Mapping Economic Insights: A Bibliometric Analysis of ASEAN MSME Policy Research (1995–2024)

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Abstract:

Research-based policies are made research position important, hence any research carried out expected can solve MSMEs problems. The research was conducted to map research articles with Scopus indexed ASEAN MSMEs policy topics using bibliometric analysis, therefore it is expected to be a direction for future research. The results show that (1) research on the topic of ASEAN MSMEs policy has increased every year and peak in 2023. (2) Indonesia is a country that influences the topic of ASEAN MSMEs policy by conducting the most publications dan have connections with other countries and Malaysia is the country with the most citations, however Pakistan and Canada are a the highest score of quality of paper. The most cited articles discuss the role of green finance in sustainable entrepreneurship and corporate social responsibility during the COVID-19 pandemic. (3) Keywords associated with MSMEs policy of ASEAN show a shift in focus from industrialization and business strategy in 2007-2019 to topics related to the green economy, sustainability, and the impact of COVID-19 in 2020-2024, therefore this topic can be researched from the perspective of green economy, innovation, and global economy. The main topic of ASEAN MSMEs policy is still relevant today and considering the limited amount of research conducted on this topic, it is anticipated that further research will drive scientific innovation and inform the formulation of policies supporting MSMEs that are more empowered and contribute to encouraging the economy in ASEAN.

Keywords: *MSME, Policy, Bibliometric, ASEAN*

1. Introduction

The Association of Southeast Asian Nations (ASEAN) is a regional group that aims to enhance economic and security cooperation among its ten Member States (Council on Foreign Relation, 2023)

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namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam which collectively cover an area of 4,49 million km2 and are home to 642.4 million people (OECD, 2018). The formation of ASEAN was based on the need for regional cooperation, especially for countries in the same geographical location to have a stronger and more collective voice concerning global powers (Velasco, 2023). Based on IMF data published by Statista (O'Neill, 2024), Economic growth measured by gross domestic product (GDP) in 2019-2022 for each country in ASEAN mostly shows an increase as shown in Figure 1. In ASEAN, MSMEs play a vital role in current and future economic development. (Bruque & Moyano, 2007) as they are essential for post-COVID-19 recovery and future socio-economic resilience looking at ASEAN countries themselves, according to ASEAN (2022), MSMEs comprise more than 97% of all companies, 85% of the workforce, around 45% of GDP and between 10% and 30% of total exports of ASEAN countries. This reinforces that MSMEs collectively are a major part of the economic life of every country in the region (Schaper & Burgess, 2021), because MSMEs not only contribute to state revenue, but can also help countries reduce unemployment rates in their respective countries if MSMEs are fully supported, especially by government policies further to strengthen the role of MSMEs in each ASEAN country.
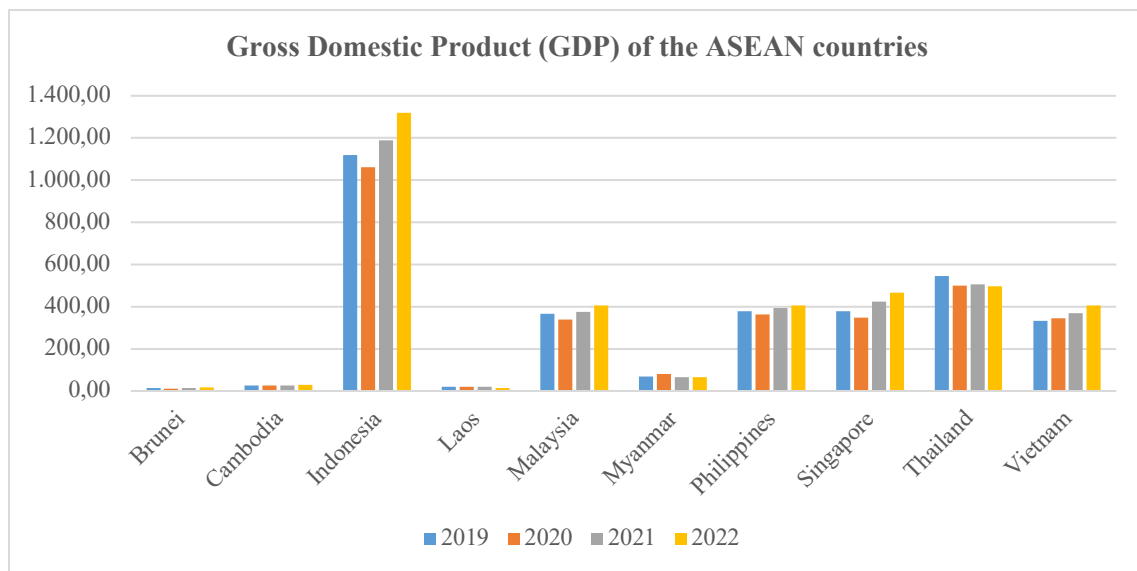

Figure 1. GDP of the ASEAN Countries

Seeing the importance of the role of MSMEs, the leaders of Southeast Asian countries that are members of ASEAN (Robertua, 2016) have a commitment to building the economy in ASEAN and in 1995 cooperation on SME development became one of the priority areas in terms of policy focus and resources (Association of Chartered Certified Accountants, 2016). Furthermore, in 2015, the ASEAN Economic Community was formed with four pillars in its framework, namely (a) a single market and production base, (b) a highly competitive economic region, (c) a region with even economic development, and (d) a region that is fully integrated into the global economy (ASEAN, 2015).

