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National Economy Development Trends Highlighted by Leading Scholarly Journals

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Abstract. Currently, the Russian academic community faces an important task of providing information support to the scientific and technological development of the national economy, aimed, among other things, at minimizing the consequences of increasing information isolation, which is changing the established publishing patterns and destroying the working models of scientific journals. The hypothesis of our research is that journals, which are at the stage of the life cycle characterized by a continuous increase in publication citation, possess scientific maturity enabling them to integrate basic trends in the development of the national economy. Therefore, the aim of our study is to design a theoretical and methodological approach to identifying basic trends in the development of the national economy through content analysis of a pool of leading Russian journals of international level that are at the stage of scientific maturity. Methodological base includes a set of approaches to life cycle modeling: scientific

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school, scientific research, scientific data, scientific publication, scientific citation and other elements of scientific activity adapted to the specifics of periodicals' functioning. To confirm the hypothesis and achieve the goal, the indicator "journal's scientific maturity index" has been developed, the structural elements of which are two-year impact factors, five-year impact factors, number of article views per year, number of article downloads per year, probability of citation after reading. Methodological support for modeling is carried out with the use of assessment tools that allow determining the vector of comprehensive development of the journal by citation indicators. The methodological approach to life cycle modeling that we developed has been tested on the example of such journals as *Vestnik MGIMO-Universiteta; Vestnik mezhdunarodnykh organizatsii: obrazovanie, nauka, novaya ekonomika; Zhurnal novoi ekonomicheskoi assotsiatsii; Mirovaya ekonomika i mezhdunarodnye otnosheniya; Sovremennaya Evropa; Voprosy ekonomiki; Forsait; Ekonomicheskaya politika; Ekonomika regiona; Ekonomicheskie i sotsial'nye peremeny: fakty, tendentsii, prognoz*. As a result, we have found that academic journals which possess scientific maturity integrate ideas that can become the determinant of new directions for national economic development. The findings will be useful to the authorities involved in designing basic trends in the development of the national economy.

Key words: national economy, basic trends, life cycle, academic journal, development modeling, scientific maturity, citation.

Introduction

Forming and achieving basic priorities of national economic development is impossible without intensifying research and development activities and making the results available to civil society. These targets have been established in federal regulatory and legal documents since 2011:

– *Strategy for Innovative Development of the Russian Federation for the period up to 2020* (approved by RF Government Resolution 2227-r, dated December 8, 2011) contained such target indicators: to increase a number of publications by Russian researchers in the total amount of publications in scientific journals to three percent globally by 2020 (2.08 percent in 2010), to increase a number of citations per publication by Russian researchers in scientific journals indexed in the Web of Science database to four citations per publication (2,4 citation per publication in 2010);

– *Strategy for Scientific and Technological Development of the Russian Federation* (approved by Presidential Decree 642, dated December 1, 2016) sets a task of creating an effective communication system to improve sensitivity of economy and society to innovations, to create conditions for high-tech business development;

– *National Project "Science and Education" (2019–2030)* directs scientific communities to increase the share of the Russian Federation in the total amount of articles in fields defined by scientific and technological development priorities in publications indexed in international databases;

– *Presidential Decree* declares the decade before 2031 Decade of Science and Technology; as the main goal it notes "increasing availability of information about achievements and prospects of Russian science for citizens of the Russian Federation"[1].

[1] On declaring the Decade of Science and Technology in the Russian Federation. Presidential Decree 231, dated April 25, 2022. Available at: http://www.kremlin.ru/acts/bank/47771

All these documents are focused on forming a reliable communication platform for researchers, scientists, business representatives and authorities, which enables genesis, evolution and expansion of new scientific ideas. Components of this platform will be scientific periodicals demanded by the society. They provide access to qualitatively new knowledge, enable further development of ideas to ensure sustainable development of country's economy and to increase its scientific and technological independence on the global stage. This in turn serves as a premise for the author to formulate the *hypothesis* of research: journals at the stage of life cycle, which is characterized by continuous growth of citations, integrate basic trends of national economic development. Hypothesis setting is conditioned by information isolation of Russian scientists, reflected in limited availability of foreign research results. This brings into focus the importance of scientific maturity of Russian journals, which reflects the level of their demand among scientists and guarantees the relevance and quality of scientific content in general. In this regard, our research *aims* to develop a theoretical and methodological approach to identify basic trends in national economy development through content analysis of the pool of leading Russian international journals that are at the stage of scientific maturity.

