Islamic Fiscal Policy: A Scientometric Analysis Using R

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This scientometric research looks at the current situation of various studies on Islamic fiscal policy published in journals that *have digital-object identifiers* (DOI). This research focuses on the features and trends of keywords, authors, and journals. We use research articles (metadata) from *Dimension* (https://dimension.ai). The research dataset was found using a search that was last updated on May 31, 2022. A descriptive statistical approach was used to determine the bibliometric map, and bibliometric analysis was performed using *R Biblioshiny*. In recent years, there has been a substantial increase in the number of studies addressing the topic of Islamic fiscal policy. Many publications publish on this topic, the most prominent of which is the *United Nations Treaty Series journal*, which features multiple authors exploring the topic using a variety of keywords. Chouwdhury MA, Kuran T, and Mirakhor A are the most prolific authors. The keywords most frequently used are *'Economic, waqf, and public.'* This review provides an overview of research trends, keywords, journals, and authors in the most popular papers on Islamic fiscal policy, as well as providing information for academics specializing in this field.

Keywords: Islamic fiscal; Fiscal policy; Scientometric

INTRODUCTION

During the Covid-19 pandemic, there was a crisis in the global economy which had a major impact on the domestic economy due to restrictions on people's movements such as supply chain disruptions, decreased production and consumption activities, increased unemployment and correction of economic growth. To reduce the impact of the crisis, effective and efficient economic policies are needed, including Fiscal Policy, Macroprudential Policy, Monetary Policy and Liquidity Policy. According to Yale University (2020) fiscal policy is the most widely adopted policy in handling the co-19 pandemic.

Fiscal policy is one of the most important economic policies for a country. According to Samuelson (1997) Fiscal policy is the process of establishing taxation and public spending in an effort to suppress fluctuations in the business cycle, and plays a role in maintaining economic growth, high employment, free from high and variable inflation rates. Meanwhile, according to Wolfson quoted by Suparmoko (1997) states that fiscal policy is government actions to improve general welfare through government revenue and expenditure policies, resource mobilization, and pricing of goods and services from companies. From these two explanations, a conclusion can be drawn that fiscal is a policy relating to revenue and expenditure.

Islam as a plenary and universal religion does not only provide guidance in matters of worship and muamalah. However, it also covers all aspects including state and government matters. In Islam, fiscal policy is an obligation of the state and becomes the right of the people, so that fiscal policy is not merely a necessity for economic improvement or for increasing people's welfare, but rather the creation of a fair economic distribution mechanism. Because the nature of the economic problems that hit humanity originate from how the distribution of wealth in the midst of society occurs.

The Islamic principles of fiscal and budgetary policy aim to develop a society based on a balanced distribution of wealth by placing material and spiritual values at the same level. Fiscal policy is considered as a tool to regulate and monitor human behavior which is influenced through the incentives provided by increasing government revenues (through taxation, loans or guarantees on government spending). Fiscal policy in a country is certainly expected to be in accordance with Islamic principles and values because the main goal of Islam is to achieve the welfare of humanity as a whole (Rozalinda, 2014).

The development of the Study of Islamic Monetary Policy in the modern era has started from 1954 to 2022 found as many as 257 documents with various types of documents including *articles, chapters, edited books, preprints, and proceedings*. Because there are not many studies that specifically address Islamic Fiscal Policy Mapping, this study focuses on mapping the development of studies on Islamic Fiscal policy using Scientometric Using R. The mapping presented in the analysis of this study is related to Document Types, Keyword trends, Topic Trends, Year of publication, Author and journal publication.