Specifically for the third pillar, namely a region with equitable economic development, this is ASEAN's recognition that SMEs may need additional support to take full advantage of the trade and investment opportunities expected to arise from further economic integration, as well as to enhance their competitiveness (OECD, 2018). Given these goals, to realize them, policies are needed that are in accordance with the needs of MSMEs in order to achieve MSMEs that can contribute positively to the economy in ASEAN countries.

The MSME sector in Southeast Asia is quite dynamic and efforts are being made to increase opportunities for small businesses. For example, Indonesia, Malaysia, the Philippines and Thailand have created MSME-specific stock markets to increase the financing options available to these businesses (ESCAP, 2024). Despite these achievements, MSMEs in ASEAN countries still face challenges in growing their businesses, especially as smaller companies will have difficulty competing globally due to their lack of financial and technical resources. (Robertua, 2016), Such as access to international markets, constraints affecting their capacity to innovate, low adoption of technology, high production costs, lack of skilled labor, and limited access to financial services (ASEAN, 2022). From these statements, there are three main problems experienced by MSMEs in ASEAN in increasing their businesses, namely (1) Internal MSMEs in terms of productivity, technology, and innovation, (2) access to financing, and (3) access to markets and internationalization.

In a survey of 1,500 SMEs in ASEAN, only 33 percent utilized the local market, but 80 percent of respondents admitted to having tried to enter the digital economy (Mada, 2023). Although there are still many SMEs who have difficulty in practice because they are constrained by the knowledge they have for the use of information technology such as in Thailand, even though the infrastructure is good, there are still few SMEs that utilize the internet network (Exportnews, 2023), even though digitalization can help MSMEs to expand their businesses by reaching customers and supply chains (Tan, 2022). In fulfilling the human resource element, it will be difficult for small companies to attract highly skilled workers because multinational companies have the capacity to provide better salary packages because they have more financial resources (Robertua, 2016).

In terms of access to finance, access to finance is a structural problem for MSMEs in any country; MSMEs have limited access to formal financial services, therefore they rely on informal sources to survive (Asian Development Bank, 2020) and traditionally, MSMEs rely more on their own funds and loans from family, relatives and friends to run their businesses (Asian Development Bank, 2022). The obstacles experienced by MSMEs are that around 60% of MSMEs surveyed who require financing or credit in the region stated that they had difficulty or were unable to obtain loans from traditional financial institutions (Tan, 2022). Internationalization can also provide benefits for SMEs in industrialized countries; SMEs often use internationalization as a tool to grow and achieve economies of scale that

would not be possible if they operated only in their domestic market (OECD, 2018), but, with these internationalization advantages, SMEs are generally less likely to internationalize than large companies. Their limited size, resources, managerial structure, and geographic location can result in informational, technical, and administrative barriers that make it difficult to access finance, meet quality standards, overcome connectivity and infrastructure constraints, innovate, or find and develop appropriate human resources (OECD, 2018). Based on the results of a survey conducted by ASEAN, it is known that the challenges faced by MSMEs when expanding internationally, as shown in Figure 2, are mostly experienced in finding trading partners and most of the obstacles faced by MSMEs that do not have international activities are related to lack of finances and inadequate knowledge of internationalization (ASEAN Secretariat, 2021).
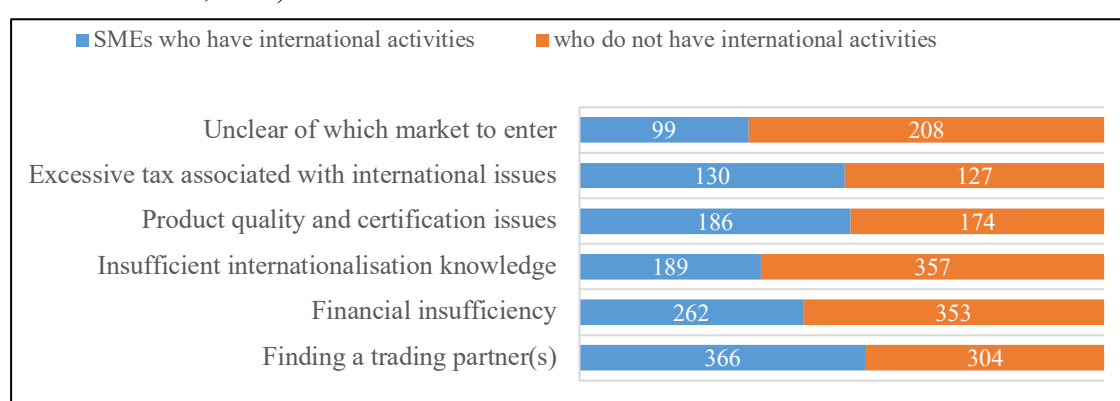

