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A Bibliometric Review of The B40 Households Group in Malaysia

Nurul Nadzirah Abdul Nasir[1]

[1] *Academy of Contemporary Islamic Studies*
    Universiti Teknologi Mara Shah Alam, Selangor, MALAYSIA

*Corresponding Author: nurulnadzirah@uitm.edu.my

Abstract

To give a comprehensive assessment of the B40 household groups research sector, a bibliometric analysis of 246 papers from the Scopus database between 2019 and 2023 is being conducted by this project. The study aims to learn about the latest research topics being worked on by researchers, examine Malaysia's contribution to the field, highlight author, university, and country collaborations in the field, and identify the most influential authors, universities, nations, and citations. Based on the study, Malaysia, the US, and the UK are the top three countries that have looked at B40 household groups. Focusing on B40 family groups most of the researchers at Universiti Kebangsaan Malaysia, Universiti Teknologi MARA, and Universiti Malaya. On this subject, Sani, N.S. is the most well-known author. Due to its unique demographic of B40 people, Malaysia is the only country in the world that carries out extensive research on B40 household groupings.

1. Introduction

Malaysia is a constitutional monarchy with a parliamentary elected federal government, located in Southeast Asia and classified as an upper-middle-income nation. Malaysia is made up of 13 states in total, with 11 on the Malay Peninsula and 2 (Sabah and Sarawak) on the island of Borneo. Though the majority ethnic group in Malaysia is Malays, with Chinese and Indians making up the other two, Islam is the official religion of the nation and is practiced by about 60% of its citizens. The country's 2019 labor force participation rate was 68.9%, with a 3.3% unemployment rate. Its gross national income was $10,590, while its poverty headcount ratio at the national poverty level was 0.4 in 2018 compared to 3.8 in 2008. While the proportion of Malaysia's population 65 years of age and older is 6.82%, the country also has a very young population (23.10%) under the age of 15. Currently, Malaysians are classified into three income divisions for households: Bottom 40% (B40) - RM6,501 and below per month; Middle 40% (M40) - RM6,502 to RM16,087; and Top 20% (T20) - RM16,088 and above per month (Abd Hamid et al., 2021). According to (Sheykhi, 2010), a household consists of one person or a collection of people who live together at the same address or primary residence and who share meals or living quarters every day. Magli et al. (2022) state that households can be divided into two categories for sociological analysis:

a) Based on the number, size, and makeup of the families in the home; and

b) Based on the age and sex composition of the household, occasionally influence the number of adults, children, and retirees.

   The term "B40" refers to a low-income group that is further classified into four structures: B1 through B4. Families earning RM2,500 or less make up the B1 group; those earning between RM2,501 and RM3,170 make up the B2 class; those earning between RM3,171 and RM3,970 make up the B3 class; and those earning between RM3,971 and RM4,850 make up the last category, B4. As a result of having to fight for scarce resources to meet their fundamental needs, households in the B40 household group have higher living costs due to high population

density. The level of living is said to be declining when an individual's income is less than their cost of living. To pay the shortfall, the person ended up taking on a second job or working part-time (Ibhrim et al., 2022).

The Eleventh Malaysian Plan's execution in Malaysia shows efforts to raise the standard of life for the country's lowest 40% income group (B40) (Thinagar et al., 2021). According to (Ghazali, 2017), 64.77% of B40 households are thought to be single-income earners, which puts them at risk for stress and shock that could potentially affect their ability to support themselves. If the socioeconomic status of B40 households stays the same, the nation's social costs would rise due to a decrease in the demand for skilled workers, which would affect economic growth (Rashid et al., 2020; Siwar et al., 2015). Therefore, measures to raise the income of B40 households must be taken by the government. But as Malaysia grows, B40 households should not be excluded from taking advantage of the benefits brought about by the expansion of the area. Regardless of ethnicity, B40 households need to be addressed. This includes vulnerable households and aspirations, as well as impoverished and low-income households in both urban and rural locations. Because of this, the government's role in the planning process extends beyond just providing support; it also involves implementing and overseeing the process (Mayan et al., 2017; Thinagar et al., 2021).