To reach this aim it is necessary to solve the following tasks:

– to offer the author's view on life cycle idea of scientific journal, taking into account express analysis of theories of scientific components life cycle;

– to identify peak development stages of the most significant Russian economic journals with a focus on regional studies (continuous growth periods of citation rate or scientific maturity of publications), to analyze the content of the most cited publications during these periods;

– to identify and visualize basic development trends of the national economy reflected in journals with scientific maturity.

The results will be useful for authorities engaged in basic development trends in development of national economy, including providing regulatory and legal support for development of scientific journals in regions of the Russian Federation.

Degree of knowledge

Theory of life cycle in relation to components of scientific activity has a long history. The first object to apply this theory was *creative activity* of scientists. In 1953 American psychologist Harvey Lehman published his monograph *Age and Achievement*, in which he outlined results of research on relationship between age and creative activity (Lehman, 2017). He concluded that the peak of creativity for most scientists falls on age of 30–35 years, by age of 45 years there is a significant decline and by age of 70 years creative activity disappears. Lehman also provides examples of scientists being highly active later in life but considers them as exceptions from the pattern he derived (Lehman, 1958). Goodwin and Sauer (Goodwin, Sauer, 1995) note that creativity of scientists slightly declines after they obtain an administrative position but it reaches its peak (throughout the cycle) at the time of re-election. Creative activity over life cycle of scientists has also been examined in works (Diamond, 1984; Diamond, 1986; Levin, Stephan, 1991; Horlings, Gurney; 2013; Rauber, Ursprung, 2006; Rauber, Ursprung, 2008). Baser and Pema (Baser, Pema, 2004) analyzed creative activity of academic economists.

O.I. Nechaev applies the theory of the life cycle to *scientific school* research and distinguishes the following stages: work of a narrow circle of like-minded people, developing a research team in

relevant areas and allocating certain directions with choosing new leaders (from students) and their followers. O.I. Nechaev notes that a scientific school loses its activity after its leader who "unties employees on the basis of moral qualities rather than administrative ones" leaves (Nechaev, 2019). There are also studies devoted to *life cycle of scientific direction* (Bochkaryov, Guseva, 2019; Tattershall et al., 2021); *life cycle of scientific research* (Humphrey, 2006; Allan, 2009) and *life cycle of scientific organization* (Buzni, Troshin, 2020).

Quite often life cycle theory is applied to *data and data management, including scientific data*. The most comprehensive review of this area was performed by the Committee on Earth Observation Satellite (USA). In 2012 the Committee published a report presenting 55 data life cycle models[2].

In Russia *life cycle of scientific data* was considered by Yu.I. Shokin and A.V. Yurchenko (Shokin, Yurchenko, 2019). According to the authors, the work with scientific data rotates around the cycle "obtaining – storage – use – disposing". Scientific data, unlike other types of data, have the following features: multiple sources; diversity of data and their formats; different quality and larger volume. Working with them is also characterized by a number of distinctive features related to: 1) need to exchange and share data; 2) need to verify research results; 3) diversity of methods and tools for data analysis; 4) need to integrate varying data. The authors divided the life cycle of working with scientific data into 22 stages. With the emergence of the *big data* phenomenon, life cycle theory began to be applied to it (Balyakin et al., 2020).

Life cycle of a scientific publication was first explored in 2002 when P.H. Franses, editor of *Statistica Neerlandica*, analyzed 66 published papers (Franses, 2002). According to his findings, the life cycle of scientific publications consists of two stages. The first stage covers article concept, its submission to journals, possible revision due to reviewers' comments and acceptance of the manuscript. The second stage is measured by citation evaluation. In addition to describing this process in detail, the author concludes the following:

1) special issue articles are cited more frequently;

2) editing takes more and more time;

3) longer articles with more references get more citations.