Figure 2. Number of Responses for Challenges SMEs Face When Expanding Internationally

In addition to the problems related to increasing their business, there are macro-level competition problems between ASEAN Regions, namely cartels and other anti-competitive agreements where competitors in the same market agree to set prices, divide the market, manipulate offers or limit production or supply and generally other anti-competitive business agreements that have the impact of distorting competition in the market (making competition unbalanced) are also prohibited (Schaper & Burgess, 2021).

Given the diversity of ASEAN MSMEs throughout the region and the complexity of the problems and challenges they will face, the role of government is needed to intervene in resolving these problems by issuing policies that can support MSMEs and are strategically relevant, because MSMEs have proven to be pillars and drivers of the economy of ASEAN countries amidst the challenges of the global economic crisis, both in terms of job creation and direct contribution to economic growth (Kominfo, 2023) and most ASEAN countries now view MSME policies as a tool to improve overall competitiveness (OECD, 2018), as one of the important aspects of ASEAN economic cooperation is to increase the role and development of MSMEs, as well as increase the competitiveness of MSMEs in regional and world markets (Tran, 2015). The support available to MSMEs also varies across ASEAN

member states, although all member states have policies to support MSMEs, the level and scope of these policies vary widely, but for low-income countries, such as Cambodia, Laos and Myanmar, they are still at the early stages of developing their MSME ecosystem (ASEAN, 2022). In support of policy formulation, it must be based on research with support from a knowledge and innovation ecosystem (Kementrian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi, 2020) that makes research related to MSME policies an important part of policy formulation. This is in line with what was conveyed by Badan Strategi Kebijakan Dalam Negeri (2017) one important aspect of policy making to solve social problems by considering research results and recommendations, considering that the impact of research is a crucial aspect in the field of science (Li & Hu, 2024), because research must be used to help determine, build, or refine mission statements (Bowen, 2018).

Considering the importance of research-based MSME policies to solve MSME problems, this study is intended to provide a comprehensive overview of MSME policy research through bibliometric analysis. In recent years, bibliometric analysis has gained great popularity in business research (Donthu et al., 2020; Donthu et al., 2021; Khan et al., 2021), and its popularity can be attributed to (1) the advancement, availability, and accessibility of bibliometric software such as Gephi, Leximancer, VOSviewer, and scientific databases such as Scopus and Web of Science, and (2) the cross-disciplinary selection of bibliometric methodologies from information science to business research (Donthu, Kumar, Mukherjee, et al., 2021), therefore it can be seen that by using the software handles large amounts of cross-disciplinary scientific data to be able to produce impactful research. In addition, researchers benefit from using bibliometric analysis when conducting research on bibliographic materials and conducting citation analysis of each article published in scientific journals and other types of scientific literature (Supriyadi, 2022).

This study analyzes the bibliography (Putera et al., 2020; Widianingsih et al., 2021) of authors from various countries who conducted research from 1995, when the policy on MSMEs was first made, which became one of the main topics for development in ASEAN, to the latest paper published in 2024, to find out:

1) What is the status and publication trends of articles on the topic of ASEAN MSME policies indexed in Scopus using the VOSviewer application?
2) How is the distribution of Publication sources and Most Cited Publications related to ASEAN MSME Policy research?
3) How are the keywords public policy, MSMEs and ASEAN related to using the VOSviewer application?

The results of this bibliometric analysis provide an overview of the current academic landscape in this field (Lacárcel et al., 2024). For policy makers and practitioners, this knowledge is expected to map

research related to MSME policies in ASEAN by highlighting directions for future research (Odriozola-Fernández et al., 2019) and to inform future research agendas (Scanlon et al., 2023). Therefore that it can lead to more targeted and impactful policies.

2. Methodology

The research method used in this study is bibliometric. Bibliometric methodology summarizes the application of quantitative techniques, namely bibliometric analysis on bibliometric data, such as publication units and citations (Broadus, 1987; Pritchard, 1969). Bibliometric analysis is often carried out using network visualization software, which ranges from graphical user interface-based software such as VOSviewer (van Eck & Waltman, 2010) to command-line-based software such as the Bibliometrix package in R (Aria & Cuccurullo, 2017), therefore in this study, the bibliometric analysis technique using the VOSviewer application to conduct the analysis involves creating a network by creating a map consisting of nodes and links derived from data extracted from the data set used in the study. These nodes are grouped into different clusters through links, which must be interpreted by researchers coherently (Saura, Dwivedi, et al., 2022; Saura, Ribeiro-Soriano, et al., 2022; van Eck & Waltman, 2017). The results of this mapping can show the publication conditions of MSME policy topics each year, identify countries that publish the most, and map MSME policy topics to provide an overview in research development.