METHODOLOGY

Scientometric is an important research topic in the field of bibliometrics (Börner, Chen, & Boyack, 2003). Two aspects of bibliometrics that can be distinguished are the construction of bibliometric maps and the graphical representation of maps. In the bibliometric literature, the greatest concern is in the construction of bibliometric maps. Research related to the effect of differences on similarity measures (Ahlgren, Jarneving, & Rousseau, 2003; Klavans & Boyack, 2006; Van Eck & Waltman, 2009) and tested with different mapping techniques (Boyack, Klavans, & Börner, 2005; Van Eck & Waltman, 2007; White, 2003). The graphical representation of bibliometric maps has received little attention. Although some researchers seriously study issues related to graphical representations (Chen, 2003; 2006; Skupin, 2004), articles published in the bibliometric literature rely on simple graphical representations provided by computer programs such as SPSS and Pajek.

For thumbnails containing no more than, say, 100 items, a simple graphical representation usually yields satisfactory results. However, there seems to be a trend towards larger maps, and for such maps a simple graphical representation is inadequate. The graphical representation of large bibliometric maps can be further enhanced by, for example, zoom functions, special labeling algorithms and density metaphors. This functionality is not included in the computer programs commonly used by bibliometric researchers.

This study uses publication data related to Islamic Fiscal Policy sourced from database dimensions. Dimensions is recognized as the largest database of abstracts and citations from peer-reviewed scholarly literature journals, books, and conference proceedings. As a result, there were 1,644 publications from 2020 to 25 May 2022. From the screening results, 1,644 articles

were published related to Islamic Fiscal Policy issues. Bibliometric mapping data for keywords, authors, journals, and document characteristics in this study were analyzed using R Biblioshiny software which is available free of charge from https://bibliometrix.org/. Studies using the bibliometric method with other Islamic economics and finance topics have been carried out by several researchers, for example As-Salafiyah et al., (2021), Laila et al., (2020), Marlina et al., (2021), Rusydiana et al., (2021), and Taqi et al., (2021).

RESULTS

Studies related to Islamic Fiscal Policy continue to experience developments in published scientific research, along with bibliometric mapping showing trending keywords, authors and published journals.

Table 1: Document type

No	Document type	Number of articles
1	Article	194
2	Chapter	33
3	Edited book	3
4	Monograph	7
5	Preprint	18
6	Proceeding	2
	TOTAL	**257**

The table above shows the number of collections of documents studied with the theme of Islamic Fiscal Policy, namely as many as 257 data consisting of 6 different types of documents, with the following explanation: (1) 194 types of articles published, (2) chapters *with* 33 *documents*, (3) *edited books* 3 *monographs* 7 documents of *preprints* 18 documents of *proceedings*.

Based on the table above, it can be concluded that the documents most widely used as objects of study in research discussing Islamic Fiscal Policy ranked first were articles published in journals with a percentage of 76.6% or 194 documents. Meanwhile, the documents that are used the least are *proceedings* with a percentage of 0.7% or 2 documents. This data shows that the references used are quite valid because they come from scientific written documents and are mostly dominated by published papers.