The 11th Malaysia Plan also aimed to raise the median monthly income from RM2,629 to RM5,701 and the average monthly family income of the lowest income group from RM2,537 in 2014 to RM5,270 in 2020. Growing the middle class was one of the three tactics the government came up with to raise household wealth and income. The government has launched several programs to assist the B40 group in raising their income, including BR1M, MySuria, Agropreneur, mobilpreneur, taxi "ride-sharing" (e.g., Grabcar, Uber), and entrepreneurship, as announced by Malaysia's Prime Minister in the 2017 Budget (Malik & Ayop, 2020). The low-income B40 group has demonstrated a positive correlation between social capital and improved quality of life (Amin et al., 2018). For instance, the Bantuan Rakyat 1 Malaysia (BRIM) was created to increase the purchasing power of individuals impacted by the 2015 GST rollout, especially the B40 group (Magli et al., 2022).

1.1 Research Questions

The question dictates how the data are found, gathered, and presented, along with the review's goal, its deliverables, and its target audience (Papaioannou et al., 2016). In this work, we aim to address multiple questions:

- What is the trend/what are the research trends in B40 household groups in Malaysia according to the year of publication?
- What are keywords' distribution and trend?
- Which are the most influential countries?
- Who are the most influential authors?
- Who has been published in the area concerning the affiliated organizations and countries?

2. Methodology

In 1969, Alan Pittard coined the word "bibliometrics," hoping it would become widely recognized in the information science community and be used specifically in all studies aimed at measuring the processes involved in written communication (Pritchard, 1969). It is crucial for scientific research to obtain a bibliometric analysis profile that outlines the research trajectory and dynamics of research activities worldwide (Liu et al., 2014), as well as a broader view of previous studies on the topic matter (Bojović et al., 2014). Moed (2006) states that this kind of research can shed light on the significant policy implications of quantitative, bibliometric assessments of the academic literature for a better understanding of scholarly activity and performance. This study uses bibliometric methods to conduct a systematic analysis of the literature by utilizing articles indexed in Elsevier's database and Scopus index. We anticipate that this paper's bibliometric analysis of articles from international journals will serve as a helpful resource for further investigation.

2.1 Data Search Strategy

Scopus is a great research platform that facilitates information gathering, analysis, and sharing in the humanities, social sciences, and natural sciences (Sudakova et al., 2022). Enhancing the efficiency and output of the research process is the Scopus database. Scopus was chosen as the database since it indexes the top papers about education and offers information for bibliometric study. Searching the Scopus database, we found pertinent research. We used the most thorough search possible, with a few phrases being chosen. Using the Scopus database website, an online search was conducted. Two of the three search terms that were used were "Malaysia" and "B40 household groups." After that, linguistic restrictions followed. The last query that was used was this one.

Search phrases for article retrieval were chosen using a screening technique in a study. B40 household groups AND Malaysia from the Scopus database, 280 documents were obtained using the following conditions: (LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR,

2022) OR LIMIT-TO (PUBYEAR, 2023). Next, using the most refined search phrase, 246 research publications were discovered and used for bibliometric analysis.

2.2 Data Analysis

Bibliometric meta-data was subjected to analyses of co-authorship, bibliographic coupling, keyword co-occurrence, and citation using VOSViewer software. A reference to the same publication in two different sources is deemed to be bibliographic coupling. In other words, the linkages between elements, such as publications, journals, and authors, are established based on the quantity of common resources. The co-occurrence of keyword analysis shows how the domain has changed over time (Deng & Xia, 2020). As a result, it is a useful technique for determining the most popular subjects within a certain research field. Citation analysis aids in the identification of popular study subjects and publications by other scholars (Lai, 2020). Presentations of the analysis's findings include tables and network visualization maps.