At this stage, the researcher needs to define the search terms in a way that will produce search results large enough to warrant bibliometric analysis but focused enough to remain within the specific research area or scope of study defined in the first step (Donthu, Kumar, Mukherjee, et al., 2021). The information obtained for this research comes from global publications (Supriyadi, 2022) on ASEAN MSME policy found on the Scopus website, which is the largest abstract and peer-reviewed literature database system, used for collecting data related to the topic and as a database source (Fareed et al., 2024). Scopus has its own Application Programming Interface (API) through, which it is possible to access all information stored in the Scopus library and obtain all metadata regarding publications, including relationships between citation (Klapka & Slabý, 2020). Based on this, searching for data in Scopus is one of the right places to search for data.

Data search in Scopus accessed on October 8, 2024 by searching on article titles, abstracts and keywords. The selection of keywords must be related to the topic of MSME policy research, accordingly that the keywords used are "POLICY" AND "MSMES" OR "MSME" OR "SMES" OR "SME OR "MSMES POLICY" OR "SMES POLICY" which then produces 7,326 documents. Then inclusion is carried out by limiting by entering the keywords "ASEAN" and "SOUTHEAST ASIA" because this article will map research on MSMEs policy in ASEAN. Then for the year it is set from 1995 to 2024, the document

type is "article" OR "conference paper", and documents in "English" which then produces 47 documents, with 40 article documents and 7 Conference Paper documents. The results of the document search were then subjected to bibliographic analysis using the VOSviewer application. The data retrieval process is shown in Figure 3.
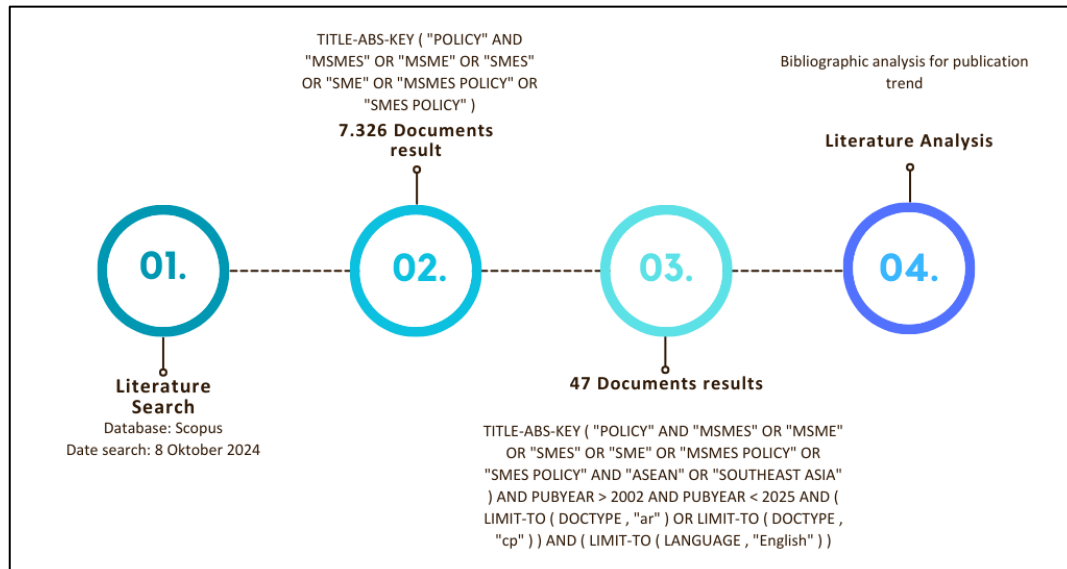

Figure 3. Scopus Data Collection Process

3. Empirical Findings/Results

Research Developments on ASEAN MSMEs Policy

The bibliographic analysis of 47 articles found that research on the topic of MSME Policy in ASEAN, articles that have been published in Scopus started in 2003 with a total of 1 article entitled "Transnationalism and the essentializing of capitalism: Chinese enterprise, the State, and identity in Britain, Australia, and Southeast Asia" (Gomez & Benton, 2003), 8 years after the formulation of the MSME policy in ASEAN. Over time, publications related to the topic tend to increase until 2024, although each year there are ups and downs in the number of articles published, as presented in Figure 4. In Figure 4, it can be seen that 2023 was the year with the most published topics with the keywords policy, MSME, MSME policy, and ASEAN, with a total of 7 articles from the last 21 years. However,