Issues of scientific publication life cycle are also considered in (Chaitow, 2019). Emergence of digital scientific articles has aroused interest of many scientists. For example, *life cycle of digital scientific publication* has become the object of research by E.N. Babin, A.M. Elizarov, D.S. Zuev, and E.K. Lipachev (Babin et al., 2013; Elizarov et al., 2014).

The study (Darling et al., 2013) devoted to the role of social networks in the life cycle of scientific publications is also worth mentioning. According to the authors, social networks can have a significant impact on popularizing scientific ideas. Publication of materials on such information platforms helps to widespread results of work among wide audience of other researchers, decision-makers, journalists and public in a short period of time and this can improve scientific and social impact of publications, to form relevant narratives and to determine economic development priorities of national economy. Despite the fact that the article was published almost 10 years ago, these recommendations are still relevant today. The authors suggest using social networks as an informal platform for previewing unfinished

[2] Committee on Earth Observation Satellites (CEOS) Working group on Information Systems and Services (2012). Data life cycle models and concepts, CEOS Version 1.2. Available at: https://ceos.org/document_management/Working_Groups/WGISS/Interest_Groups/Data_Stewardship/White_Papers/WGISS_Data-Lifecycle-Models-And-Concepts.pdf (accessed: May 15, 2022).

works (preprints) – a source of forming the first stage of scientific publication life cycle.

Life cycle of scientific publication directly depends on its citation, which also has its own cycle. In 1979 A. Avramescu proposed the existence of three types of *citation life cycles within a single category of scientific publications* (Avramescu, 1979). On the basis of these observations he distinguished three types of scientific papers: highly cited, barely noticed and brilliant.

V. Cano and N. Lind identified two types of life cycle curves citation. Analysis was based on 10 classic works in medicine and biochemistry. The first type is characterized by a relatively rapid accumulation of citations in the first years of article's existence (4–7 years after publication), followed by a gradual decline. It is typical for articles with low and medium citations. The second type is characterized by moderate citations in the first six years followed by a steady climb in citations. This pattern was found in particular for biochemistry articles and for highly cited papers (Cano, Lind, 1991). P. Wouters considered life cycle of citations as a mean of scientometrics to visualize science:

1) in form of information on performance of researchers, research institutes or other entities in terms of certain indicators;

2) in form of maps of science;

3) in form of rankings, for example, journals in terms of impact factors (Wouters, 1997).

H. Bouabid proposes a model for predicting future or expected citations for a corpus of scientific publications (Bouabid, 2011). The article (Gou et al., 2021) identifies four stages in life cycle of scientific article:

– stage I: citation rate of publication follows a zero-growth model, number of citations is equal or approximately zero;

– stage II: citation rate of publication follows exponential model and accelerate;

– stage III: citation rate corresponds to linear model; number of citations grows smoothly;

– stage IV: citation rate corresponds to deceleration phase of logistic model, number of citations decreases over the years.

Life cycle of (scientific) knowledge is considered in works (Swanson, 1993; Peinigrahi, 2011; Ivanova, 2016). D. Swanson notes that scientific knowledge becomes increasingly divided into areas as it develops. However, combining knowledge from different fields (subjects) can result in something new. Consequently, knowledge can go through more than one life cycle as new relationships that were not obvious at the time of initial publication, are formed (Swanson, 1993).

Therefore, we see that the concept of life cycle is quite actively applied to research certain elements of scientific activity. However, studies of life cycle of a scientific periodical journal have not yet been conducted either by domestic or foreign scientists. The term *"journal's life cycle"* appeared in 1992 in an article (Maczelka, Zsindely, 1992) devoted to impact factor and self-citation rate of chemistry journals. At the same time, topic of journal's life cycle was not revealed in the article. Among works in Russian research devoted to *life cycle of printing products* can be mentioned (Levykin, 2013; Anisimova, Nazarenko, 2015). However, these works do not also concern scientific periodicals.

Scientific relevance of our study is driven, among other things, by lack of works devoted to life cycle of scientific periodical. A pool of leading economic journals is researched.

Materials and methods

Mentioned review of life cycle theory application to components of scientific activity allows us to note that currently there is no universally recognized interpretation of "life cycle of scientific periodical" concept. At the same time, we

established a conceptual link between life cycle of scientific object and its citation rate, which is an important factor in its development. Therefore, in this research we will define stages of journal's evolution as a basic definition: from creation to loss of citation rate. These stages are quite difficult to formalize without having a developed methodological basis.

