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INVESTMENT AND ECONOMIC GROWTH INTERCONNECTION: A BIBLIOMETRIC ANALYSIS

Abstract. The article examines modern trends in studying the relationship between investments and economic growth through bibliometric analysis. The goal of the article is to review scientific publications to identify the main concepts and approaches to studying the connection between investments and economic growth, as well as to reveal research gaps on this topic for further exploration. The research employed the bibliometric analysis method using software tools such as VOSviewer and Biblioshiny. The sample included 432 publications from the Scopus database. The selected publications were analyzed based on indicators such as the annual volume of scientific output, connections between publication parameters, mapping, clustering, thematic modeling, and network analysis. The literature review revealed the research methods, model specifications, and datasets are used by researchers to explore the role of investments in achieving growth. The analysis identified the main factors considered by researchers when studying the relationship between investments and economic growth. Data also showed a shift in focus towards studying the situation in developing regions such as Africa, Malaysia, Iran, Pakistan, and others. The findings from the bibliometric analysis can be used to explore promising topics related to investments and economic development further.

Keywords: investments, economic growth, models, bibliometric analysis, VOSviewer, Biblioshiny, publication review.

INTRODUCTION

The challenge of achieving sustainable economic growth through effective investment management has attracted the attention of researchers for decades. This issue is consistently present in political discourse, government decisions, and strategic documents. Recently, there has been a growing interest in studying the impact of investments on economic growth amid frequent global and regional crises, tighter financing conditions, and difficulties in predicting macroeconomic trends. Investment promotion has become a crucial element of national policies and international agreements [1].

In the Republic of Kazakhstan, most sectors of the economy, apart from extractive industries, face a lack of funds for financing investment projects [2]. The significant need for investment resources necessitates finding new methods and incentives for attracting external and internal investments, revitalizing investment processes, and increasing the efficiency of investment activities.

Recognizing the critical role of investments in the economic development of nations and industries, a considerable body of literature is devoted to studying investments and their components, including foreign direct investments, public and private investments, and the impact

of investments on the pace and quality of economic growth. Therefore, identifying the nature and parameters of the relationship between investments and economic growth is an important research direction, making this topic highly relevant.

This research employs bibliometric analysis to provide a comprehensive review of literature related to investments and economic growth. Bibliometric analysis is an open-source tool designed for comprehensive mapping analysis of scientific sources, enabling a full spectrum of publication analysis and result visualization.

The aim of this article is to identify key research directions and concepts related to investments and their impact on economic growth and to reveal research gaps in existing publications that could form the basis for future studies.

LITERATURE REVIEW

Extensive literature on the relationship between investments and growth reveals diverse perspectives among researchers regarding the impact of investments on macroeconomic indicators, including GDP growth. Overall, studies confirm that investments positively influence economic development [3]. Meyer D.F. (2023), based on research on the relationship between domestic investments, governance indicators, risk, and economic development in Kazakhstan and Poland, concludes that investments are crucial for achieving accelerated economic growth and development [4]. The work of Afonso, A. and St. Aubyn, M. (2019) identifies the positive effect of public investments on economic growth in most countries, the positive effect of private investments on growth in all studied countries, as well as the presence of crowding-out and inflow effects [5].

Economic literature puts forth various conceptual theoretical models of economic growth, such as the classical growth theory, neoclassical growth theory, endogenous growth theory, and others. Endogenous growth models explore the influence of investments on economic growth and the limits of their positive effect [6, 7]. An attempt to determine the optimal level of investment is made in the work of Baneliene et al. (2018). They prove that investments in R&D in EU countries have the highest multiplicative effect when GDP exceeds €10,397 per capita [8].

An important research direction, in our opinion, is the study of the impact of specific types of investments on economic development. The literature review revealed that many researchers focus on studying foreign direct investments (FDIs) [9, 10, 11, 12]. Special attention is also paid to investments in fixed capital [13, 14, 15]. Govdeli T. (2022) establishes a causal relationship between domestic savings and fixed capital investments in seven Caucasus and Central Asia countries [16]. Researchers such as Ginevicius R. (2023), Arana Barbier (2023), Mudronja et al. (2019), and Wynn et al. (2022) delve deeper into the role of R&D investments in the economic development of specific regions and industries [17, 18, 19, 20]. The case of Kazakhstan is examined in the work of Colapinto et al. (2020), concluding that Kazakhstan requires substantial investments in six key economic sectors to significantly enhance their contribution to overall GDP [21]. In the article by Huseynli (2023), issues related to the impact of R&D investments on accelerating economic growth in several Central Asian countries are studied [22]. The peculiarities of public investments are thoroughly analyzed by Berg A. et al. (2018), based on the Cobb-Douglas production function and the neoclassical growth model [23]. Cepparulo A. et al. (2023) studied the distribution of public-private partnerships (PPPs) among EU countries, highlighting the importance of reviving investment selection in PPPs based on efficiency criteria and fiscal rule adaptation [24].

Industry-specific investments are becoming increasingly relevant under modern conditions. The findings of Emako et al. (2022) suggest that the more investments countries attract to the manufacturing sector, the higher their economic growth will be [25]. Furthermore, Vertakova et al. (2022) identify the most attractive industries for investments, capable of creating a propulsive effect for the development of other enterprises, industries, and regions [26]. Al-Banna et al. (2024) argue that it is necessary to find an optimal balance between avoiding risks of overinvestment and underinvestment traps in economic sectors [27]. Kazakhstani researchers Temirbayev B., Zagal K.,

Akhmetzhanova S. (2021) assessed the efficiency of sectoral investments based on interindustry balance multiplier calculations, revealing that investments in healthcare and social services yield the highest returns [28].

The results of studies on the impact of investments on economic growth are ambiguous; empirical data show diverse directions of relationships and influencing factors. However, the literature on the impact of investment on economic growth is limited, and this study provides a novel perspective on this relationship through a bibliometric analysis. In this regard, the present study aims to identify key concepts and approaches to studying investments and their contribution to economic growth, as well as to uncover research gaps in existing publications for further exploration.

MATERIALS AND METHODS

To identify the main concepts and approaches to studying the contribution of investments to economic growth, bibliometric analysis of the literature was chosen. Bibliometric analysis of existing scientific research employs quantitative approaches to assess and analyze scientific publications, their authors, journals, citations, and other characteristics of scholarly works. By examining the features and trends in scientific publications, bibliometric analysis allows the identification of significant topics and their interconnections, key authors, as well as main approaches and methods in the studied field. This method helps to highlight areas for further research and evaluate the influence and significance of various scientific publications.