previous years, on average, the topic has only published an average of 2 articles. Even in 2010-2012 and 2015, there were no articles published on the topic.
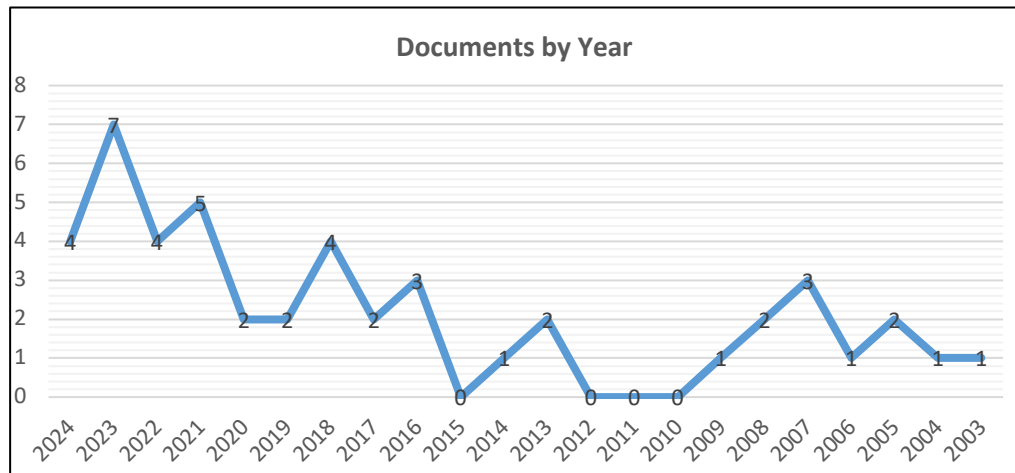

Figure 4. Annual Publication Number Graph

From the distribution of origin of the author's country (Putera et al., 2022), Indonesia is the country with the most published documents, namely 14 documents, followed by Malaysia in second place with 11 documents and Thailand and the United Kingdom with 6 documents, with details in Figure 5.

The 10 countries with the most published articles are dominated by countries in Southeast Asia, where 4 countries, namely Indonesia, Malaysia, Thailand, and Brunei Darussalam, are also members of ASEAN.
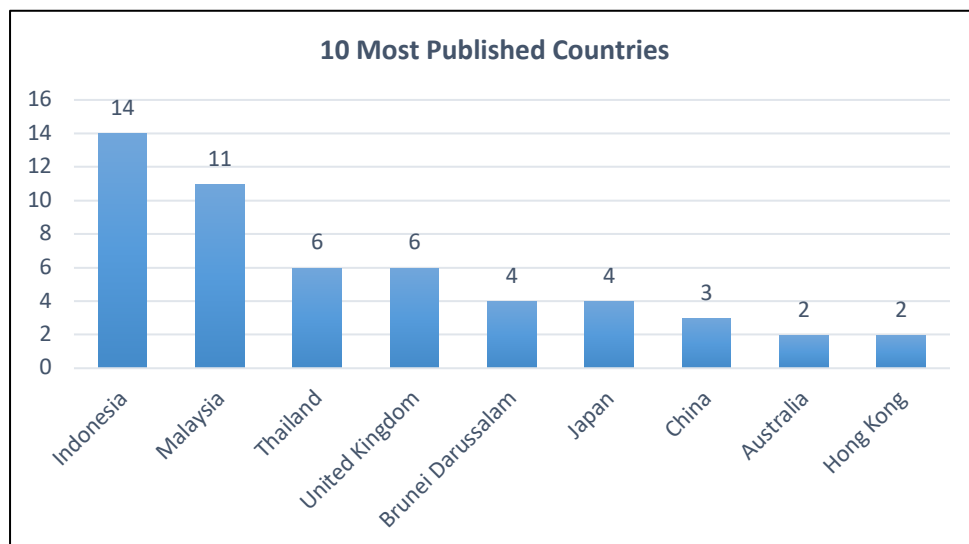

Figure 5. 10 Most Published Countries

Based on the results of network visualization mapping which illustrates the relationship between countries using VOSviewer with the Co-authorship analysis type, which is useful for seeing the relationship between researchers (van Eck & Waltman, 2022). Unit analysis is Countries, from 47 articles with the determination of the occurrence of countries at least 2 times, 12 countries were found to be related to each other and one country that was not related to the others, as shown in Figure 6.
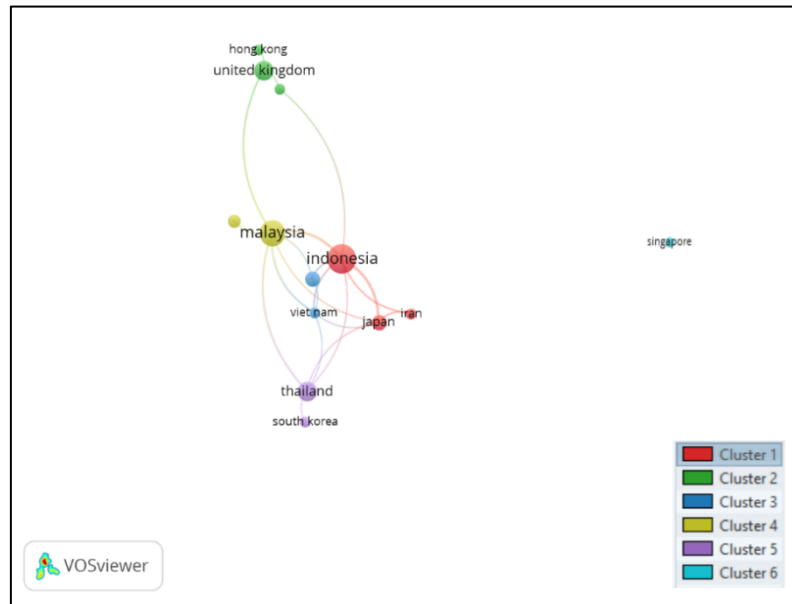

