p. 3-4]

In turn, ignoring this not even a tendency, but already a vector towards consistency - which runs through the entire 20<sup>th</sup> century - excludes the achievement of a sufficient level of inclusive well-being.

That is why, revealing the connection between the nature of sustainable development and inclusive growth models and the interdisciplinary shift of the first half of the last century, it was necessary to once again emphasize the importance of understanding the role of consistency in scientific research and social and economic management.

#### 4 Conclusions

Thus, in view of the above, and based on the work of the mentioned scientists, we can conclude that the considered phenomena in science of the period of the late 19<sup>th</sup> and the first half of the 20<sup>th</sup> centuries indicate not only the transitional nature of this era, but also about the emergence of the systemic and structural paradigm in the analysis.

This paradigm, firstly, had a transdisciplinary and relativistic nature. Secondly, and more importantly, in the author's view, it had a tendentious systemic character, which determined

the nature and ways of the implementation of models of sustainable development and inclusive economic growth.

But it's necessary to understand, that, given the above and also taking into account the increasing attention of the international expert community to the conceptual basis of the model of inclusive economic growth, its study certainly requires further deepening.

The article reflects the logic of the first theoretical chapter of the author's PhD thesis and, accordingly, is also largely theoretical.

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