

Bibliometric and Retrospective Analysis on Economic Behavior for Inclusive Growth

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Abstract

The article provides a bibliometric analysis of existing publications on the market participants' behavior (manufacturers, trading companies, and other intermediaries and consumers). The basis for the study is the Scopus database, which presents publications on this topic for over thirty years. The article aims to study the research directions on behavioral models of economic entities and the factors that influence their formation. Such analysis can be used to determine the place of behavioral economics in the system of modern views of economists on its impact on the further global development of the economic system. By selecting the most relevant articles on the economic behavior of market participants in the context of an inclusive economy, 1198 scientific articles were selected, published in periodicals from 1989 to 2021. The clustering and retrospective analysis were chosen as a methodological study tool, performed using VOSviewer 1.6.16 software. It made it possible to obtain a clear visualization of research clusters on economic entities' behavioral aspects, including individual periods of the enormous publication activity from 2011 to 2021. In addition, the article identifies the largest regional research networks of behavioral models in an inclusive economy. Based on the analysis of the scientific publications from the Scopus database, three periods of research on the behavioral aspects of economic entities were identified. The study of the first stage focused on e-commerce development as a significant factor in market changes, accompanied by the transition of competition from local to global. The next phase of the economic behavior study was accompanied by the sustainable development concept and changes in consumer values, which influenced the choice of suppliers and service providers and the growing importance of decision criteria that previously could not be considered purely economic. Considerable attention in this period of publishing activity was paid to social responsibility and sustainable consumption. The last research defined in the article stages is aimed at using modern research methods and information technologies for a deeper analysis of the subject area. It makes it possible to identify relevant factors influencing the formation of economic entities' behavior patterns, which could not be determined before.

Keywords: economy, market, behavior, business, consumers, inclusive growth.

JEL Classification: D11, H30, O10.

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Introduction

Many factors shape the economic agent's behavior. At the same time, the economic behavior of each of the market participants can significantly affect economic development. Along with many important factors, such as indicators of macroeconomic stability, the study of behavioral patterns of each market participant allows a deeper understanding of socio-economic processes. And also identify trends that will change the economic system and society soon. It allows companies, non-profit organizations, social institutions, and government officials to be more prepared for the impending changes. Analysis of research published in leading scientific journals contributes to a deeper understanding of the economy and social sphere processes and leads to changes in behavioral patterns.

Literature Review

Given the significant number of social and economic shocks, increasing global problems of hunger, energy inequality, access to resources, etc., the inclusive economy is increasingly the subject of scientific debate. So, signs of inclusive development, catalysts, and inhibitors of inclusive growth, policy measures, etc., are partially or fully described in the works (Domonkos, 2015; George, 2012; Gupta, 2016; Hay, 2020; Heshmati, 2019; etc.). Behavioral economics is at the peak of research. Many works (Alefán, 2022; Arora, 2019; Ata, 2021; Biewendt, 2021; Bildiren, A., 2022; Chong, 2012; Davidaviciene, 2019; Dittmar, 2014; Dunska, 2018; Fernandes, 2014; Kim, 2008; Kim, 2011; McKnight, 2001; Napoli, 2014; Prothero, 2011; Rahmanov, 2021; Salé, 2021; Wong, 2003) is devoted to the study, systematization, evaluation, modeling of behavioral factors. A significant number of publications are devoted to the study of fundamental and practical approaches to the systematization of scientific knowledge based on the use of bibliometric analysis, in particular (Dubina, 2020; Duffy, 2020; Kolosok, 2021; Letunovska, 2021; Makerska, 2021; Zolkover, 2020). The application of retrospective analysis is not new, but it is interesting to adapt its methods to modern research (Hong, 2011, Alefan, 2022; Bildiren, 2022; Pasco, 2022; Dittmar, 2014).

Methodology and research methods

Scopus was selected as the primary source for this research, one of the most influential scientific databases. The articles were searched based on the titles, abstracts, and keywords. The scientific area of research is inclusive economic growth. A time span of 30 years was set, and thus, only literature published from 1989 to 2021 was selected. Only articles written in English were chosen for the bibliometric analysis, and publications authored in other languages were excluded from the study. Restrictions have been applied to the scope of the research (publications focused on economic issues). Thus, 1198 publications were taken for further consideration. VOSviewer 1.6.16 software was used to map and visualize scientific networks to make joint publications to analyze publications comprehensively. All analysed data were downloaded from public databases; therefore, ethics committee approval or informed consent was not required.