The study aims to uncover how investments contribute to economic growth, technological progress, human capital development, innovation, and productivity improvement. Existing research may indicate that the pace and quality of economic growth are linked to various types of investments. Therefore, it is important to analyze the structure and components of investments, sectoral differences, and features of investment activities. Bibliometric analysis also enables the identification of studies on investment policies and initiatives aimed at supporting economic growth. One advantage of bibliometric analysis is its ability to encompass articles examining the specifics of investment support in different countries and regions. This method also identifies keywords that, when combined, provide a high-level description of the content of scientific publications and the interconnections between citations. Such an approach enhances understanding of various aspects of the impact of investments on economic growth.

The study was conducted using the Scopus database in November 2024. Scopus is recognized as one of the primary and widely used bibliographic databases, offering an extensive selection of research literature across various scientific fields. To select articles from the Scopus database, a five-stage process was employed (Figure 1).

Figure 1 – Stages of the scientific publication selection process

Note: compiled by the authors

A search query was performed, including keywords like "investment/investments," "economic growth," "model/models," and "modeling" in accordance with the study's topic. Publications related to fields such as "Economics, Econometrics and Finance," "Business, Management and Accounting," and "Multidisciplinary" were selected. Publications were filtered by type, selecting

articles from academic journals and reviews. Studies published between 2020 and 2024 were chosen. Publications were further filtered using the keyword “investment”.

The selected sample of scientific publications was analyzed using the VOSviewer and Biblioshiny software, which provide comprehensive tools for studying scientific literature, including clustering, bibliographic linking, and thematic mapping. Using VOSviewer and Biblioshiny optimizes the bibliometric analysis process, facilitating the visualization of complex networks and clusters of interconnected terms. The generated graphs and figures aid in better understanding significant themes, key concepts, patterns, and emerging trends in the studied field. The displayed combinations of keywords form thematic clusters and create bibliometric maps that highlight the strength of connections, keyword size, and associations between specific terms. In the context of a growing number of scientific publications, bibliometric analysis offers opportunities for a broad review of research experience, significance, and the influence of various scientific publications, as well as helps classify areas for additional analysis.

RESULTS AND DISCUSSION

The role of investments in economic growth has been extensively studied by economists, especially in recent years. To reveal the dynamics of knowledge on investments and their impact on economic growth, information on the annual volume of scientific output, the most relevant sources, the most active organizations, co-occurrence networks, and bibliometric mapping was analyzed.

Between 2020 and 2024, a sample of 432 scientific publications across 150 sources was selected. During this period, 1,186 authors published their research, 66 of whom conducted solo-authored studies. More than 30% of articles were published through international collaboration. The average number of citations per publication was 17.5.

Figure 2 presents the annual volume of publications on the topic of the impact of investments on economic growth using modeling.

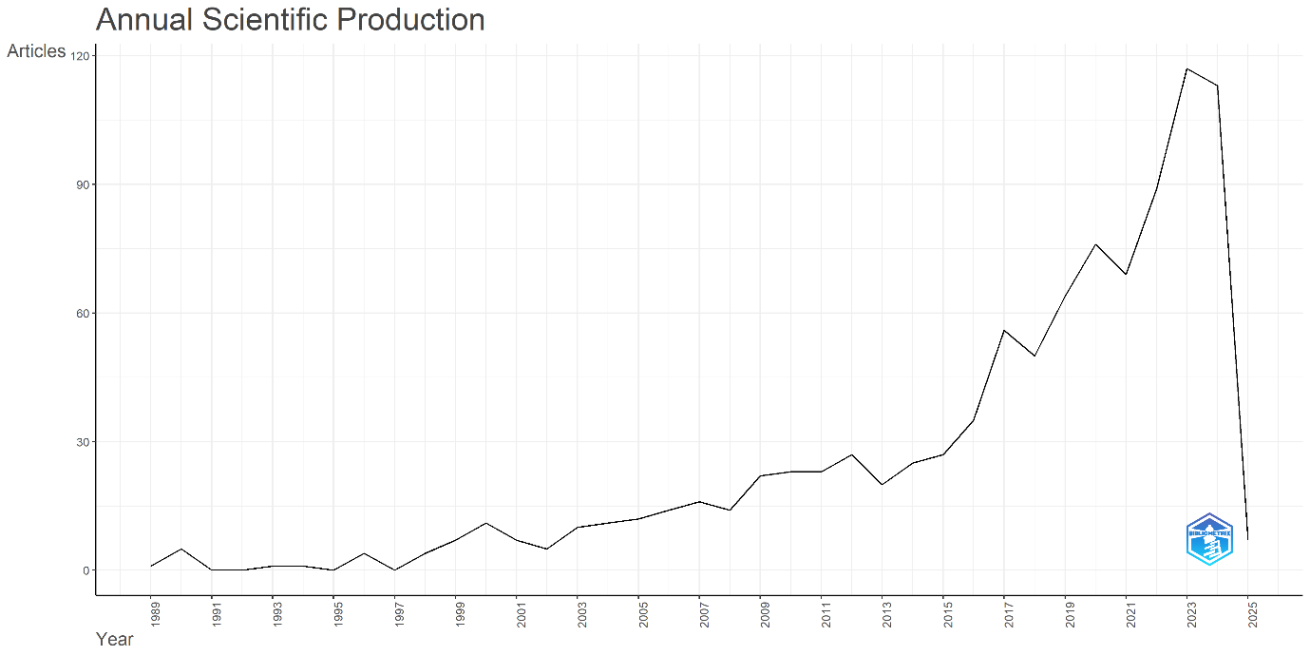

Figure 2 – Number of scientific publications in the field of the relationship between investment and economic growth by year

Note: compiled by the authors using Biblioshiny

The analysis highlights the consistent growth of scientific publications on the subject during the 2020–2024 period, indicating their increasing relevance. The annual growth rate of publications was 11.22%. Over the analyzed period, the annual number of publications nearly doubled, from 67 in 2020 to 101 in 2024. The highest publication activity was observed in 2024. The rise in research on the relationship between investments and economic growth may be attributed to increasing challenges in finding funding sources amid global crises and the need to transition to sustainable economic development models.

The connection between parameters of scientific publications is shown in Figure 3, illustrating the relationships between the author's country, keywords, and the journal in which the article/review was published.