After examining methodological features of life cycle model design in works of foreign (Dauns, 1967; Lyppite, Shmidt, 1967; Katz, Kahn, 1978; Boulding, 1953; Miller, Friesen, 1984; Greiner, 2002; Lester et al., 2003; Adizes, 2004) and Russian scientists (Emel'yanov E.N., Povarnitsyna, 1996), the following universal features of its construction can be noted:

– life cycle curve is designed taking into account two parameters: time and performance;

– life cycle stages are consistent, each subsequent stage is a consequence of the previous one;

– each life cycle stage has individual content;

– movement through life cycle goes in direction "from the past to the future", which is inherent in evolutionary nature of any economic object, including journal;

– time of passing through stages is variable, for each scientific publication it is individually based;

– it is possible to determine stage of life cycle only by "looking back", by the fact of what happened.

We propose to use time and scientific maturity index of journal, which is introduced to reflect integrated performance of its functioning, as parameters for designing development trajectory. To calculate this index, we will use evaluation framework that comprehensively measures reader's interest for different time periods of journal's functioning. One of the basic indicators will be impact factors from several time periods.

Impact factors as components of scientific activity assessment have been actively discussed over the last 15 years (Archambault, Larivière, 2009; Kiesslich et al., 2021; Torres-Salinas et al., 2022; Tret'yakova, 2015), although 1927 when journal rankings based on their citations were conducted for issues related to selection of periodicals for libraries, can be considered as the origin of such scientometric indicators. (Gross, Gross, 1927). In 1955 E. Garfield proposed his own method to calculate such metric, designated as impact factor of scientific journal (Garfield, 1955). From that time studies to identify the most important journals in certain fields of research have been actively conducted.

We have to admit that, despite more than half a century of metric's history, indicator "impact factor" is controversial. Many domestic and foreign scientists criticize it (Balatsky, 2015; Lariviere, Sugimoto, 2019; West et al., 2017). The most popular argument against its use is related to uneven distribution of citations across publications (Seglen, 1997). Therefore, in order for impact factors to provide a qualitative assessment of journal, our research proposes to integrate them with other indicators in authors' calculation methodology. The structure of Index of Scientific Maturity is shown in *Table*.

As an evaluation mean we propose to use method of calculating the length of a vector by its coordinates, in which coordinate values correspond to journal metric indicators (formula 1).

$$\text{Index of Scientific Maturity} = \sqrt{\sum_{i=1}^{m} a_i^2}, \quad (1)$$

where Index of Scientific Maturity – index of scientific maturity of journal,

a_i – journal citation metric;

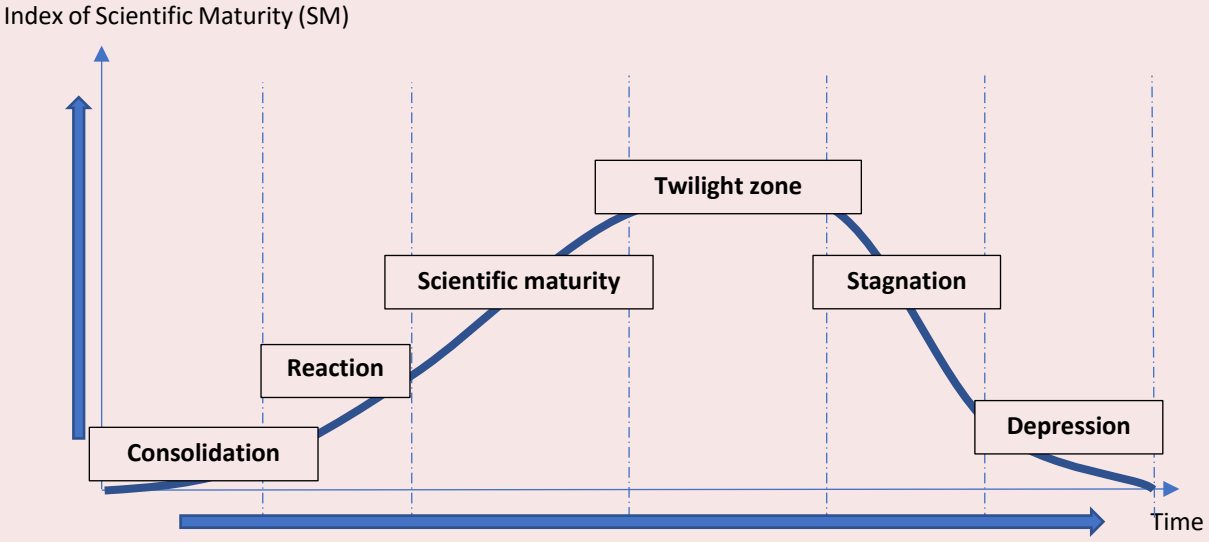
$i = 1, 2,.., m$ – number of metrics used.