Table 1. Stages of the literature search and selection process

| Stage | Filters |
|---|---|
| <i>Stage 1 Data Collection</i> | |
| Choice of suitable information sources | Scopus Database |
| Identification of search field in the database | Title, abstract, keywords |
| Identification of search keywords | Consumer behavior, economic growth, factors, business |
| <i>Stage 2 Data screening</i> | |
| Identification of publication type | Journal articles only; conference papers, books, and chapters of books excluded |
| Choice of the language | English |
| Choice of the field of publication | Business, Management, and Accounting; Social Sciences; Economics, Econometrics, and Finance |
| Identification of the publication's time limits | 1989-2021 (since the publications beginning on the subject in the database) |
| <i>Stage 3 Bibliometric analysis</i> | |
| Tools | VOSviewer 1.6.16, Microsoft Excel |

Source: developed by the authors

Results

According to the study's approach to monitoring published research (Table 1), for the period 1989–2021, 1198 original articles were identified. Figure 1 shows the growth dynamics of the number of publications on economic behavior for inclusive growth and their citations. The polynomial growth trend in the annual

number of articles for the last 32 years is determined ($y = 9,5858x^2 - 212,09x + 809,16$, $R^2 = 0.877$). From 1989 to 2021, the average growth rate of published study results was 2,5%. The highest citation rate and the number of citations per article were achieved in 2021 (6353 and 32 citations per 1 publication, respectively).

Bibliometric analysis using the software product VOSviewer 1.6.16 allowed us to identify six key clusters of research on the behavioral factors that impact the economic entities' activities involved in economic activities at the local and global levels. Thus, 5873 keywords were selected for the initial analysis, with a frequency of more than five times. As a result of their verification for relevance, the main clusters of research were determined from 287 words.

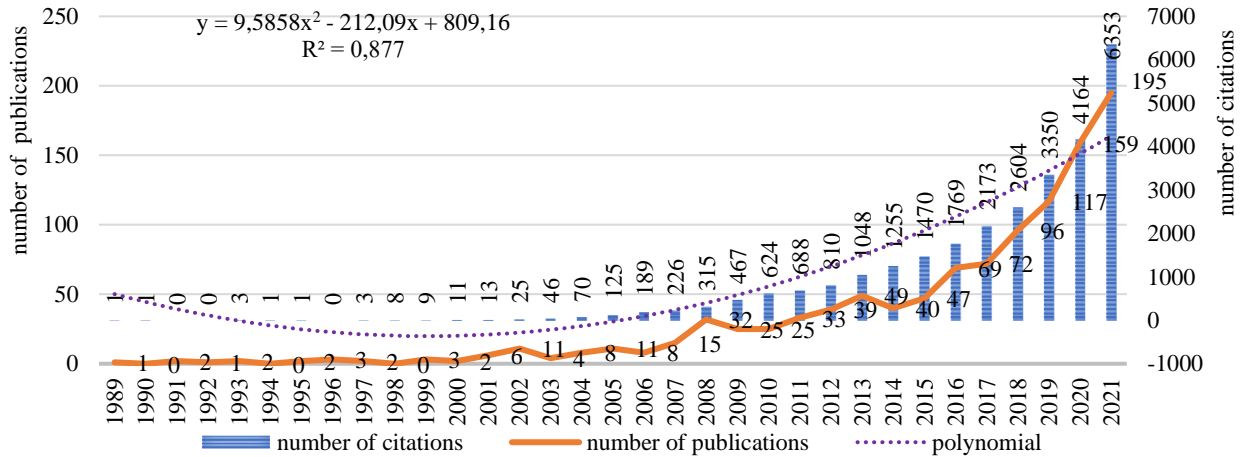


Figure 1. Number of publications and citations on economic behavior for inclusive growth

Source: developed by the authors

The ten most-cited publications in economic behavior for inclusive growth research in the Scopus database are listed in Table 2. All articles are cited more than 200 times. That indicates the high value of these publications to the world scientific community. All works are published in high-ranking journals with high ratings.