After lowering the weighted sum of the squared distances between each pair of elements, VOSViewer arranges the items into a map. According to (Appio et al., 2016), normalization based on LinLog/modularity was created. Additionally, by using VOSViewer's visualization tools on the data set, analyses like co-citation and co-occurrence analysis and keyword co-occurrence analysis were carried out, uncovering patterns based on mathematical relationships. With keyword co-occurrence analysis, one may effectively uncover popular themes across several domains (Zhao, 2017) and analyze the development of a research area over time (Li et al., 2016). As opposed to this, citation analysis helps highlight important research questions, trends, and methodologies as well as investigating the historical significance of a discipline's primary focus (Allahverdiyev & Yucesoy, 2017). One of the bibliometric techniques that are commonly used is document co-citation analysis (Appio et al., 2016; Fahimnia et al., 2015; Liu et al., 2015), and the results of this technique depend on network theory to determine the pertinent data structure (Liu et al., 2015).

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4. Findings

1. What is the trend/what are the research trends in B40 household groups in Malaysia according to the year of publication?
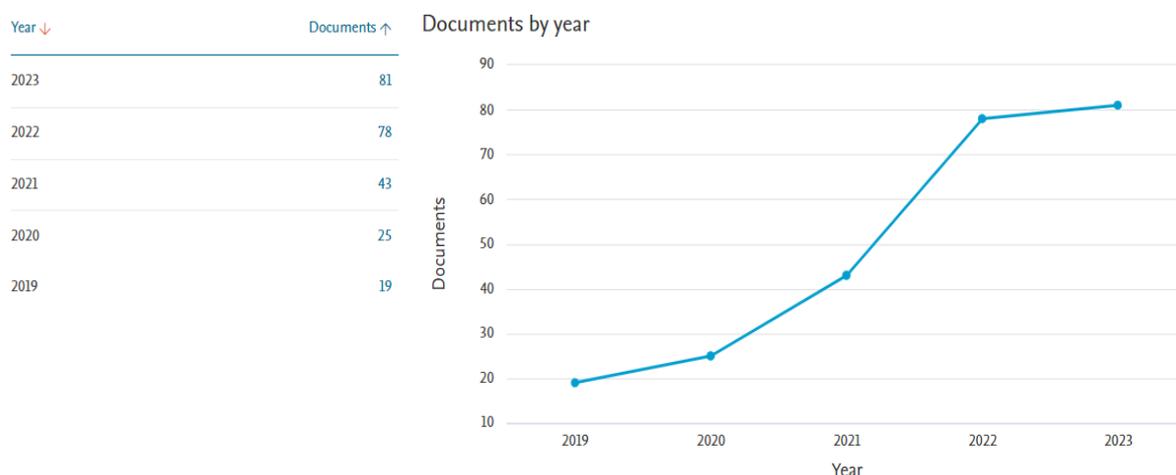

Year ↓	Documents ↑
2023	81
2022	78
2021	43
2020	25
2019	19

Fig. 1 *Research trends in B40 household group studies*

Figure 1 shows the number of B40 household group publications published each year between 2019 and 2023. The figure shows that research on B40 household groups is significant and stable, ranging from 19 (2019) to 81 (2023). There were 19 articles published in 2019, representing 0.08% of publications; 25 publications in 2020, representing 0.10%; 43 publications in 2021, representing 0.17%; 78 publications in 2022, representing 0.32% of publications, and 81 publications in 2023, representing 0.33% of publications. We notice that, more articles were published in 2023 as Malaysia begins to pay serious attention to helping the B40 household groups.

2. What are keywords' distribution and trend?

Fig. 2 *Network visualization map of keywords' co-occurrence*

In 246 articles about B40 household groupings, a total of 65 keywords were utilized. Based on the co-occurrence analysis, the keywords are arranged into five groups or clusters, as Figure 2 illustrates. Relevant study topics in the interest area are described by the keywords in the clusters (Goksu, 2021).