Behavior of scientific maturity index at stages of journal's life cycle is shown in *Figure 1*.

Scientific maturity structure of journal (Index of Scientific Maturity)

A_i	Metric	Content
A_1	Two-year RSCI impact factor without self-citation	Number of citations in the current year from other journals to articles in this journal published in the previous two years, divided by number of these articles
A_2	Two-year RSCI impact factor taking into account citations from all sources	Amount of citations in the current year to articles published in journal over the previous two years, divided by number of these articles; self-citation is also taken into account
A_3	Two-year impact factor according to the RSCI core	Amount of citations in the current year to articles published in journal over the previous two years, divided by number of these articles; in this case, only references from journals included in the RSCI core (WoS, Scopus or RSCI) are taken into account; self-citation is taken into account (if journal is included in the RSCI core)
A_4	Two-year impact factor according to the RSCI core without self-citation	Amount of citations in the current year from other journals to articles in this journal published in the previous two years, divided by the number of these articles; references are taken into account only from journals included in the RSCI core (i.e. included in WoS, Scopus or RSCI)
A_5	RSCI five-year impact factor	Amount of citations in the current year to articles published in journal over the previous five years, divided by number of these articles; self-citation is also taken into account
A_6	Five-year RSCI impact factor without self-citation	Amount of citations in the current year from other journals to articles in this journal published in the previous five years, divided by number of these articles
A_7	Five-year impact factor according to the RSCI core	Amount of citations in the current year to articles published in journal over the previous 5 years, divided by the number of these articles; in this case, only references from journals included in the RSCI core (WoS, Scopus or RSCI) are taken into account; self-citation is taken into account (if journal is included in the RSCI core)
A_8	Five-year impact factor according to the RSCI core without self-citation	Amount of citations in the current year from other journals to articles in this journal published over the previous 5 years, divided by number of these articles; references are taken into account only from journals included in the RSCI core (WoS, Scopus or RSCI)
A_9	Number of article views per year	Number of views of pages with abstracts of articles in journal by elibrary.ru users per year; Items of all types for all available years are taken into account; depends not only on interest of readers, but also on journal's volume and depth of archive posted on elibrary.ru
A_{10}	Number of article downloads per year	Number of downloads of full texts of articles in journal by users of the elibrary.ru portal per year; Items of all types for all available years are taken into account; depends not only on interest of readers, but also on journal's volume, depth of archive posted on elibrary.ru and access mode (open or paid); Repeated uploads of an article by the same user are not counted
A_{11}	Probability of citation after reading, %	It is calculated as the average share of authors who cited article for all articles per year among the authors who downloaded full text of this article on the portal elibrary.ru; all citations and all downloads of article made from the moment this article was posted on elibrary.ru are taken into account
Source: own compilation		

Figure 1. Scientific journal's life cycle model



Consolidation	Reaction	Scientific maturity	Twilight zone	Stagnation	Depression
Thinking through a publishing idea to support research	Implementation of ideas	Launching mechanisms for promoting a scientific publication and building a brand	Still a strong position but the process of aging has begun	No vision for the future	Loss of authors and readers Resignation of scientists from the editorial
Integrating resources and efforts	Organizing storage of published materials	Integrating research results into international scientometric databases	Focus on past achievements that stop working	Deterioration in the metrics of scientific publications and articles	Ending publishing activities
Active communications	Ensuring accessibility of published materials	Educational activities and work with authors	Order for order – further educational work with authors	Exclusion from high-rating international scientometric databases	Reduction or complete ending of financial support of founder
Taking risks	High vulnerability	Sustainability or confidence in the future	Dangerous stability: if you chose the right path, you will get off it	Personal survival	Trace is being is erased, "death" may take years
Index of SM = min	Index of SM → max	Index of SM = max	Index of SM =< max	Index of SM < max	Index of SM → min

Source: own compilation.