The three fields plot below is an illustration of the 3 elements consisting of a list of journal names, a list of authors and a list of topics used. The three elements are plotted with a gray plot that shows their relationship to each other, starting from the name of the journal, then each journal shows the author and each writer is shown the topics they use in their papers with the theme of Islamic Fiscal. With the rule that the size of each rectangle in the name list represents the number of papers associated with that element.
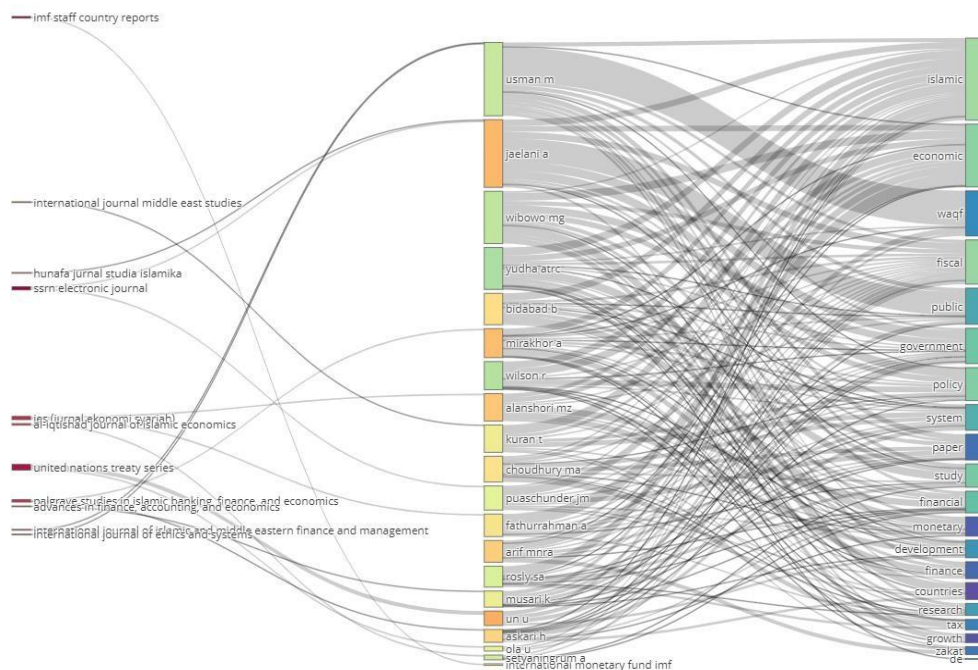

Figure 1: Three Fields Plot

The first element, namely the journal. There are 11 journals indexed in *the Three fields plot* that publish papers on the theme of Islamic Fiscal Policy, but the top journal that publishes the most papers with this theme is *the United Nations Treaty Series* which is depicted in the largest rectangle.

The second element in the middle is the author's name. Some authors whose journal publications are recognized will be associated with the previous element. However, some are not indexed and so have no relation to any of the listed journals. In addition, each of these authors will also be associated with frequently used keyword topics on the right. There are 19 top authors

listed in this plot. The size of the rectangle indicates the number of papers written by each author. In this plot, Usman M occupies the widest box indicating that he has written the most on the theme of Islamic Fiscal Policy.

The third element is the keyword topic that appears the most in the paper that is the object of research. Each topic is associated with an author who makes extensive use of that topic. There are 20 keyword topics listed and the keywords that appear most often are *economic, waqf,* and *public* which are indicated by the size of the rectangle that dominates the other rectangles. It seems that these three topics are also used by many of the authors listed.
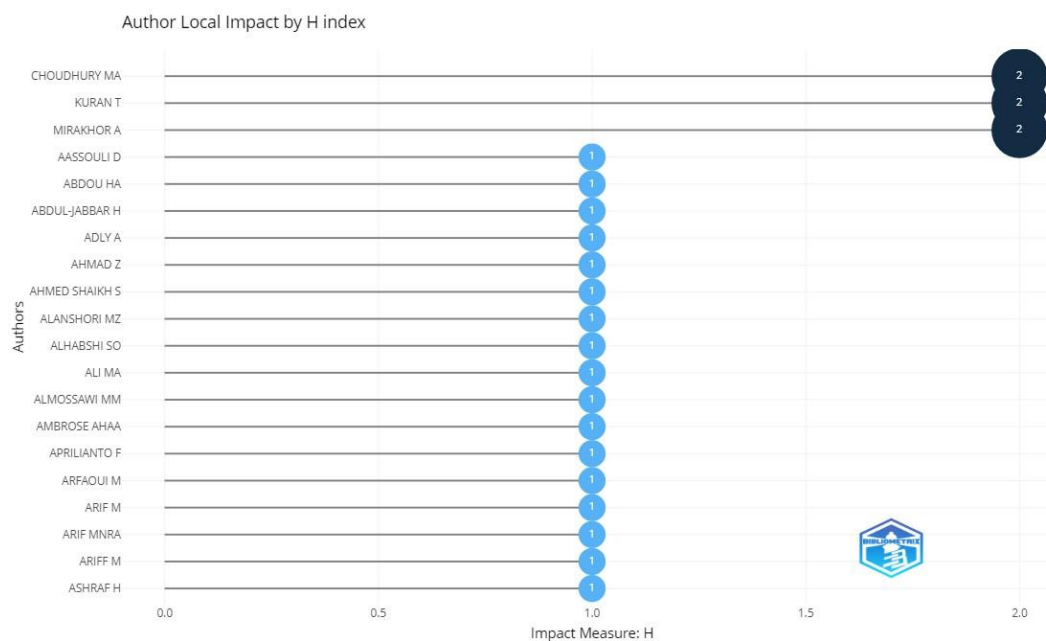