Table 2. Top 10 leading publications in economic behavior for inclusive growth research (based on the Scopus database)

| Article title | Total citations | Author | Country affiliation | Journal/Year of publication |
|---|-----------------|--|--|---|
| A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents | 1810 | Kim, D.J., Ferrin, D.L., Rao, H.R. | United States, Singapore | Decision Support Systems, 2008 |
| What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology | 1329 | McKnight, D.H., Chervany, N.L. | United States | International Journal of Electronic Commerce, 2001 |
| Financial literacy, financial education, and downstream financial behaviors | 650 | Fernandes, D., Lynch Jr., J.G., Netemeyer, R.G. | Netherlands, Portugal, United States | Management Science, 2014 |
| What can big data and text analytics tell us about hotel guest experience and satisfaction? | 463 | Xiang, Z., Schwartz, Z., Gerdes, J.H., Uysal, M. | United States | International Journal of Hospitality Management, 2015 |
| Sustainable consumption: Opportunities for consumer research and public policy | 424 | Prothero, A., Dobscha, S., Freund, J., Kilbourne, W. E., Luchs, M. G., Ozanne, L.K., Thøgersen, J. | Ireland, United States, United Kingdom | Journal of Public Policy and Marketing, 2011 |
| Predicting consumer decisions to adopt mobile commerce: Cross country empirical examination between China and Malaysia | 353 | Chong, A.Y.-L., Chan, F.T.S., Ooi, K.-B. | Hong Kong, Malaysia | Decision Support Systems, 2012 |
| Consumer purchase intention for organic personal care products | 352 | Kim, H.Y., Chung, J.-E. | United States | Journal of Consumer Marketing, 2011 |
| The relationship between materialism and personal well-being: A meta-analysis | 344 | Dittmar, H., Bond, R., Hurst, M., Kasser, T. | United Kingdom, United States | Journal of Personality and Social Psychology, |

| Article title | Total citations | Author | Country affiliation | Journal/Year of publication |
|--|-----------------|--|---------------------------|------------------------------------|
| | | | | 2014 |
| Do Reverse-Worded Items Confound Measures in Cross-Cultural Consumer Research? The Case of the Material Values Scale | 311 | Wong, N., Rindfleisch, A., Burroughs, J.E. | United States | Journal of Consumer Research, 2003 |
| Measuring consumer-based brand authenticity | 271 | Napoli, J., Dickinson, S.J., Beverland, M.B., Farrelly, F. | Australia, United Kingdom | Journal of Business Research, 2014 |

Source: developed by the authors.

The most cited publications on the research topic are related to the paradigm shift of consumer behavior and, therefore, the manufacturer with the development of e-commerce. The two most cited publications (Table 2) address the issue of trust as a guarantee of e-commerce development. It is quite logical because one of the biggest problems in the growth of e-commerce in the early stages of its formation was the distrust of consumers and producers (sellers) due to unfinished tools for doing business. Eight years have passed between the article's publication (McKnight, D.H., Chervany, N.L, 2001) and the study's results (Kim, D.J., Ferrin, D.L., Rao, H.R., 2008). It indicates the duration of e-commerce formation and technology development that has ensured the business process's reliability. It has become a driver for more and more businesses to engage in e-commerce and global business change. Later publications focus on the methodology that can be used to study changes in the behavior of consumers, producers, and intermediaries in the market and changes in behavior due to the spread of sustainable consumption ideas.

The red cluster (109 items) is formed around studying consumer behavior in the activities of firms, organizations, and enterprises, modeling behavioral processes, and their impact on the development of economic entities. The green cluster (67 items) consists of studies of sustainable consumption and responsible attitude to the environment. Much of the cluster's publications relate to finding a balance between production and consumption while minimizing environmental damage. The blue cluster (61 items) brings together research papers on the structural modeling of consumer behavior in terms of gender, income, age, etc., to achieve economic and marketing results. The yellow cluster (27 items) is devoted to studying consumers' psychological and behavioral impulses and values that influence their consumer choices.

The purple cluster (11 items) explores communication and information technologies aimed at forming rational and predictable consumer behavior based on modern humanistic values and ensuring high living standards. The Blue Cluster (4 items) consists of publications that explore approaches to effective management decisions by business representatives, manufacturers, intermediaries, and logistics companies. Much attention in the articles of this cluster is paid to the criteria of business efficiency, in particular financial management, standardization, and knowledge management.