The largest cluster, represented by 24 terms in Figure 2, is the red cluster. Terms like poverty, household income, income, sustainability, quality of life, B40, West Malaysia, lowest income group, household, and susceptibility are emphasized. The second cluster with 20 terms is the green one. Adolescents, attitudes toward health, depression, health literacy, depression, help-seeking, people, mental illness, mental disorders, and mental health are among them. The third cluster's blue cluster had the most often used keywords, which included adult, aged, child, educational status, female, gender, health knowledge, human, knowledge, and male. The cluster depicted in yellow is the fourth largest, containing seven keywords. The most frequently used keywords were anxiety, demographics, disease severity, and health care professionals. In another cluster, the most popular keywords are housing affordability and Malaysia. This finding shows that the poverty of the B40 household group should be eliminated because it can cause mental disorders to those involved.

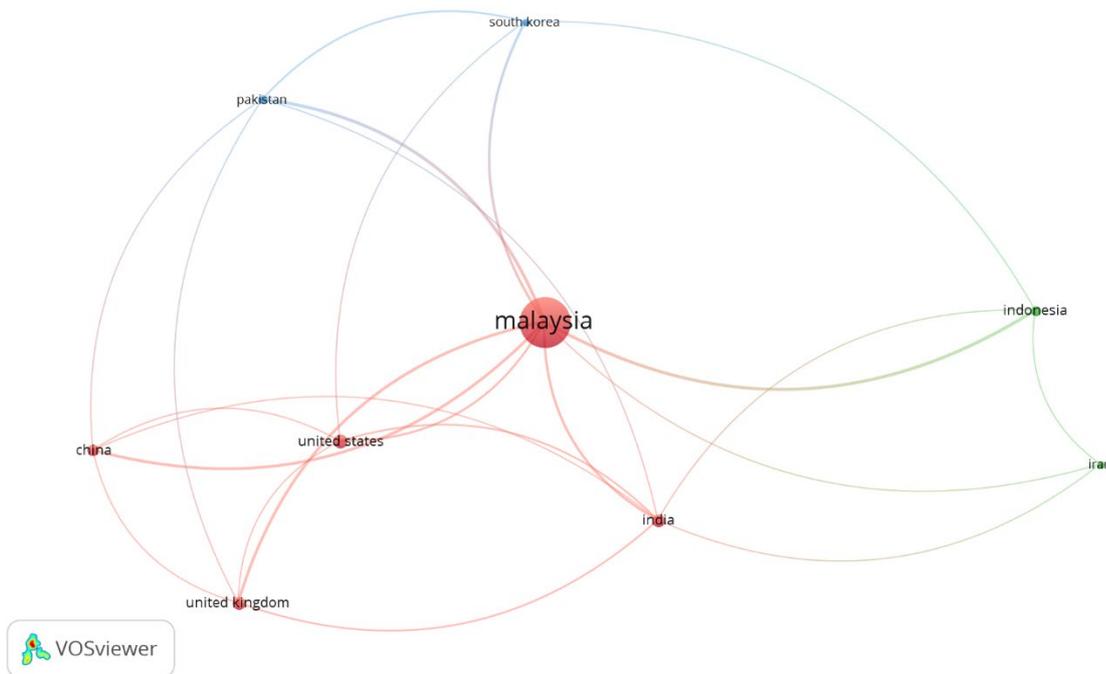3.   Which are the most influential countries?

Fig. 3 *The country co-authorship in B40 household groups*

The nations with whom the writers of B40 family groups collaborate are displayed in Figure 3. Academics are collaborating on B40 household groups because the clusters displaying the nations in which authors collaborate the most are not significantly different from one another. The three most powerful nations in terms of cooperation, based on total link strength (TLS) value, are the US, Malaysia, and India. China, India, Malaysia, the United States, and the United Kingdom are surprisingly all part of the same group. However, Indonesia, Iran, Pakistan, and South Korea are also included in the same umbrella organization.