Figure 2: Authors Impact

Authors who have published their papers can also be ranked by impact with an h-index rating. My h-index values range from 0 to 2 and the level of impact is shown in blue in the bar chart, where the darker the color indicates the greater the impact.

The figure above shows that the authors who achieved the highest h-index value of 2 with maximum impact with dark blue bar chart colors were achieved by Choudhury MA, Kuran T, and Mirakhor A followed by other authors with lower impact levels than 1 as shown in the image below. on.

Choudhury MA is one of the most popular authors with the highest impact. Based on the profile featured on IGI Global, Dr. Masudul Alam Choudhury is Professor of Economics in the Department of Economics and Finance, College of Commerce and Economics, Sultan Qaboos University, Muscat, Sultanate of Oman. He is also the International Chair and founding member of the Postgraduate Program in

Islamic Economics and Finance, Trisakti University, Indonesia. Professor Choudhury taught economics for twenty-two years at Cape Breton University, Sydney, Nova Scotia, Canada before retiring. He now continues to conduct advanced research and teach at all levels of pedagogy. Areas of research focus and teaching at the doctoral level are the economics and epistemology of unified knowledge, and functional ontological conceptualization and application to world systems in various fields. Within this domain include political economy, economic theory, financial issues, and the integral relationship between science and society. Its methodological approach is systems-oriented and mathematical while applying a philosophy of science and empirical applications. Professor Choudhury has published many journals and many books with leading scientific publishers.
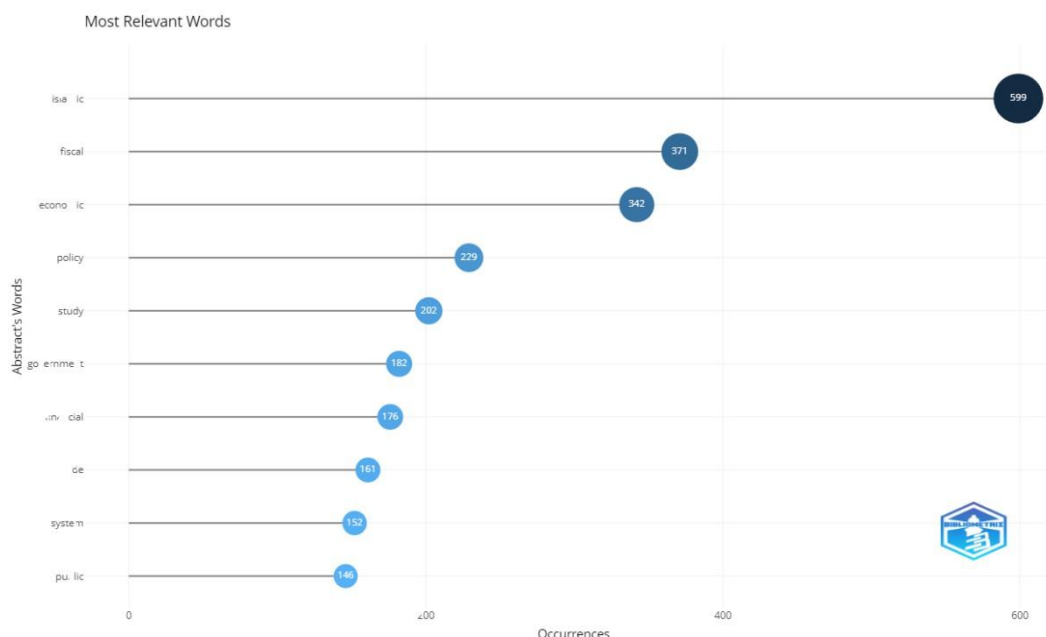
Figure 3: Most Relevant Words