This framework can be extended with citation indicators of scientific publication in other databases, if journal in question is indexed in them. Besides, it has been recommended to take into account the number of downloads of journal's articles from its website, social network pages and other public sources that reflect readers interest in published materials, if journal has appropriate Internet metrics

Therefore, the authors' methodological approach to identify basic development tendencies national economy includes the following research steps:

1. Identifying testing ground for research. RSCI journal database RSCI in open access of the Scientific Electronic Library elibrary.ru is proposed as a source.

The total number of economic journals in elibrary.ru in April is 1542; 533 of them are indexed in RSCI; 364 journals are included in the List of peer-reviewed scientific publications, they contain the main scientific results of dissertations for the degree of candidate and doctor of sciences; 44 journals are included in core of RSCI; 35 journals are included in RSCI (collection of the best Russian journals on the Web of Science platform); 22 journals are indexed in Scopus; 18 journals are indexed in WoS (WoS indexes 1518 journals in economics; 1166 journals in Economics, Econometrics and Finance).

Simultaneous fulfillment of the following conditions serves as a selective filter for our research: journal indexation in Web of Science and Scopus, its presence in RSCI database, the RSCI core and in the VAK list. Currently, 8 Russian journals meet these conditions: "Voprosy ekonomiki"; "World Economy and International Relations"; "Foresight and STI Governance", "Journal of the New Economic Association"; "Ekonomicheskaya politika"; "International Organisations Research Journal", "MGIMO Review of International Relations", "Contemporary Europe".

The sample additionally included two highly cited top ten journals: "Economy of Regions" and "Economic and Social Changes: Facts, Trends, Forecast". During the public examination of RSCI, experts singled them out as national-level publications worthy of inclusion in RSCI (Tret'yakova, 2020). These journals are also included in rating based on analysis of bibliometric parameters and expert assessments of scientific level (Balatsky, Ekimova, 2019). Journals "Economy of Regions" and "Economic and Social Changes: Facts, Trends, Forecast" are included in the Diamond List of rating, which forms the 13 best Russian economic publications (ranking third and tenth).

Thus, the sample includes ten journals.

2. Designing a model of life cycle curve of selected journals by calculating scientific maturity index for the period 2014–2022. To identify basic trends in the development of Russian economy, we should consider publications of "scientific maturity" stage, which is characterized by a continuous growth in citations, reflecting high interest of readers in articles published in journals.

3. Conducting content analysis of the most cited publications with "scientific maturity". Units of analysis will be key words of these articles, which is due to the fact that key words are designated by authors as dominants of conceptual space of their research. They also represent an easily formalizable construct even within a large corpus of texts (Belousov, Zelyanskaya, 2012). Use frequency of particular keyword helps to identify core of tsubject area ontology and its periphery.

The authors' approach will help to identify the main proposed by the authors and selected by the reviewers research topics of corresponding time period for each journal, collectively representing scientific basis for forming of trends in development of national economy.

Results and discussion

Content analysis of key words in the most citation-rated articles from previously selected journals allows us to note that in 2009–2013 innovations, sustainable development and economic security of regions, investments and human capital as factors of economic growth of national economy were the most discussed topics. Since 2014 research interest has shifted to industries digitalization and to digital economy development. Scientific focus on import substitution processes as a factor of regional economic growth in response to sanctions pressure from other countries has also become in demand. In 2018–2022 research topics related to digital transformation strengthened their positions and formed the main trend in national economy development *(Fig. 2)*.