Figure 6. Countries Network Visualization Map

The mapping results produced interconnected 6 clusters and 2 clusters with the same relative strength within several countries' dominance in each cluster. Clustering is another enrichment technique for bibliometric analysis whose main purpose is to create thematic or social clusters (depending on the type of analysis performed), and curating network clusters and observing their development can be useful for understanding how research fields materialize and develop (Donthu, Kumar, Mukherjee, et al., 2021). Within the cluster, there are items which are objects of interest. These items can be publications, researchers, or terms (van Eck & Waltman, 2022) that have a size and relationship between one item and another. Each link has a strength, which is represented by a positive numeric value; the higher this value, the stronger the link (van Eck & Waltman, 2022). Cluster 1, marked in red, consists of 3 countries, namely Indonesia, Iran, and Japan. Indonesia dominates the first cluster, which can be seen to have the largest circle size and is related to 7 other countries. Cluster 2, marked in green, consists of 3 countries, namely Australia, Hong Kong, and the United Kingdom. The United Kingdom dominates cluster 2 and is related to 3 countries. Cluster 3, marked in blue, consists of 2 countries, Brunei Darussalam and Vietnam. Brunei Darussalam dominates cluster 3 and is related to 3 countries. Cluster 4, marked in yellow, consists of 2 countries, namely China and Malaysia. Malaysia dominates cluster 4 and is related to 7 countries. Cluster 5, marked in purple, consists of 2 countries, namely South Korea and Thailand, and Thailand dominates cluster 5, which is related to 5 countries. Finally, cluster 6, marked in blue, is

filled by a country, namely Singapore, and Singapore has no relationship with other countries.

Distribution of Research Citations

A citation is a reference to a text or part of a text that refers to a document in which the text is contained (Hayati, 2016), and citations from other works published in bibliometrics show that there is a meaningful relationship between the study and the reference (Feeley, 2008). Based on the results of the article search in Scopus, it is known that Malaysia is the country that dominates in articles, with the topic of MSME policies in ASEAN, which are the most cited with a total of 321 citations, as detailed in Figure 7 and details in table 1
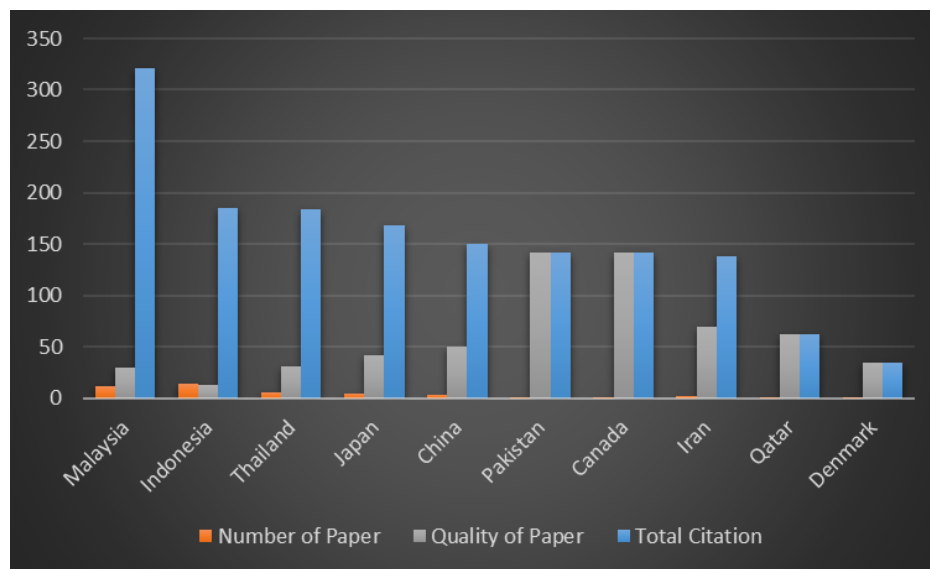

Figure 7. 10 Countries with the Highest Citations

Table 1. 10 Countries with the Highest Citations

Country	Total Citation	Number of Paper	Quality of Paper
Malaysia	321	11	29,18
Indonesia	185	14	13,21
Thailand	184	6	30,67
Japan	168	4	42
China	150	3	50
Pakistan	141	1	141
Canada	141	1	141
Iran	138	2	69
Qatar	62	1	62
Denmark	34	1	34