4.   Who are the most influential authors?
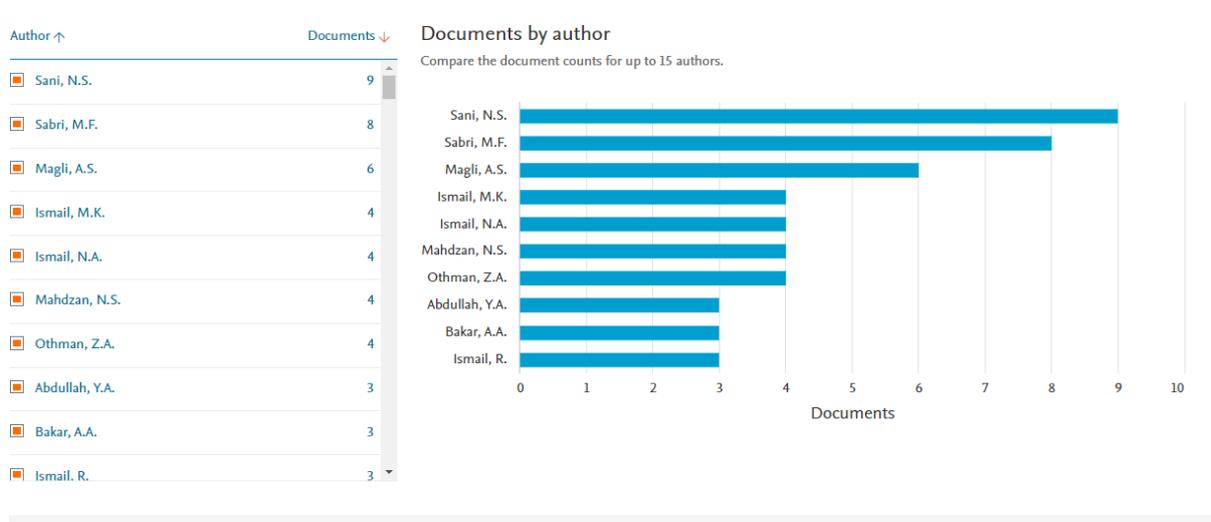
Fig. 4 *Most influential authors*

Based on Figure 4, we can see that Sani, N.S. published 9 articles (0.19%), Sabri, M.F. published 8 articles (0.17%), and Magli, A.S. published 6 articles (0.13%), while Ismail, M.K., Ismail, N.A., Mahdzan, N.S., and Othman, Z.A. published 4 articles respectively (0.08%), Abdullah, Y.A., Bakar, A.A., and Ismail, R. published 3 articles

respectively (0.06%). Sani, N.S. is the most influential author because he publishes more articles than other authors.

5. Who has been published in the area concerning the affiliated organizations and countries?

Documents by affiliation ⓘ
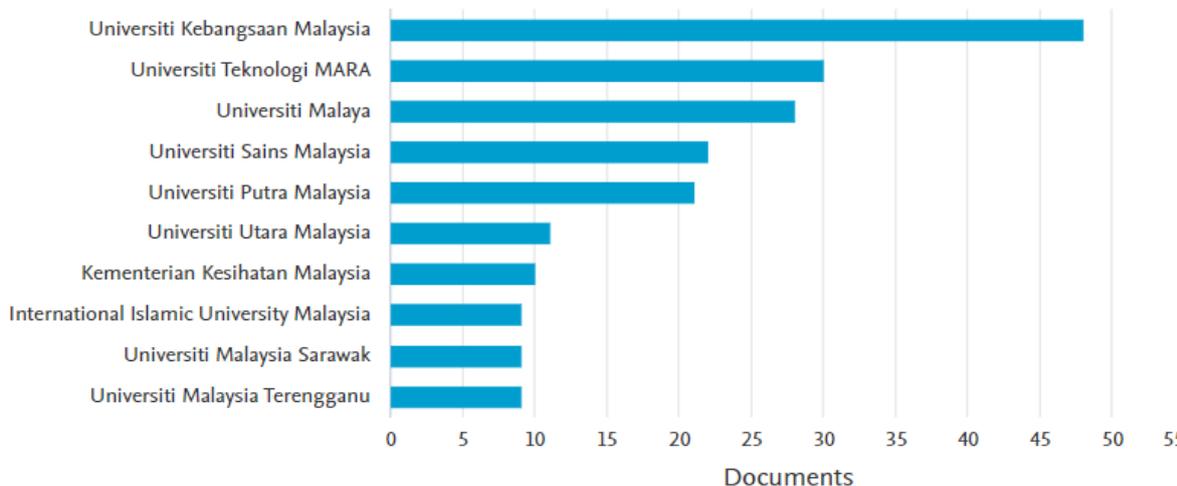Compare the document counts for up to 15 affiliations.