This research also counts the relevant words used in the collection of documents that are the object of research, there are words with a number of occurrences between 0 and 600 times and a list of the top 10 words and a blue table diagram showing the comparison of the number of occurrences each use of the word and its relevance to the theme of Islamic Fiscal Policy.

The top word with the highest number of occurrences and most relevant to the theme of this research is 'Islamic' with a total usage of more than 599 times and the most relevant is indicated by a dark blue line chart, the word resilience also follows the research theme of Islamic Fiscal Policy, so the dominant word that appears in collecting the data studied is the Islamic word. Next is the word 'fiscal, economy and policy' with more than 200 occurrences. Then the word 'government' with a number less than 200.

Figure 4: Word Cloud

The word cloud above reveals a description of the words that often appear in the data set of research papers with the theme of Islamic Fiscal Policy. The words that appear most often in the first place are Islam, fiscal, economics, policy, and government. *The word cloud* displays word overviews of various sizes according to the number of words that appear. In terms of placement, the word cloud tends to be random, but the dominating word is placed in the middle so that it is more visible with its large size.
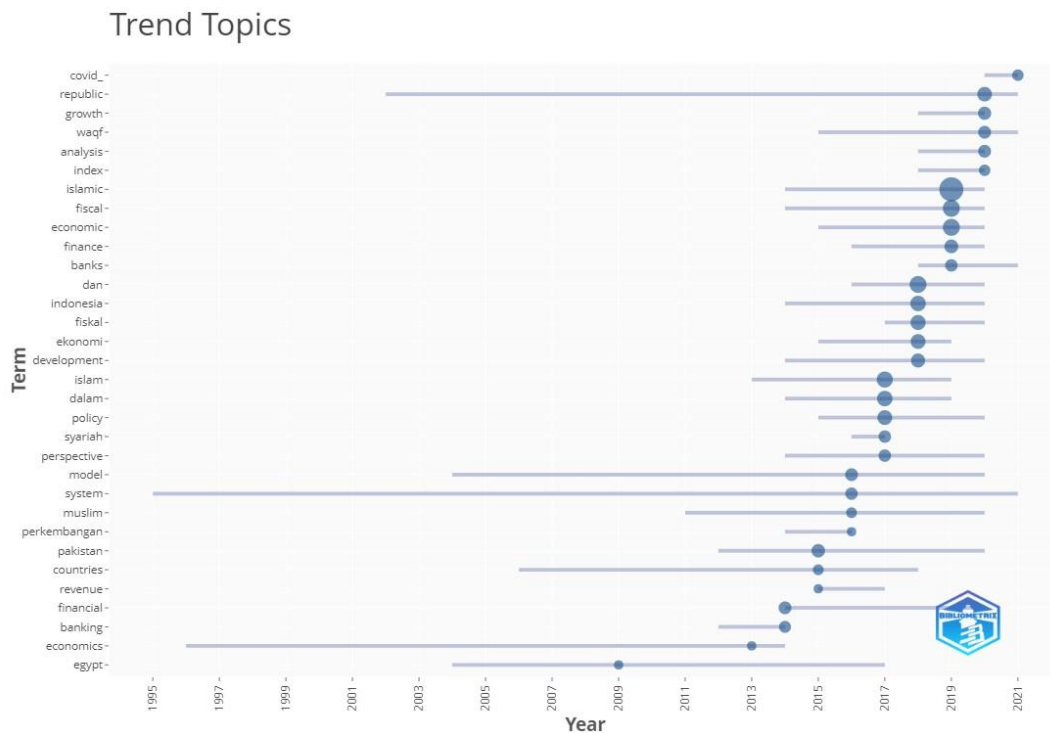
Figure 5: Trend Topics

Trend topics are the result of an analysis of document titles that present an overview of the development of Islamic Fiscal Policy themes from time to time divided by year. These results show which topics have been used for the longest time and which topics have been used the most recently. In addition, trending topics also consider the frequency value of each word indicated by the log axis.