In Figure 7, it is shown that besides Malaysia, nine other countries with the most citations are Thailand, Indonesia, Japan, China, Pakistan, Canada, Iran, Qatar, and Denmark. In second and third place, the most cited countries are Indonesia and Thailand, with 185 and 184 citations. It can be seen on table 1, the big three most cited countries come from countries in the ASEAN region. Based on the calculation to see the Quality of Paper, which is a comparison of the number of citations with the number of articles, Pakistan and Canada are the countries with the highest scores with a score of 141, Iran is in second place with a score of 69, and the country in third place is Qatar with a score of 62. The results prove that those three countries are quite influential in research related to the topic of ASEAN MSME Policy because they are often used as references for research related to the topic of ASEAN MSME policy.

Furthermore, from 47 search results on the Scopus page, ten articles with the most citations were obtained, and the 1st rank was occupied by an article with the title "Does green finance matter for sustainable entrepreneurship and environmental corporate social responsibility during COVID-19?" (Sadiq et al., 2022) and "A moderated-mediation analysis of psychological empowerment: Sustainable leadership and sustainable performance" (Iqbal et al., 2020) with a total of 141 citations, more details in Table 2.

Table 2. 10 Articles with the Most Citations

Rank	Article	Journal	Year	Scopus Quartile	Total Citation	TC/Y
1	Does green finance matter for sustainable entrepreneurship and environmental corporate social responsibility during COVID-19? (Sadiq et al., 2022)	China Finance Review International	2022	Q1	141	70,50
2	A moderated-mediation analysis of psychological empowerment: Sustainable leadership and sustainable performance (Iqbal et al., 2020)	Journal of Cleaner Production	2020	Q1	141	35,25
3	COVID-19 and regional solutions for mitigating the risk of SME finance in selected ASEAN member states (Taghizadeh-Hesary et al., 2022)	Economic Analysis and Policy	2022	Q1	103	51,50
4	Unintended consequences: Social policy, state institutions and the 'stalling' of the	Economy and Society	2007	Q1	64	3,76

	Malaysian industrialization project (Henderson & Phillips, 2007)					
5	Implementing e-HRM: The readiness of small and medium sized manufacturing companies in Malaysia (Hooi, 2006)	Asia Pacific Business Review	2006	Q2	62	3,44
6	SMEs and carbon neutrality in ASEAN: the need to revisit sustainability policies (Yoshino et al., 2023)	Economic Research-Ekonomska Istrazivanja	2023	Q1	35	35,00
7	Foreign direct investment, linkage formation and supplier development in Thailand during the 1990s: The role of state governance (Lauridsen, 2004)	European Journal of Development Research	2004	Q1	34	1,70
8	Applying the strategic alignment model to business and ICT strategies of Singapore's small and medium-sized architecture, engineering and construction enterprise (Hua, 2007)	Construction Management and Economics	2007	Q1	25	1,47
9	R&D and non-R&D in the innovation process among firms in ASEAN countries: Based on firm-level survey data (Tsuji et al., 2018)	European Journal of Management and Business Economics	2018	Q1	21	3,50
10	Determinants on utilization of the Korea-ASEAN free trade agreement: Margin effect, scale effect, and ROO effect (Lee, 2014)	World Trade Review	2014	Q1	18	1,80

In Table 2, it can be seen that in second place is the article with the most citations, namely "COVID-19 and regional solutions for mitigating the risk of SME finance in selected ASEAN member states" (Taghizadeh-Hesary et al., 2022) with a total of 103 citations, and in third place is the article entitled "Unintended consequences: social policy, state institutions and the 'stalling' of the Malaysian

industrialization project" (Henderson & Phillips, 2007) with a total of 64 citations. Looking at the comparison between the total citations and the number of years since the article was published until 2024, the article "Does Green Finance Matter for Sustainable Entrepreneurship and Environmental Corporate Social Responsibility During COVID-19?" (Sadiq et al., 2022) is in first place because it only achieved 141 citations in 2 years since the article was published. In second place is the article entitled "COVID-19 and Regional Solutions For Mitigating The Risk of SME finance in Selected ASEAN Member States" (Taghizadeh-Hesary et al., 2022), which can achieve 103 citations in 2 years. And in third place, "A Moderated-Mediation Analysis of Psychological Empowerment: Sustainable Leadership and Sustainable Performance" (Iqbal et al., 2020), it achieved 141 citations in 4 years. The duration since an article's publication does not appear to significantly influence its citation count, as articles published within the past two years can receive a higher number of citations, which can encourage researchers who want to conduct research related to the topic of ASEAN MSME policy to be able to produce impactful and influential research.