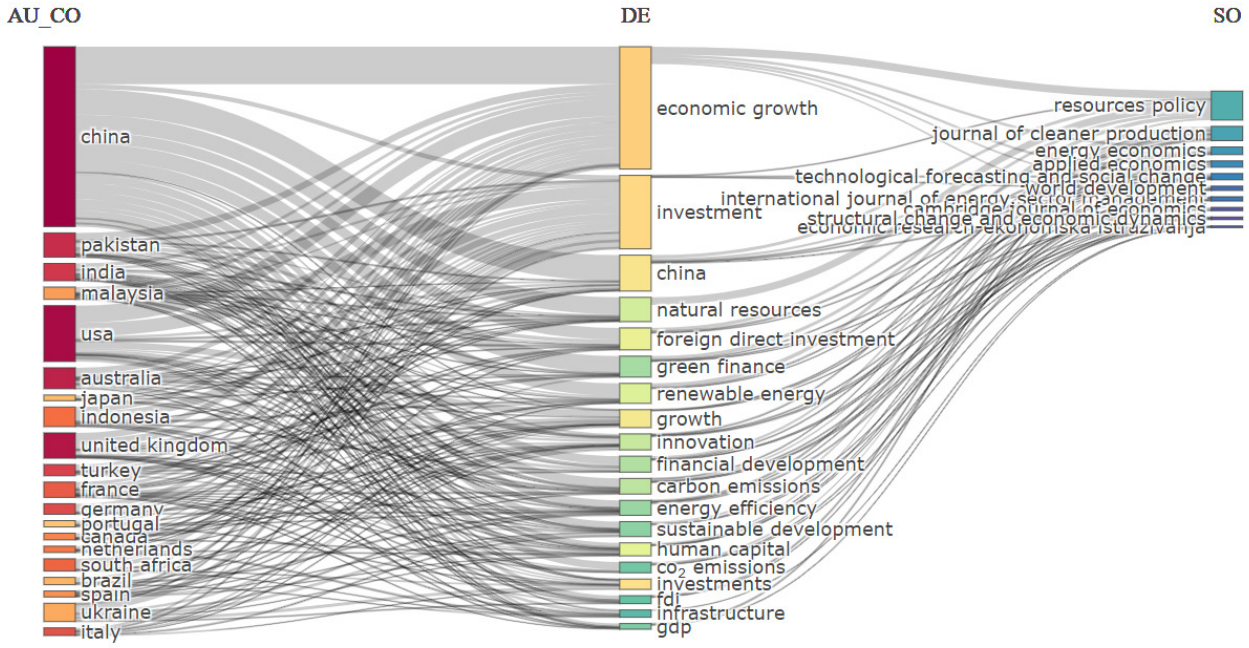

Figure 3 – Three-fields plot

Note: compiled by the authors using Biblioshiny

Researchers from China are the most active authors publishing research on the impact of investments on economic growth in recent years. Additionally, the role of investments in economic growth is actively studied both in developed countries (the USA, Japan, the UK, France, Germany and others) and in developing countries and economies in transition (Pakistan, India, Malaysia, Indonesia and others). The largest number of articles addresses economic growth, as evidenced by the frequent use of related keywords in the abstracts and content of articles. The majority of articles on this topic are published in journals such as Resources Policy, Journal of Cleaner Production, Energy Economics, Applied Economics and others.

Keywords were analyzed using the VOSviewer program, which allowed for the assessment of the strength of co-occurrence of selected terms. A specialized thesaurus of the most frequently used keywords was applied to create a bibliometric map. The visualized results of the sample are presented in Figure 4, where the size of each element symbolizes its overall strength of association, and the thickness of the lines indicates the strength of the connection between two terms. Keywords within a single cluster are more closely related.

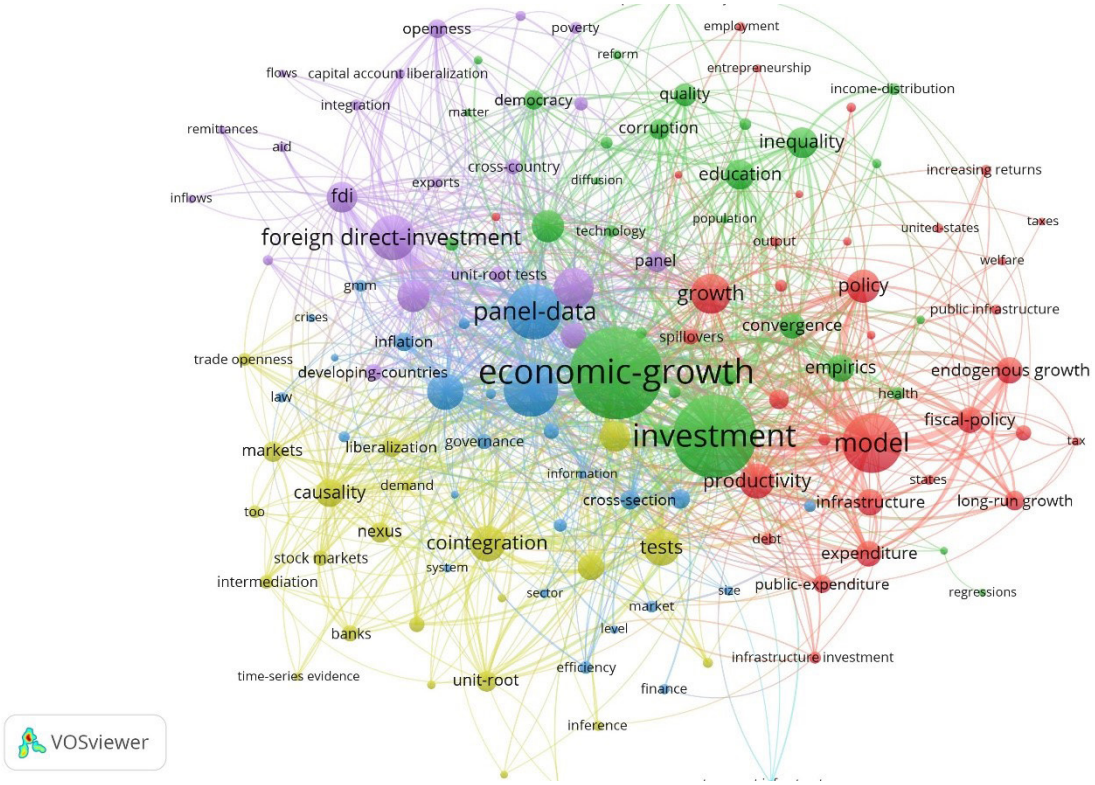

Figure 4 – Bibliometric map of scientific publications in the field of the relationship between investment and economic growth

Note: compiled by the authors using VOSviewer

The mapping method uses different colors to represent several clusters (blue, red, green, yellow, purple, and others). Cluster interpretation is based on the keywords found within them. This division is conditional, as clusters and keywords are interrelated. The largest circles indicate the central significance of the keywords "Economic growth" and "Investment," which are linked to all elements on the map.