In addition, the appearance of the topic is also adjusted to the frequency of occurrence of the word in the research topic under study, namely Islamic Fiscal Policy. The higher the meaning, the more words used. Furthermore, the further it moves to the right, the more

recently the word has been used. Based on the Trend Topics above, the development of the theme of Islamic Fiscal Policy began in 1995 and experienced a significant increase in 2019.

The topics used since the beginning of the development of the theme of Islamic Fiscal Policy were the first and second systems, then the economy. There is one topic that is quite consistent, namely the system. There are many because it is almost always used in the 1995-2021 range. Then, topics that are widely used in 2020 include the republic, growth, endowments, analysis, and indexes.
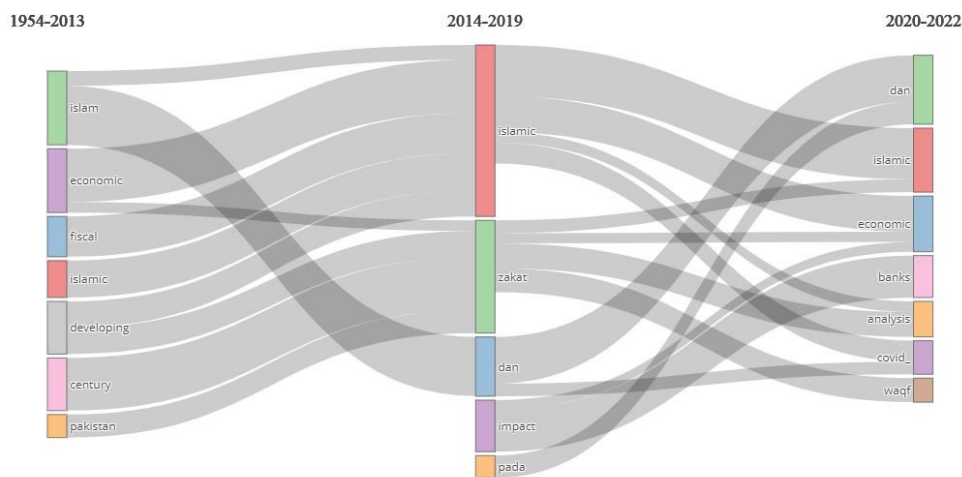

Figure 6: Thematic evolution

The themes used in papers that are the object of research are constantly changing, especially for newly published papers when compared to papers that have been published for a long time. The theme evolution is shown in the image above. Although the theme of this research is Islamic Fiscal Policy, this data shows several sub-themes that are widely used.

The left section shows some of the most widely used themes from 19542013, there are 7 themes listed with different sizes depending on the number of uses of the theme. The theme "Islam" took first place, followed by the theme "economy, development, century, fiscal, Islam and Pakistan".

The second or middle section displays several themes that were widely used from 2014 to 2019. Some of the themes that emerged during this period were an evolution of the themes used before and were related to

their content, for example the theme of Zakat emerged as a revolutionary form of 'economy', 'developing', 'centuries', and 'Pakistan', this shows that the research using the theme of Zakat is an extension of the 'economy', 'developing', 'century', and 'Pakistan' research themes in previous studies. In this section, the most used theme is 'Islam'.