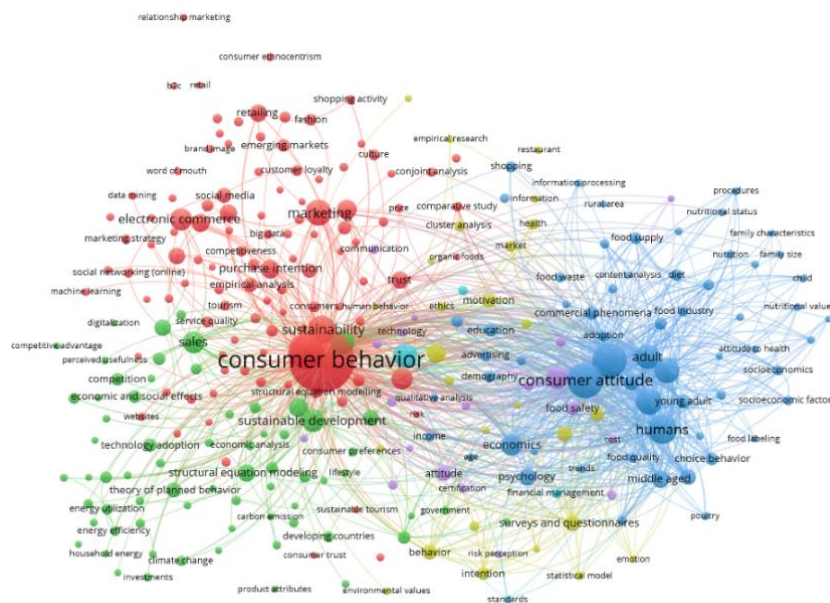


Figure 2. Visualization map of scientific publications on economic behavior for inclusive growth

Source: developed by the authors

Retrospective analysis of scientific research is essential for understanding the researched problems. The visualization obtained with VOSviewer 1.6.16 is shown in Figure 3. Retrospective analysis is an excellent tool that complements cluster analysis. The combination of these tools allows not only to determine the directions of the scientific problem that are in the focus of scientists but also to trace the change of views on its study. The scientific problem may have different relevance in different periods under the influence of influencing factors. It allows you to study the situation comprehensively, using different approaches to study specific aspects of the complex problem.

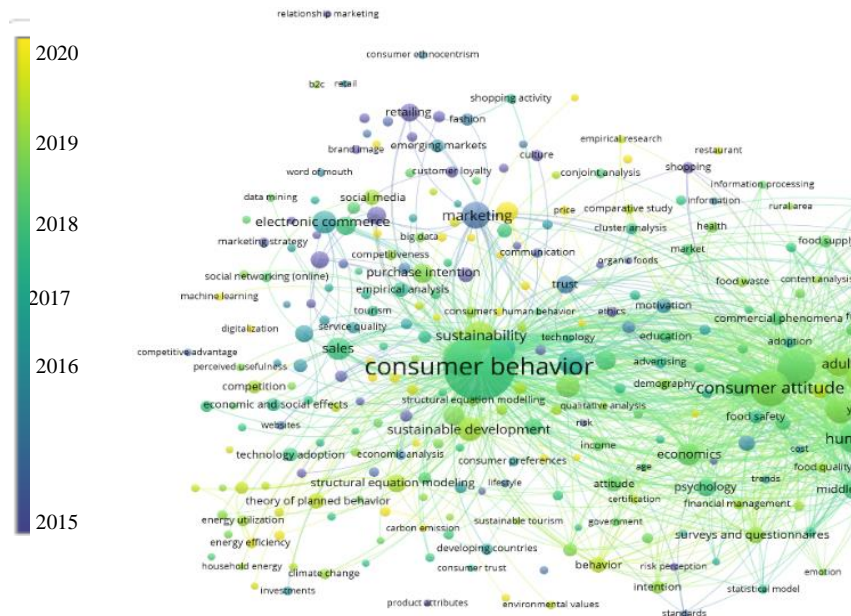


Figure 3. Retrospective analysis of scientific research on economic behavior for inclusive growth

Source: developed by the authors

A retrospective analysis of scientific research on economic behavior for inclusive growth indicates a change in the research subject. The attention of scientists during the study of the research question shifted. Until 2017, the subject of the study was mainly problems in the organization's internal environment. Particular attention was paid to general management, consumer research, and improvement of marketing activities. It was seen as the basis for effective company behavior in the market, which will provide conditions for effective satisfaction of consumer needs and building a sustainable model of profitable interaction of producers, intermediaries, and consumers in the market.