Table 1 presents the color clusters and the keywords included in them.

Table 1 – Clustering of scientific publications in the field of the impact of investment on economic growth

Cluster number	Cluster color	Number of terms	Most frequently used terms
1	green	16	Economic growth, investment, institutions, education
2	red	10	Model, growth, productivity, policy
3	light blue	6	Impact, panel data, determinants
4	purple	5	Foreign direct investment, countries, financial development, trade
5	yellow	4	Cointegration, causality, liberalization

Note: compiled by the authors using VOSviewer

The bibliometric map of publications identified eight main clusters, with the largest and most central being the green cluster "Economic growth". The second-largest cluster is the red "Model" which is closely linked to the green cluster, as most studies examine these two directions together. This indicates that scientific publications often use keyword combinations included in these clusters.

Scientific publications also investigate factors influencing the relationship between investments and economic growth. These factors are reflected as elements of the clusters on the bibliometric map. For example, they include "inflation", "crises", "sustainability", "risk", "technology", "innovation", "inequality", "taxes" and others. Each cluster has a group of interrelated keywords that frequently co-occur in scientific publications. It is worth noting that these terms are among the most significant and frequently discussed in the existing literature on investments.

Terms such as "structural equation", "empirical analysis", "regression analysis," "time-series evidence" and "unit-root tests" included in the clusters are research methods used to analyze the relationship between investments and economic growth. Consequently, these methods are the most suitable and relevant for studying this topic.

The development of thematic directions in the area of investments' influence on economic growth is presented in Figure 5. The graph illustrates themes as circular markers of varying sizes, located in one of four areas: "basic themes", "motor themes", "niche themes" and "emerging themes."

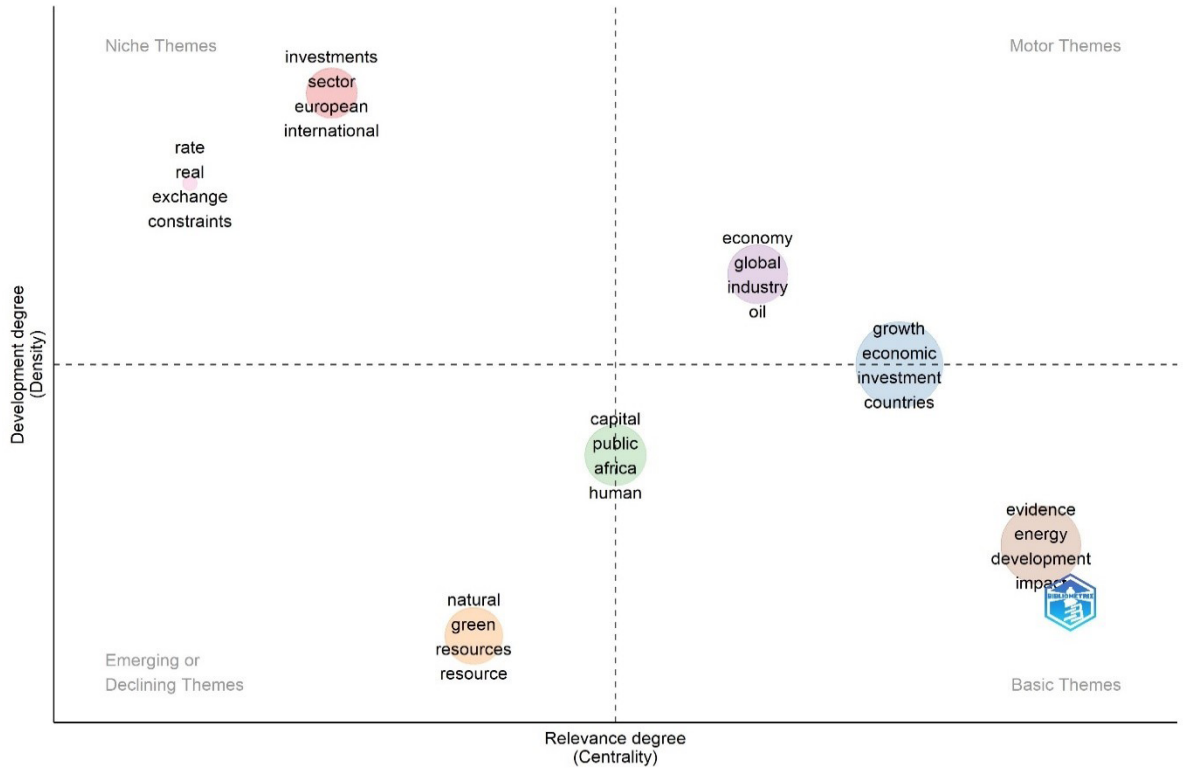

Figure 5 – Bubble chart of publications in the field of the impact of investment on economic growth

Note: compiled by the authors using Biblioshiny

Basic research themes from 1989 to February 2025 include "evidence", "energy", "development", "impact", "economic growth", "investment" and "countries". These themes dominate contemporary research. Basic themes also include topics like "capital", "public", "Africa" and "human". This indicates that in research, these subjects are strongly connected to the influence of investment on economic growth. Moreover, these topics serve as a transition from one area to another: from basic themes to emerging ones. "Motor themes" (key driving topics) include "economy", "global", "industry" and "oil", which help identify the most relevant and rapidly evolving questions and research areas. In contrast, "niche themes," which focus on narrower, specific aspects of research, include "sector", "European", "international", "rate", "real", "exchange" and "constraints". Emerging themes include "natural", "green" and "resources". These themes highlight the most pressing current issues, such as green investments, improving investment efficiency, innovations, and the influence of various

factors on the relationship between investments and economic growth. Additionally, under-researched areas include uncertainty and risks, access to investments, the role of government and business, industry, resources and investments in low-income countries.

Figure 6 presents key trends in the field over time. The analysis of scientific publications with time stamps used different colors to reflect the progression of research over time. Darker clusters represent older studies, while lighter clusters represent more recent studies.