Then the third or right section shows several themes that were widely used from 2020 to 2022. Some of the themes that emerged during this period were evolutions of the themes used before and had relevance to their content, such as the theme 'economy' which emerged as a form of revolution from the theme 'Islam, Zakat, and Its Impact', this shows that the research using the theme 'economy' is an extension of the research theme 'Islam, Zakat, and its Impact' in previous years. research.
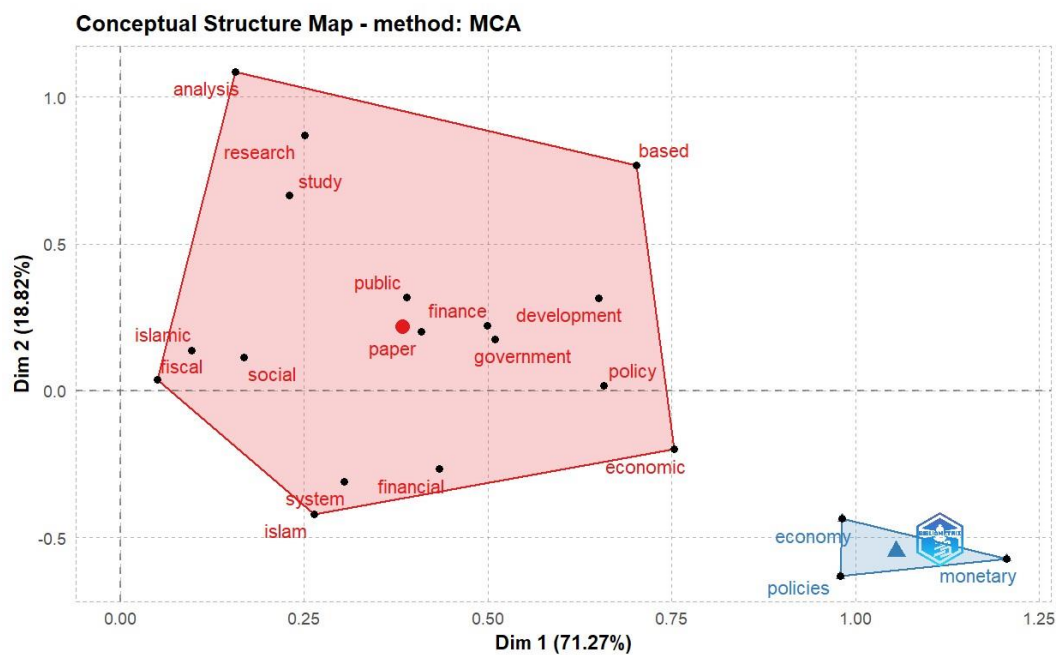

Figure 7: Conceptual Structure Map [MCA method]

This study also describes a conceptual structure map or contextual structure map for each word that often appears in research papers on the theme of Islamic Fiscal Policy by dividing it based on mapping the relationship between one word and another through regional mapping. Each word is placed according to the value of Dim 1 and Dim 2 (Diminutive particle) to produce a mapping between words whose values do not differ much.

In this data there are 2 parts of the area that are divided, namely the red area and the blue area. Each area contains words related to each other. Based on the picture above, the red area shows more quantity and

variety of words included in it, this shows that many research papers make connections between the words listed in this area. Blue is the smallest in the area and the fewest words that appear.

FINDINGS

This study presents the results of bibliometric analysis using the R Biblioshiny from various research publication sources consisting of 257 types of articles, documents, edited books, monographs, preprints, and proceedings with the Islamic fiscal theme indexed by the Dimension.ai database.

Table 2: Findings

Rank	Keywords occurrence	Highest authors publication	Journals with the highest publication
1	Economic	Choudhury MA.	United nation treaty series
2	Waqf	Kuran T.	JES (Jurnal Ekonomi Syariah)
3	Public	Mirakhor A.	SSRN electronic journal
4	Government	Aassouli D.	Current issues in tourism
5	System	Abdou HA.	Palgrave studies in Islamic banking, finance, and economics
6	Paper	Abdul-Jabbar H.	Al-Iqtishad journal of Islamic economics
7	Study	Adly A.	International journal of Islamic and middle eastern finance and management
8	Financial	Ahmad Z.	Advance in finance, accounting, and economics
9	Monetary	Ahmed Shaikh S	Hunafa jurnal studia islamika
10	Development	Alanshori MZ.	International journal middle east studies