Calculation of scientific maturity index of journals shows that all journals, except for "Voprosy ekonomiki", have a steady growth, which allows us to record "scientific maturity" stage of their life cycle, forming reliable platforms for discussing relevant issues of national economic development, serving as sources for generating answers to modern challenges *(Fig. 3)*.

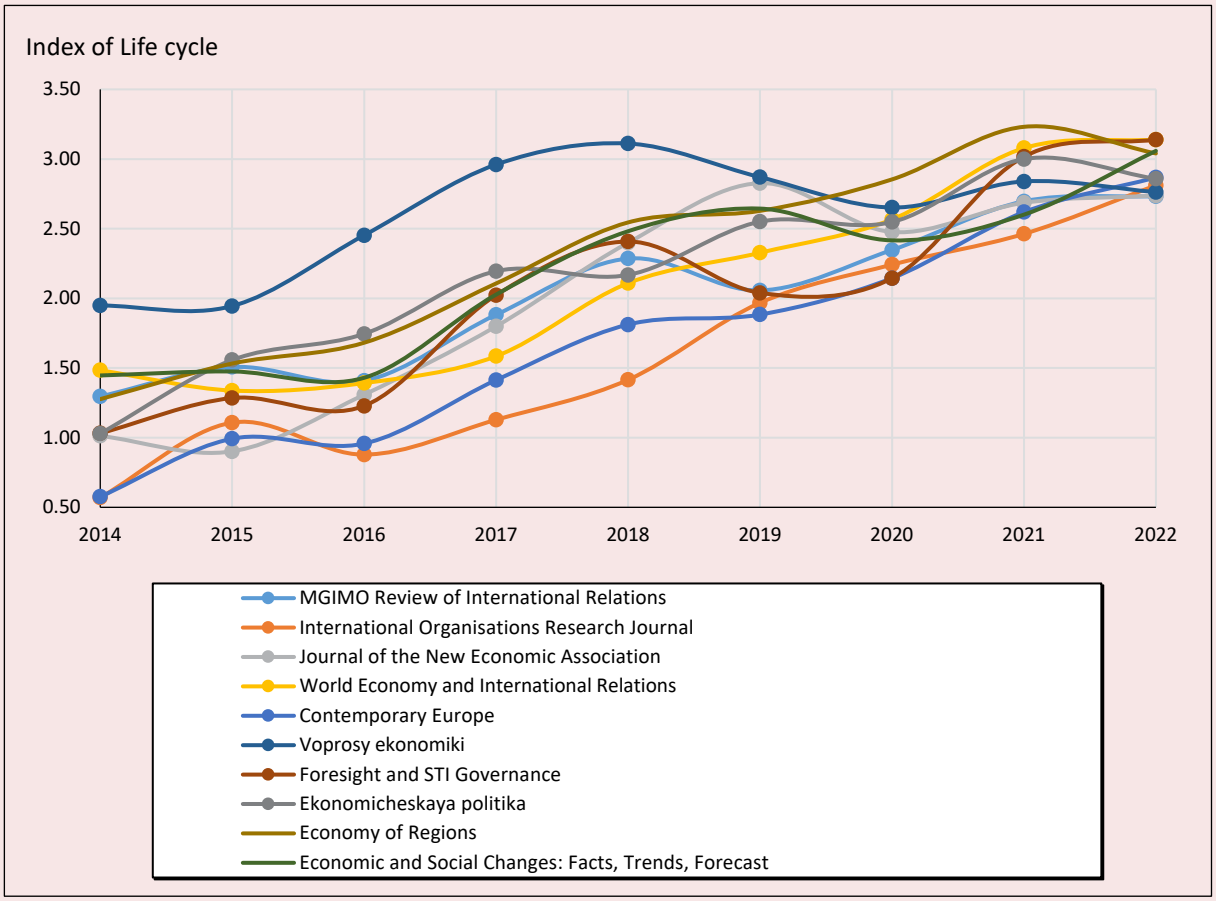
Content analysis of the first twenty most cited articles from journals in question at the identified citation peaks allowed us to identify the main development tendencies of national economy that have emerged in the scientific community.