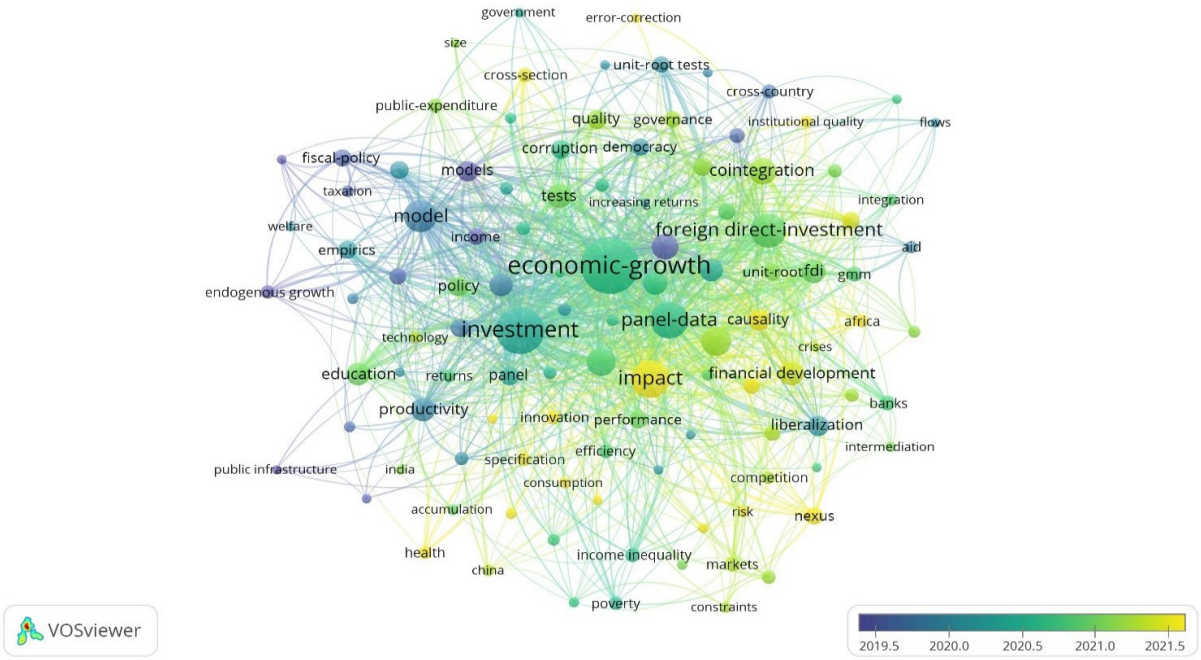

Figure 6 – Thematic mapping of scientific publications in the field of the impact of investment on economic growth in the order of time evolution

Note: compiled by the authors using VOSviewer

In research conducted in 1989–2016, the focus was on terms like “income”, “fiscal policy”, “foreign direct investment”, “endogenous growth” and “infrastructure”. In 2017–2022, studies increasingly addressed issues related to economic growth, globalization, modeling, liberalization, productivity, panel data and sustainable development. Notably, publications in 2023 – February 2025 show a shift towards studying impact, quality, environmental, renewable energy, innovations, risk, ICT and similar topics. This indicates the recognition of the link between investments and long-term sustainable economic growth. Research in this direction explores how investments contribute to achieving sustainable development, environmental and social initiatives, digital transformation of businesses.

CONCLUSION

This study identified contemporary scientific directions and approaches to exploring the relationship between investments and economic growth. A sample of 976 publications on the topic from the international Scopus database for the period 1989 – February 2025 was analyzed. It was revealed that interest among researchers in studying the impact of investments on economic development significantly increased during this period. Key directions of these studies were investments, particularly foreign direct investments (FDIs), and their relationship with economic growth.

Researchers from China were the most active contributors during 1989 – February 2025, primarily focusing on economic growth, FDIs, inflation, innovations, financial development, and

sustainable development. The role of investments in economic growth was actively studied both in developed countries (the USA, Japan, the UK, France, Germany and others) and in developing and transitioning economies (Pakistan, India, Malaysia, Indonesia and others).

Data visualization enabled the identification of eight main clusters, with the green cluster "Economic growth" and the red cluster "Model" being the central ones. This confirms the frequent use of these keyword combinations in publications. Publications also examine factors affecting the relationship between investments and economic growth, such as "inflation", "crises", "sustainability", "risk", "technology", "innovation", "inequality", "taxes" and others.

The identification of thematic directions revealed that basic themes for research include "evidence", "energy", "development", "impact", "economic growth", "investment" and "countries". The most relevant and rapidly developing themes include "economy", "global", "industry" and "oil", while niche themes include "sector", "European", "international", "rate", "real", "exchange" and "constraints". Earlier studies focused on topics like income, fiscal policy and endogenous growth. More recent studies address investments in impact, quality, innovations, risk, environmental sustainability and digital technologies.

The analysis results highlight the importance of foreign direct investments and their significant role in stimulating economic growth. For developing countries, it is crucial to create conditions that foster the attraction of foreign direct investments, specifically by improving the financial climate, reducing political risks, strengthening infrastructure, and promoting innovative technologies. It is also worth noting the growing interest in investments in sustainable development and renewable energy, which may become a priority for environmentally-oriented economies. This will help create a more resilient and competitive economy that attracts additional investments.

To improve investment policy, it is recommended to focus on the need to create and maintain stable and transparent economic and political conditions that facilitate the attraction of both foreign and domestic investments. It is important to concentrate on the development of financial markets and the institutional environment to enhance the accessibility of investment capital. Thus, the results of our study may be useful for developing more precise and targeted recommendations for improving investment policy, especially for developing countries, which will have a positive impact on their economic development.

Despite significant progress in studying the relationship between investment and economic growth, several key gaps have been identified that require special attention. First, research often pays insufficient attention to developing countries, particularly in the context of transition economies, which opens up opportunities for future comparative studies. Second, there is a lack of research focused on the long-term effects of investments, as well as on specific types of investments. Therefore, it is recommended that future research examine the impact of various types of investments on economic growth, including investments in innovation and sustainable development. An important direction for future studies will be the application of interdisciplinary approaches that consider the influence of social, political, and economic factors. Further research could also employ econometric models that predict the impact of investments on economic growth in the context of global challenges such as climate change.