However, the growing importance of social responsibility in society has led to a change in consumer behavior (population) and business. Accordingly, the most significant research subject was the transition to a socially responsible business model following the concept of sustainable development. From 2017 to 2019, such studies aroused the most significant interest of the scientific community and business.

Recent research on methods of studying the problem of the behavior of economic entities to form a model of socially responsible business and promote inclusive economic growth. The use of information technology and big data processing allows the information base to more fully make effective management decisions about the interaction of business and consumers.

To supplement the current results of the research study on economic behavior for inclusive growth, Figure 4 contains a visualization of research areas for individual years from 2010 to 2021. This visualization confirms the conclusions described above regarding the retrospective analysis of scientific publications on the research topic. In this case, a more detailed analysis confirms the previous findings.

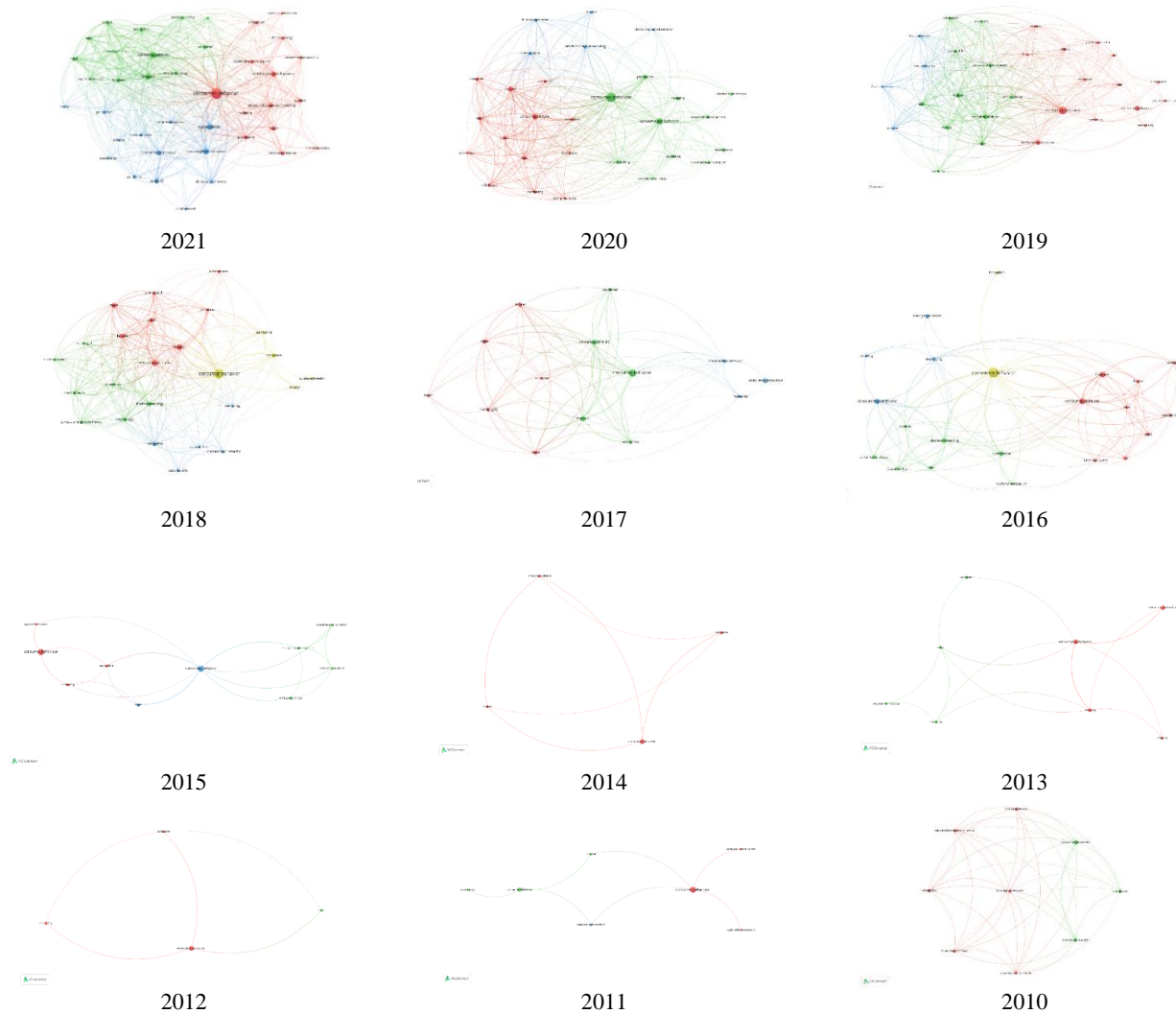


Figure 4. Detailing retrospective analysis of scientific publications on economic behavior for inclusive growth

Source: developed by the authors.