The results of the research above show bibliometric analysis using R Biblioshiny of journal articles with *digital object identifiers* which is complemented by Islamic Fiscal Policy themes indexed by the Dimension database. Research related to Islamic Fiscal Policy has become an interesting discussion since 1954 and continues to grow throughout the world so that researchers in the fiscal field have begun to produce various scientific studies in developing research related to Islamic Fiscal Policy. The development of literature on Islamic Fiscal Policy is also growing, along with the development of various Islamic financial institutions.

Based on *the three fields plot*, the keywords most frequently used by researchers in Islamic fiscal policy research are *'Economics, waqf, and public'*. The word economy ranks second after the word *'Islam'*. This is because in the findings of several studies, some researchers juxtapose the word fiscal with economics. As an example in research conducted by (Kuran 1992; & Tahir 2013).

The word waqf is the word choice that is widely used by researchers after the word 'Economy'. This shows that Islamic fiscal policy research favors the topic of waqf. In Rianto and Arif's research (2012) it is stated that cash waqf has played an important role as a new fiscal role instrument in the economy. This role makes cash waqf one of the poverty alleviation programs in Indonesia. In addition, in other studies it was found that

waqf as an Islamic fiscal instrument has a strong foundation in terms of fiqh and ushul fiqh and its implementation, especially in Indonesia (Permana 2021).

One of the discussion chapters in the research conducted by Kahf (1987) discusses lessons relevant to public revenues in the modern Islamic fiscal system. One of the contents of the discussion is that the ownership system regulated by Islam is based on the existence of private ownership which is protected and guaranteed side by side with public ownership which is also protected and guaranteed. The Islamic economic and financial system is based on the interbreeding of public and private ownership. He also added that public property *includes* land that is not used in economic production, mineral resources and energy sources such as *cataracts* and waterfalls.

In addition, this study also analyzes thematic evolution. Results shown by the thematic evolution in papers on Islamic Fiscal Policy, where the keywords *'Islamic, economic, developing, century, fiscal, and Pakistan'* has been detected since the first period, namely 1954-2013, and continues to grow until the third period, namely 2019-2020, the theme of waqf has begun to emerge indicating that research with the theme of Islamic Fiscal Policy has begun to develop and can be compared with other fiscal policies.

The interesting fact shown by these words is that research on the theme of Islamic Fiscal Policy is not very

broad and does not cover various sectors, because the popular words that appear are similar to one another. For example, the words Islam and Islam and the scope of industries that appear only in finance, corporations and banks are not yet specific fields. This shows the need to improve and expand research on the theme of Islamic Fiscal Policy to other areas of the economy.

CONCLUSION

This study presents the results of a bibliometric analysis using the R Biblioshiny from various research publication sources consisting of 257 types of *articles, documents, edited books, monographs, preprints, and proceedings* with the theme of Islamic fiscal policy indexed by the Dimension.ai database. Based on a study of the *Three Fields Plot*, the keywords most frequently used by researchers in Islamic fiscal policy research are *'Economics, waqf, and public'*. In addition, the results shown by the thematic evolution in papers on Islamic Fiscal Policy, where the keywords *'Islamic, economic, developing, century, fiscal, and Pakistan'* has been detected since the first period, namely 1954-2013, and continues to grow until the third period, namely in 2019-2020 the theme of waqf has begun to appear which shows that research with the theme of Islamic Fiscal Policy is starting to develop and can be compared with other fiscal policies.

The interesting fact shown by this research is that research with the theme of Islamic Fiscal Policy is not too broad and does not cover various sectors, because the popular words that appear are similar to one another. For example, the words Islam and Islamic as well as the scope of industries that appear only in finance, corporations and banks, are not yet specific fields. This shows the need to improve and expand research on the theme of Islamic Fiscal Policy to other areas of the economy.

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