REFERENCES

1. UNCTAD (2024). World Investment Report 2024. Investment Promotion and Digital Government. Overview. https://unctad.org/system/files/official-document/wir2024_overview_ru.pdf

2. The concept of investment policy of the Republic of Kazakhstan until 2026. – https://adilet.zan.kz/rus/docs/P2200000482

3. Makuyana, G. and Odhiambo, N.M. (2018). Public and Private Investment and Economic Growth: An Empirical Investigation. //Studia Universitatis Babeș-Bolyai Oeconomica, Sciendo, 63(2): 87-106. https://doi.org/10.2478/subboec-2018-0010

4. Meyer, Daniel Francois. (2023). The Relationships between Domestic Investment, Country Risk, Governance and Economic Development: a Comparison of Kazakhstan versus Poland. //JOURNAL OF

EASTERN EUROPEAN AND CENTRAL ASIAN RESEARCH, 9 (6),1055-1071, https://doi.org/10.15549/jeecar.v9i6

5. Afonso, A. and St. Aubyn, M. (2019). Economic growth, public, and private investment returns in 17 OECD economies. //Port Econ J, 18, 47–65. https://doi.org/10.1007/s10258-018-0143-7

6. Lukas, R. (1988). On the mechanics of economic development. //Journal of Monetary Economics, 22: 3-42. https://www.parisschoolofeconomics.eu/docs/darcillon-thibault/lucasmechanicseconomicgrowth.pdf

7. Aghion, P. and Howitt P. (1992). A Model of Growth Through Creative Destruction. //Econometrica, 60(2): 323-51. https://doi.org/10.2307/2951599

8. Baneliene, Ruta, Melnikas Borisas, Strazdas Rolandas, Tolocka Eligijus. (2018). Innovation activities and the impact of investment in R&D on the economic growth: Assessment and modelling. //Terra Economicus, 16(4): 66-76. https://doi.org/10.23683/2073-6606-2018-16-4-66-76

9. Joo, B. A. and Shawl, S. (2023). Understanding the Relationship Between Foreign Direct Investment and Economic Growth in BRICS: Panel ARDL Approach. //Vikalpa, 48(2), 100-113. https://doi.org/10.1177/02560909231180078

10. Hossain, R., Roy, C. K., and Akter, R. (2022). The effects of foreign direct investment and trade openness on economic growth amid crises in Asian economies. // Economic Journal of Emerging Markets, 14(2), 231–243. https://doi.org/10.20885/ejem.vol14.iss2.art7

11. Bilas, V. and Franc, S. (2022). The Contribution of Foreign Direct Investment to Economic Growth in the Selected Emerging European Countries: the Evidence Based Upon the Panel Cointegration Model. // Economic Horizons, 24(3), p. 217-229. https://doi.org/10.5937/ekonhor2203229B

12. Nauryzbayeva, Zh.K. (2018). Economic growth and the inflow of foreign direct investment: how relevant are the indicators of their relationship in the context of the economy of Kazakhstan? // Central Asian Economic Review, 4(122), 150-160

13. Zhang, B. (2019). Research on Fixed Assets Investment Forecast Based on ARIMA Model. 2019 International Conference on Economic Management and Model Engineering (ICEMME), Malacca, Malaysia. 381-384. https://doi.org/10.1109/ICEMME49371.2019.00083

14. Makohon, V., Radionov Y. and Adamenko I. (2020). Investment policy of the state as a tool for economic growth of the country. //Problems and Perspectives in Management, 18(3): 245-54. https://doi.org/10.21511/ppm.18(3).2020.21

15. Bi, Xing, and Zhao Kai. (2017). Prediction of investment in fixed assets based on grey neural network and ARIMA model. Proceedings of International Conference on Computers and Industrial Engineering: How Digital Platforms and Industrial Engineering are Transforming Industry and Services. Lisbon. ISSN 21648689, ISBN 978-000000000-2 https://www.scopus.com/record/display.uri?eid=2-s2.0-85040953605&origin=recordpage

16. Govdeli, Tuncer. (2022). Economic Growth, Domestic Savings and Fixed Capital Investments: Analysis for Caucasus and Central Asian Countries // MONTENEGRIN JOURNAL OF ECONOMICS, 18(3), 145-153, https://doi.org/10.14254/1800-5845/2022.18-3.12

17. Ginevicius Romualdas (2023). Assessment of the Effectiveness of investment in R&D by European Union Countries. Amfiteatru Economic. 251 (6). 251-264. https://doi.org/10.24818/EA/2023/62/251

18. Arana, Barbier P.J. (2023). The Relationship between Scientific Production and Economic Growth Through R&D Investment: A Bibliometric Approach. //Journal of Scientometric Research, 12 (3): 596-602. https://doi.org/10.5530/jscires.12.3.057

19. Mudronja, Gorana, Jugovic Alen, Skalamera-Alilovic Dunja. (2019). Research and development and economic growth: EU port regions. Proceedings of Rijeka Faculty of Economics, 37(2), 587-602. https://doi.org/10.18045/zbefri.2019.2.587

20. Wynn, K., Liu M., Cohen J. (202)2. Quantifying the economy-wide returns to innovation for Australia. //Australian Economic Papers, 61(3): 591-614. https://doi.org/10.1111/1467-8454.12262

21. Colapinto, C., Jayaraman R. and La Torre D. (2020). A goal programming model to study the impact of R&D expenditures on sustainability-related criteria: the case of Kazakhstan. //Management Decision, 58 (11): 2497-512. https://doi.org/10.1108/MD-09-2019-1334

22. Huseynli, N. (2023). Examination of the Relationship Between Economic Growth and Research and Development Expenditures in Azerbaijan, Kazakhstan and Kyrgyzstan. //Finance: Theory and Practice, 27 (2): 28-37. https://doi.org/10.26794/2587-5671-2023-27-2-28-37

23. Berg, A., Buffie, E.F., Pattillo, C., Portillo, R., Presbitero, A.F. and Zanna, L.-F. (2018). Some Misconceptions About Public Investment Efficiency and Growth. //Economica, 86(342): 409-430. https://doi.org/10.1111/ecca.12275

24. Cepparulo, Alessandra, Eusepi Giuseppe, Giuriato Luisa. (2023). Public Finance, Fiscal Rules and Public-Private Partnerships: Lessons for Post-COVID-19 Investment Plans // COMPARATIVE ECONOMIC STUDIES, 66(1), p.191-213, https://doi.org/10.1057/s41294-023-00213-x