The dynamics of publishing activity on the research topic by country show that attention to behavioral economics as a component of the economic system and the driving force of economic development is a traditional component of economic doctrine in the United States (Figure 5). In other countries, this area of research is not so developed. However, there is a noticeable tendency to increase attention to the behavioral economy in China. It can be assumed that this is due to the need to find latent drivers of economic development, the activation of which does not require high financial costs or the implementation of large-scale infrastructure projects.

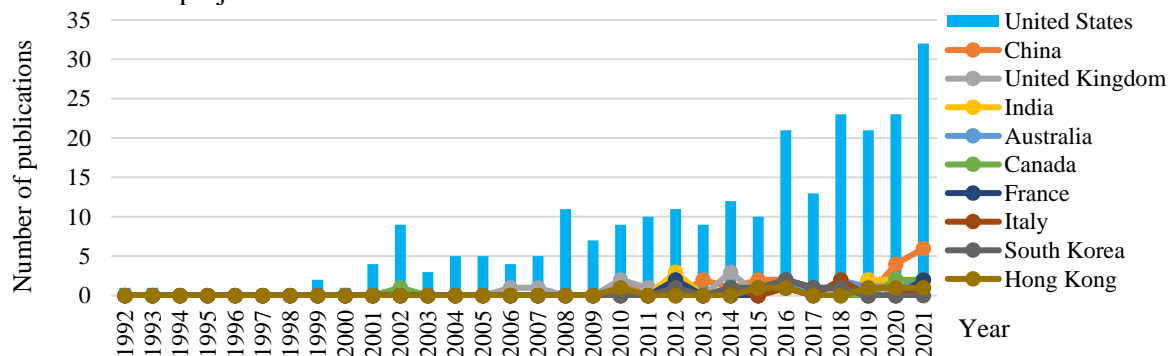


Figure 5. Dynamics of publishing activity on economic behavior for inclusive growth in the regional context

Source: developed by the authors.

Figure 6 shows several established research networks that study behavioral patterns and factors contributing to their formation in an inclusive economy. The most powerful collaboration, which results in a significant

number of scientific publications, has been established between scientists from the United States and China. At the same time, there are several research networks in Europe simultaneously. One of them can be called Central European, which unites countries formerly associated with the Soviet Union. Such countries include, in particular, Slovakia, Romania, the Czech Republic, and Lithuania. Another network brings together scientists from Italy, Germany, and Belgium.