Fig. 5 *The affiliated organizations that published most articles*

Table 1 *List of affiliated organizations that published most articles*

Affiliated organizations	Number of articles
Universiti Kebangsaan Malaysia	48
Universiti Teknologi MARA	30
Universiti Malaya	28
Universiti Sains Malaysia	22
Universiti Putra Malaysia	21
Universiti Utara Malaysia	11
Kementerian Kesihatan Malaysia	10
International Islamic University Malaysia	9
Universiti Malaysia Sarawak	9
Universiti Malaysia Terengganu	9

Regarding organizations, institutions or universities that do good work with B40 household groups, we mainly have "Universiti Kebangsaan Malaysia" with 48 publications or 0.24%; "Universiti Teknologi MARA" with 30 publications or 0.15%; "Universiti Malaya" with 28 publications or 0.14%; "Universiti Sains Malaysia" with 22 publications or 0.11%; "Universiti Putra Malaysia" with 21 publications or 0.11%; "Universiti Utara Malaysia" with 11 publications or 0.06%; "Malaysian Ministry of Health" with 10 publications or 0.05%; International Islamic University Malaysia, "Universiti Malaysia Sarawak" and "Universiti Malaysia Terengganu" with 9 publications respectively viz. 0.05% (see Figure 5 and Table 1).
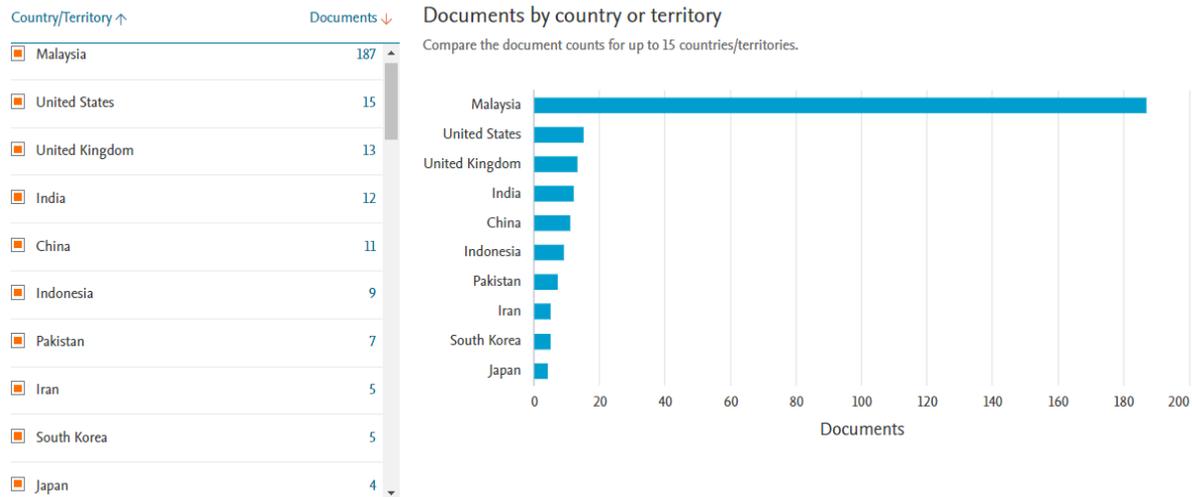
Fig. 6 *The countries that published most articles*

The data set study revealed that publications about B40 household groupings are related to ten nations, with Malaysia accounting for the majority of them at 187 publications, or 0.7%. Then, in order of publication count, the United States ranked first with 15 (0.06%), followed by the United Kingdom with 13 (0.05%), India with 12 (0.04%), China with 11 (0.04%), Indonesia with 9 (0.03%), Pakistan with 7 (0.03%), Iran and South Korea with 5 (0.02%) and Japan with 4 (0.01%). Malaysia has written more articles than any other nation, making it the most influential nation (see Figure 6).