25. Emako, Ezo, Nuru Seid, Menza Mesfi. (2022). The effect of foreign direct investment on economic growth in developing countries // TRANSNATIONAL CORPORATIONS REVIEW, 14(4), 382-401, SI, 2022-12-10, https://doi.org/10.1080/19186444.2022.2146967

26. Vertakova, Yulia, Klevtsova Maria, Zadimidchenko Anna. (2022). Multiplicative Methodology for Assessing Investment Attractiveness and Risk for Industries // JOURNAL OF RISK AND FINANCIAL MANAGEMENT, 15(10), https://doi.org/10.3390/jrfm15100419

27. Al-Banna, Adnan, Yaqot Mohamed, Menezes Brenno C. (2024). Investment strategies in Industry 4.0 for enhanced supply chain resilience: an empirical analysis // COGENT BUSINESS & MANAGEMENT, 11(1), https://doi.org/10.1080/23311975.2023.2298187

28. Temirbayev, B., Zagal, K., Akhmetzhanova, S. (2021). Investment climate of Kazakhstan: trends of change. //Kazakhstan – Spectrum, 4, 64-82. – https://journal-ks.kisi.kz/index.php/ks/article/view/56

СПИСОК ИСПОЛЬЗОВАННЫХ ИСТОЧНИКОВ

1. UNCTAD. (2024). Доклад о мировых инвестициях 2024. Содействие инвестициям и цифровое правительство. Обзор. https://unctad.org/system/files/official-document/wir2024_overview_ru.pdf

2. Концепция инвестиционной политики Республики Казахстан до 2026 года, утвержденная постановлением Правительства РК от 15.06.2022 года № 482. – https://adilet.zan.kz/rus/docs/P2200000482.

3. Makuyana, G. and Odhiambo, N. M. (2018). Public and Private Investment and Economic Growth: An Empirical Investigation. //Studia Universitatis Babeș-Bolyai Oeconomica, Sciendo, 63(2): 87-106. https://doi.org/10.2478/subboec-2018-0010.

4. Meyer, Daniel Francois. (2023). The Relationships between Domestic Investment, Country Risk, Governance and Economic Development: a Comparison of Kazakhstan versus Poland. //JOURNAL OF EASTERN EUROPEAN AND CENTRAL ASIAN RESEARCH, 9 (6),1055-1071, https://doi.org/10.15549/jeecar.v9i6.

5. Afonso, A. and St. Aubyn, M. (2019). Economic growth, public, and private investment returns in 17 OECD economies. //Port Econ J, 18, 47–65. https://doi.org/10.1007/s10258-018-0143-7.

6. Lukas, R. (1988). On the mechanics of economic development. //Journal of Monetary Economics, 22: 3-42. https://www.parisschoolofeconomics.eu/docs/darcillon-thibault/lucasmechanicseconomicgrowth.pdf.

7. Aghion, P. and Howitt P. (1992). A Model of Growth Through Creative Destruction. //Econometrica, 60(2): 323-51. https://doi.org/10.2307/2951599.

8. Baneliene, Ruta, Melnikas Borisas, Strazdas Rolandas, Tolocka Eligijus. (2018). Innovation activities and the impact of investment in R&D on the economic growth: Assessment and modelling. //Terra Economicus, 16(4): 66-76. https://doi.org/10.23683/2073-6606-2018-16-4-66-76.

9. Joo, B. A. and Shawl, S. (2023). Understanding the Relationship Between Foreign Direct Investment and Economic Growth in BRICS: Panel ARDL Approach. //Vikalpa, 48(2), 100-113. https://doi.org/10.1177/02560909231180078.

10. Hossain, R., Roy, C. K., and Akter, R. (2022). The effects of foreign direct investment and trade openness on economic growth amid crises in Asian economies. // Economic Journal of Emerging Markets, 14(2), 231-243. https://doi.org/10.20885/ejem.vol14.iss2.art7.

11. Bilas, V. and Franc, S. (2022). The Contribution of Foreign Direct Investment to Economic Growth in the Selected Emerging European Countries: the Evidence Based Upon the Panel Cointegration Model. // Economic Horizons, 24(3), p. 217-229. https://doi.org/10.5937/ekonhor2203229B.

12. Наурызбаева, Ж. К. (2018). Экономический рост и приток прямых иностранных инвестиций: насколько релевантны показатели их связи в условиях экономики Казахстана? // Central Asian Economic Review, 4(122), 150-160.

13. Zhang, B. (2019). Research on Fixed Assets Investment Forecast Based on ARIMA Model. 2019 International Conference on Economic Management and Model Engineering (ICEMME), Malacca, Malaysia. 381-384. https://doi.org/10.1109/ICEMME49371.2019.00083.

14. Makohon, V., Radionov Y. and Adamenko I. (2020). Investment policy of the state as a tool for economic growth of the country. //Problems and Perspectives in Management, 18(3): 245-54. https://doi.org/10.21511/ppm.18(3).2020.21.

15. Bi, Xing, and Zhao Kai. (2017). Prediction of investment in fixed assets based on grey neural network and ARIMA model. Proceedings of International Conference on Computers and Industrial Engineering: How Digital Platforms and Industrial Engineering are Transforming Industry and Services. Lisbon. ISSN 21648689, ISBN 978-000000000-2 https://www.scopus.com/record/display.uri?eid=2-s2.0-85040953605&origin=recordpage.

16. Govdeli, Tuncer. (2022). Economic Growth, Domestic Savings and Fixed Capital Investments: Analysis for Caucasus and Central Asian Countries // MONTENEGRIN JOURNAL OF ECONOMICS, 18(3), 145-153, https://doi.org/10.14254/1800-5845/2022.18-3.12.

17. Ginevicius Romualdas (2023). Assessment of the Effectiveness of investment in R&D by European Union Countries. Amfiteatru Economic. 251 (6). 251-264. https://doi.org/10.24818/EA/2023/62/251.

18. Arana, Barbier P. J. (2023). The Relationship between Scientific Production and Economic Growth Through R&D Investment: A Bibliometric Approach. //Journal of Scientometric Research, 12 (3): 596-602. https://doi.org/10.5530/jscires.12.3.057.

19. Mudronja, Gorana, Jugovic Alen, Skalamera-Alilovic Dunja. (2019). Research and development and economic growth: EU port regions. Proceedings of Rijeka Faculty of Economics, 37(2), 587-602. https://doi.org/10.18045/zbefri.2019.2.587.