Most of the authors are focused on digital economy (20%); 18% of the authors studied issues of regional economic development, including spatial aspects with rating articles; green economy / alternative energy were covered by 12% of the authors; impact of the COVID-19 pandemic was reflected in by 10% of the authors; behavior of various economic entities under shock conditions or conditions of uncertainty were touched upon by 10% of the authors; technological revolution as a factor of economic growth is studied by 5% of the authors; impact of sanctions was touched upon by 3% of the authors. However, in terms of citation index, ranking of topics are different *(Fig. 4)*.

Figure 2. Key words in highly rated Russian scientific journals of international level, 2009–2022

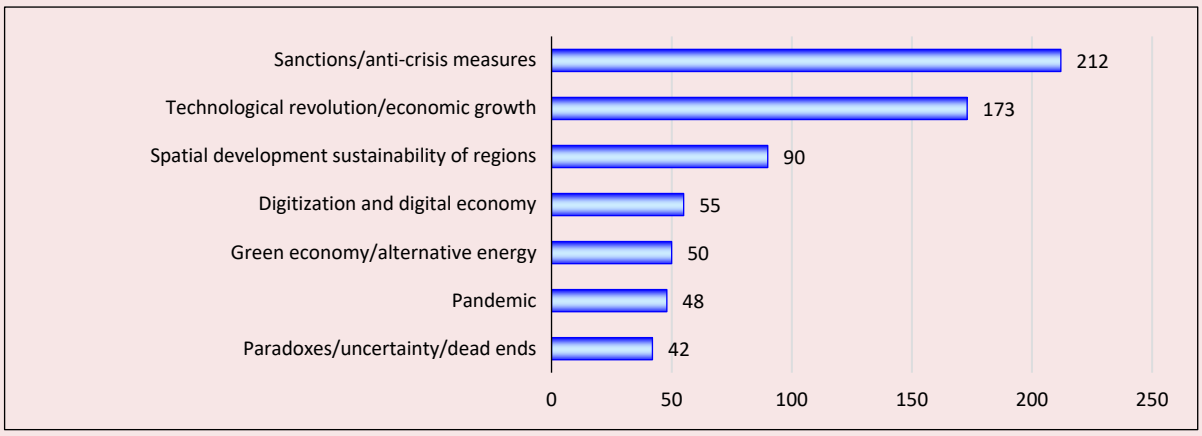
Source: own compilation.

Figure 3. Life cycles of highly rated Russian scientific journals of international level, 2014–2022



Source: own compilation.

Figure 4. Ranking of research topics stated in titles of articles, by the average citation rate of articles, 2014–2022



Source: own compilation.

Figure 5. Content analysis of key words in the most popular articles from highly ranked journals in the "scientific maturity" stage, 2014–2022

Source: own compilation.

Content analysis of key words in the most popular articles from highly rated journals at the stage of "scientific maturity" also confirms identified prioritization of scientific topics *(Fig. 5)*.

Therefore, the example of journals in question shows that scientific periodicals can serve as a source of basic trends integration in development of national economy in case it reaches the stage of scientific maturity in its life cycle, which is characterized by steady growth in citation rate of articles.

Conclusion

This research aims to address the issue of strengthening information support for scientific and technological development of national economy, to minimize impacts of growing scientific isolation. An option for its comprehensive solution, according to authors, is to improve national discussion platform. Components of this platform are Russian journals. Their scientific maturity determines genesis, evolution and expansion of creative ideas and new knowledge demanded in the new economic reality.

Within article authors attempted to transfer the hypothetical link between establishing basic directions of national economy development into publication reality, taking into account life cycle of journals. For this purpose, we developed theoretical and methodological aspects of modeling life cycle of scientific periodicals and proposed a methodological framework that enables identifying a development stage of a particular journal. Therefore, an additional research filter was to find journals at the stage of scientific maturity, reflecting steady growth in their citation rate and their functioning due to publication authority formed over the years.

The next step not only to identify but also to assess the potential for sustainability of national economic development can be key (by citation index) research topics comparison of the leading ranking journals characterized by scientific maturity, with key topics of journals from the VAK List of category K1, grouped by the regional characteristics of the founders. The maximum overlap of topics will indicate uniform forming of basic development tendencies. If there is a maximum overlap over the entire research period, we can talk about the coherence of scientific space, which serves as a fundamental basis for country's economic growth.

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