5. Conclusion

We analyzed 246 publications published between 2019 and 2023, or 246 out of 280 publications, or 0.88% of the study on B40 household groups published in Scopus between 2019 and 2023. To ascertain the output by years, universities, nations, and authors, we first carried out a quantitative analysis of the metadata.

The co-occurrence study emphasizes the need to end the poverty of the B40 household groups since it can lead to mental health issues in people who are affected. Very few studies in B40 household groups were found, according to the co-occurrence analysis. The nations of Malaysia, the United States, the United Kingdom, India, and China are thought to have produced the greatest number of publications and to have had the greatest influence on research on B40 household groupings. The universities with notable production are "Universiti Kebangsaan Malaysia," "Universiti Teknologi MARA," "Universiti Malaya," "Universiti Sains Malaysia," and "Universiti Putra Malaysia."

As far as authors go, the most published in the field are Sani, N.S., Sabri, M.F., and Magli, A.S. Being the most prominent in an area does not necessarily mean having the most publications from a certain nation, university, or author. Although it is possible to create an adequate number of documents, these will not be as well-known and influential if they are not of sufficient relevance to the scientific community. In a field of study, the caliber of the work—particularly the community that can read and assess the work—matters more than its number when it comes to being a reference. Because of this, to submit your work, you must locate a journal that is respected in the field.

There are limitations to this study. First off, the data we gathered was limited to Scopus and did not encompass all scholarly publications, including WoS. Secondly, there was disregard for the most recent publications (2020 publications) that were approved but not included in Scopus' index. These restrictions, however, are not anticipated to have an impact on the findings of this investigation. Additionally, we limited the search scope of the data search to the phrase "B40 household groups"; otherwise, we may have included terms like "low-income household groups," "unprivileged groups," and others. While using synonymous search terms could yield a more accurate dataset, our analysis of the data received from Scopus indicates that the coverage of all relevant elements of B40 household groups makes our dataset acceptable.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

References

Abd Hamid, N., Yaacob, Z., Ibrahim, Z., Azizan, S., & Rashid, N. (2021). A socio-economic perspective of B40 household budgets in Malaysia. *The journal of contemporary issues in business and government*, *27*(2), 19-24.

Allahverdiyev, M., & Yucesoy, Y. (2017). Development stages and types of glass art from past to present. *Ponte*, *3*(4), 224-238.

Amin, A., Som, A. P. M., & Zolkifeli, Z. (2018). Social Capital Impact on Quality of Life of Low-Income Population Group. *International Journal of Engineering & Technology*, *7*(434), 137-139.

Appio, F. P., Martini, A., Massa, S., & Testa, S. (2016). Unveiling the intellectual origins of social media-based innovation: insights from a bibliometric approach. *Scientometrics*, *108*, 355-388.

Bojović, S., Matić, R., Popović, Z., Smiljanić, M., Stefanović, M., & Vidaković, V. (2014). An overview of forestry journals in the period 2006–2010 as basis for ascertaining research trends. *Scientometrics*, *98*, 1331-1346.

Deng, S., & Xia, S. (2020). Mapping the interdisciplinarity in information behavior research: a quantitative study using diversity measure and co-occurrence analysis. *Scientometrics*, *124*, 489-513.

Fahimnia, B., Sarkis, J., & Davarzani, H. (2015). Green supply chain management: A review and bibliometric analysis. *International journal of production economics*, *162*, 101-114.