20. Wynn, K., Liu M., Cohen J. (202)2. Quantifying the economy-wide returns to innovation for Australia. //Australian Economic Papers, 61(3): 591-614. https://doi.org/10.1111/1467-8454.12262.

21. Colapinto, C., Jayaraman R. and La Torre D. (2020). A goal programming model to study the impact of R&D expenditures on sustainability-related criteria: the case of Kazakhstan. //Management Decision, 58 (11): 2497-512. https://doi.org/10.1108/MD-09-2019-1334.

22. Huseynli, N. (2023). Examination of the Relationship Between Economic Growth and Research and Development Expenditures in Azerbaijan, Kazakhstan and Kyrgyzstan. //Finance: Theory and Practice, 27 (2): 28-37. https://doi.org/10.26794/2587-5671-2023-27-2-28-37.

23. Berg, A., Buffie, E.F., Pattillo, C., Portillo, R., Presbitero, A.F. and Zanna, L.-F. (2018). Some Misconceptions About Public Investment Efficiency and Growth. //Economica, 86(342): 409-430. https://doi.org/10.1111/ecca.12275.

24. Cepparulo, Alessandra, Eusepi Giuseppe, Giuriato Luisa. (2023). Public Finance, Fiscal Rules and Public-Private Partnerships: Lessons for Post-COVID-19 Investment Plans // COMPARATIVE ECONOMIC STUDIES, 66(1), p. 191-213, https://doi.org/10.1057/s41294-023-00213-x.

25. Emako, Ezo, Nuru Seid, Menza Mesfi. (2022). The effect of foreign direct investment on economic growth in developing countries // TRANSNATIONAL CORPORATIONS REVIEW, 14(4), 382-401, SI, 2022-12-10, https://doi.org/10.1080/19186444.2022.2146967.

26. Vertakova, Yulia, Klevtsova Maria, Zadimidchenko Anna. (2022). Multiplicative Methodology for Assessing Investment Attractiveness and Risk for Industries // JOURNAL OF RISK AND FINANCIAL MANAGEMENT, 15(10), https://doi.org/10.3390/jrfm15100419.

27. Al-Banna, Adnan, Yaqot Mohamed, Menezes Brenno C. (2024). Investment strategies in Industry 4.0 for enhanced supply chain resilience: an empirical analysis // COGENT BUSINESS & MANAGEMENT, 11(1), https://doi.org/10.1080/23311975.2023.2298187

28. Темирбаев, Б., Загал, К., Ахметжанова, С. (2021). Инвестиционный климат Казахстана: тенденции изменения. // Казахстан – Спектр, 4, 64-82. https://journal-ks.kisi.kz/index.php/ks/article/view/

ИНВЕСТИЦИЯ МЕН ЭКОНОМИКАЛЫҚ ӨСУДІҢ ӨЗАРА БАЙЛАНЫСЫ: БИБЛИОМЕТРИЯЛЫҚ ТАЛДАУ

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Аңдатпа. Мақалада инвестиция мен экономикалық өсудің өзара байланысын зерттеудегі заманауи үрдістер библиометриялық талдау негізінде қарастырылады. Мақсат – инвестиция мен экономикалық өсу арасындағы байланысты зерттеудегі негізгі тұжырымдамалар мен тәсілдерді анықтау және осы тақырыптағы зерттеу олқылықтарын анықтау арқылы болашақ зерт-

теулерге негіз жасау. Зерттеуде библиометриялық талдау әдісі қолданылып, VOSviewer және Biblioshiny бағдарламалық құралдары пайдаланылды. Үлгі Scopus деректер базасынан алынған 432 жарияланымды қамтыды. Таңдалған жарияланымдар ғылыми еңбектердің жылдық саны, жарияланым параметрлерінің байланысы, карталау, кластерлеу, тақырыптық модельдеу және желілік талдау сияқты көрсеткіштер бойынша талданды. Ғылыми әдебиеттерді шолу барысында зерттеушілердің инвестицияның өсуге ықпалын анықтау үшін қандай зерттеу әдістерін, модельдер спецификациясын және деректер жиынтықтарын пайдаланатыны анықталды. Талдау барысында инвестиция мен экономикалық өсу арасындағы байланысты зерттеуде зерттеушілер назар аударатын негізгі факторлар анықталды. Сондай-ақ Африка елдері, Малайзия, Иран, Пәкістан және басқа да дамушы елдердегі жағдайды зерттеуге назардың ауысқаны туралы мәліметтер алынды. Библиометриялық талдау нәтижелерін инвестиция мен экономикалық даму тақырыптары бойынша болашақ зерттеулерді жоспарлауда қолдануға болады.
Түйін сөздер: инвестиция, экономикалық өсу, модельдер, библиометриялық талдау, VOSviewer, Biblioshiny, жарияланымдарға шолу.

ВЗАИМОСВЯЗЬ ИНВЕСТИЦИЙ И ЭКОНОМИЧЕСКОГО РОСТА: БИБЛИОМЕТРИЧЕСКИЙ АНАЛИЗ

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Аннотация. В статье рассмотрены современные тенденции в области исследования взаимосвязи инвестиций и экономического роста на основе библиометрического анализа. Целью статьи является проведение обзора научных публикаций для определения основных концепций и подходов в изучении связи между инвестициями и экономическим ростом, а также выявление исследовательских пробелов в данной тематике для проведения дальнейших исследований. Для исследования был использован метод библиометрического анализа с применением программных инструментов VOSviewer и Biblioshiny. Выборка включала 432 публикации из базы данных Scopus. Отобранные публикации были проанализированы по таким индикаторам, как количество годовой научной продукции, связь между параметрами публикаций, картирования, кластеризации, тематическое моделирование и анализ сетей. Обзор научной литературы позволил выявить, какие методы исследования, спецификация моделей, наборы данных используются исследователями для выяснения роли инвестиций в достижении роста. Проведенный анализ позволил определить основные факторы, которые берутся исследователями во внимание при изучении взаимосвязи между инвестициями и экономическим ростом. Также были получены данные о смещении центра внимания на изучение ситуации в развивающихся странах Африки, Малайзии, Иране, Пакистане и других. Полученные в ходе библиометрического анализа выводы можно использовать для дальнейшего исследования перспективных тем, связанных с инвестициями и экономическим развитием.
Ключевые слова: инвестиции, экономический рост, модели, библиометрический анализ, VOSviewer, Biblioshiny, обзор публикаций.