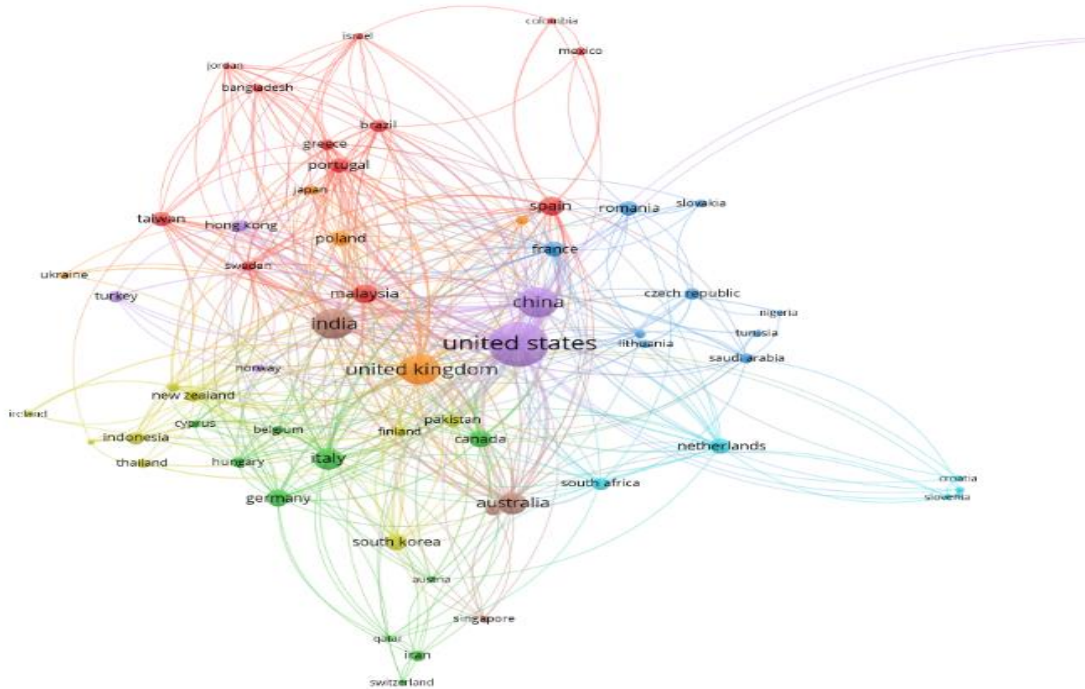


Figure 6. Research networks on economic behavior for inclusive growth

Source: developed by the authors

The Asian region has its regional research network. However, China does not play a significant role in it.

With the growing influence of consumers on economic processes, the study of behavioral models is intensifying, taking into account what becomes a business necessity. Researchers from around the world are increasingly paying attention to this research topic. It leads to the formation of new research networks. It should be noted that the role of regional cooperation is growing, for example, between the United States and Canada or between China and other Asian countries (Figure 7).

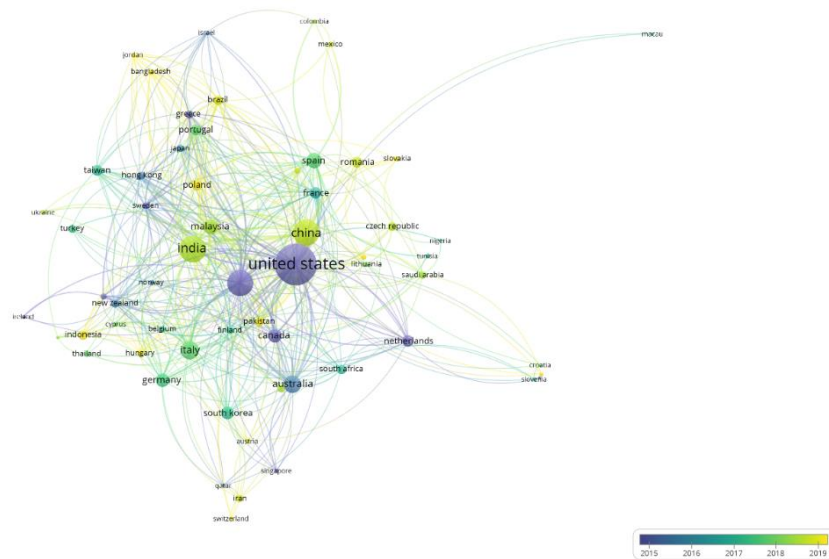


Figure 7. Dynamics of research networks formation on economic behavior for inclusive growth

Source: developed by the authors.

Conclusions

Behavioral patterns of consumers and the factors that influence their formation have long been the subject of research by scientists. It is evidenced by the significant number of publications in the Scopus database for over thirty years. The research topic was updated due to the transition of competition from the local to the global level due to the development of e-commerce. The next stage of the research was related to forming a sustainable consumption model and the need to conduct socially responsible business. The latest research focuses on applying the latest research methods and information technologies for a more in-depth analysis of the available data on the behavioral models of economic entities.

Author Contributions

Conceptualization: L.S, and I.V.; **methodology:** L.S, I.V.; **software:** L.S.; **formal analysis:** L.S., I.V., K.S., and Ye.B.; **investigation:** L.S., I.V., K.S., Ye.B.; **writing-original draft preparation:** L.S., I.V., K.S.; **visualization:** L.S., I.V., K.S., Ye.B.; **supervision:** L.S.

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