Ghazali, R. (2017). Keterangkuman dan Masyarakat Saksama: Multi-dimensi Kemudahterancaman Isi Rumah B40 dalam Memperkasa Sosio ekonomi Kelompok B40 Mendepani Arus Perdana. *Kuala Lumpur: Institut Tadbiran Awam Negara (INTAN)*.

Goksu, I. (2021). Bibliometric mapping of mobile learning. *Telematics and Informatics*, *56*, 101491.

Ibhrim, Z., Zur Raffar, I. N. A., Aziz, S. A., & Dzaky, A. (2022). Impact of the COVID-19 Pandemic on the Standard of Living of the B40 Group. *Environment-Behaviour Proceedings Journal*, *7*(22), 9-13.

Lai, C. L. (2020). Trends of mobile learning: A review of the top 100 highly cited papers. *British Journal of Educational Technology*, *51*(3), 721-742.

Li, H., An, H., Wang, Y., Huang, J., & Gao, X. (2016). Evolutionary features of academic articles co-keyword network and keywords co-occurrence network: Based on two-mode affiliation network. *Physica A: Statistical Mechanics and its Applications*, *450*, 657-669.

Liu, W., Gu, M., Hu, G., Li, C., Liao, H., Tang, L., & Shapira, P. (2014). Profile of developments in biomass-based bioenergy research: a 20-year perspective. *Scientometrics*, *99*, 507-521.

Liu, Z., Yin, Y., Liu, W., & Dunford, M. (2015). Visualizing the intellectual structure and evolution of innovation systems research: a bibliometric analysis. *Scientometrics*, *103*, 135-158.

Magli, A. S., Sabri, M. F., Rahim, H., & Othman, M. (2022). Payment Behaviour Among B40 Households During COVID-19 as a Mediator Towards Financial Well-Being. *Malaysian Journal of Consumer and Family Economics*, *28*, 1-32.

Malik, S. A., & Ayop, A. R. (2020). Solar energy technology: Knowledge, awareness, and acceptance of B40 households in one district of Malaysia towards government initiatives. *Technology in Society*, *63*, 101416.

Mayan, S. N. A., Nor, R. B. M., & Samat, N. (2017). Challenges to the household income class B40 increase in developed country towards 2020 case study: Penang. *International Journal of Environment, Society and Space*, *5*(2), 35-41.

Moed, H. F. (2006). *Citation analysis in research evaluation* (Vol. 9). Springer Science & Business Media.

Papaioannou, D., Sutton, A., & Booth, A. (2016). Systematic approaches to a successful literature review. *Systematic approaches to a successful literature review*, 1-336.

Pritchard, A. (1969). Statistical bibliography or bibliometrics. *Journal of documentation*, *25*, 348.

Rashid, N., Rahizal, N., & Possumah, B. (2020). Does income difference cause different household expenditure consumption. *International Journal of Innovation, Creativity and Change*, *12*(12), 1314-1340.

Sheykhi, M. (2010). A Socio Economy Perspective of Household Tehran. pdf (pp. 155–167). In: Tehran.

Siwar, C., Zahari, S. Z., & Ismail, M. K. (2015). *Kemiskinan dan agihan pendapatan di Malaysia: Status dan kadar kemiskinan mengikut etnik dan strata serta golongan berpendapatan isi rumah 40 peratus terendah (B40)*.

Sudakova, N. E., Savina, T. N., Masalimova, A. R., Mikhaylovsky, M. N., Karandeeva, L. G., & Zhdanov, S. P. (2022). Online formative assessment in higher education: Bibliometric analysis. *Education Sciences*, *12*(3), 209.

Thinagar, S., Roslan, S. N. M., Ismail, M. K., & Chamhuri, N. (2021). COVID-19: B40 household's financial and consumption during the implementation of movement control order (MCO). *Planning Malaysia*, *19*.

Zhao, X. (2017). A scientometric review of global BIM research: Analysis and visualization. *Automation in construction*, *80*, 37-47.