The most cited article, "Does green finance matter for sustainable entrepreneurship and environmental corporate social responsibility during COVID-19?" (Sadiq et al., 2022) examines the importance of the green economy and corporate social responsibility (CSR) during the COVID-19 pandemic in Southeast Asia. The results of the study show that sustainable entrepreneurship has a significant role in reducing carbon emissions and encouraging environmentally friendly technology by MSME actors. MSME actors are the main actors in sustainable technology and product innovation, therefore policies issued by the government are expected to support this through green investment, environmentally friendly credit, and innovative policy instruments. Next, the second most cited article, entitled "A moderated-mediation analysis of psychological empowerment: Sustainable leadership and sustainable performance" (Iqbal et al., 2020) empirically tests the impact of sustainable leadership on psychological safety and the impact of psychological safety on sustainable performance and theoretically explores the potential impact of psychological safety as a mediator linking the influence of sustainable leadership to sustainable performance. The results of the study show that sustainable leadership that prioritizes psychological safety and employee empowerment can improve organizational performance sustainably. The third most cited article, entitled "COVID-19 and Regional Solutions For Mitigating The Risk Of SME Finance In Selected ASEAN Member States" (Taghizadeh-Hesary et al., 2022), aims to identify the determinants of the credit guarantee ratio for SMEs and analyze its relationship with macroeconomics, banks and SME policies in 5 countries in ASEAN. In addition, this study aims to develop a regional credit guarantee scheme (RCGS) that can help SMEs during the COVID-19 pandemic and economic recovery from the post-pandemic. The results of the study are that the credit guarantee ratio must be adjusted to the macroeconomic conditions and bank profiles, and ASEAN governments must increase the credit guarantee ratio for SMEs during the COVID-19 period. Related to the regional credit guarantee scheme (RCGS) in ASEAN, it can increase cooperation between countries in ASEAN, strengthen regional

financial transactions, and support the sustainability of SMEs. The top 3 most cited articles have different topics related to MSMEs in ASEAN, including innovative policies and green credit, psychological security and employee empowerment to improve organizational performance, and regional credit guarantee schemes to support SME sustainability and strengthen cooperation between countries in ASEAN. From these different topics, research on MSME policies does not have a specific topic that is most cited. In addition, the topic of the ASEAN MSME Policy can be elaborated with other topics therefore that problems related to MSMEs can be solved based on the type of problem to be studied.

The 10 most cited articles come from different journals. The journals "China Finance Review International" dan "Journal of Cleaner Production" are the most cited. The second and third place are the journals "Economic Analysis and Policy" and "Economy and Society", and journals come from Scopus quartile 1. The 10 journals were published in 2014 on average. However, the top 3 most published journals from the keyword search results were published above 2020.

Mapping of ASEAN MSME Policy Topics

The results of network visualization mapping with co-occurrence analysis type settings, author keywords analysis units, and full counting calculation methods to describe keyword relationships and the results of network visualization are obtained in Figure 8.
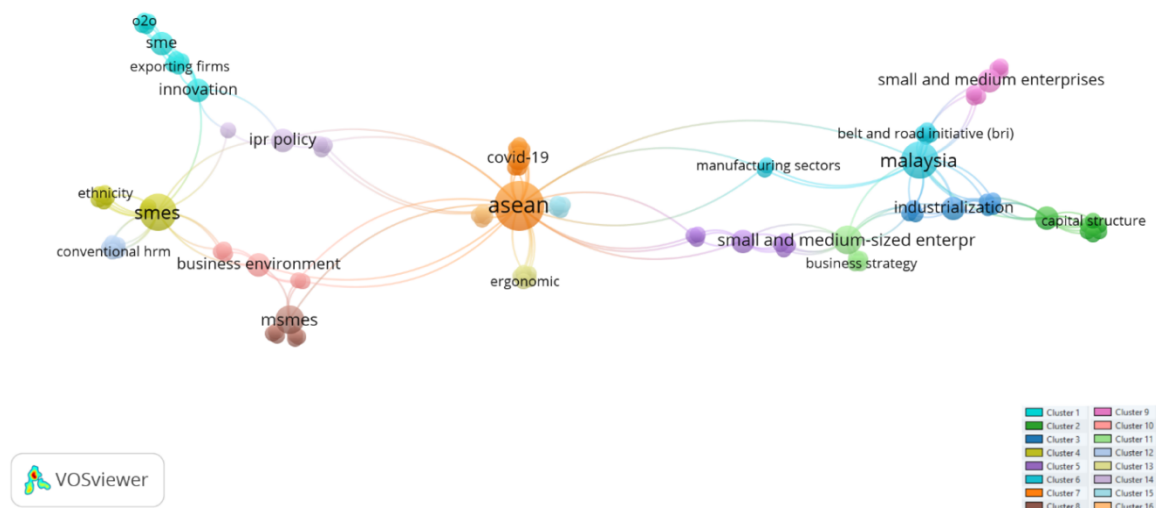

Figure 8. Map Network Visualization Keywords

The results of the network visualization mapping produce 16 different color clusters with each number of keywords with details in Table 3.

Table 3. Cluster Analysis in Network Visualization

Cluster	Number of Keywords

Cluster 1	10
Cluster 2	8
Cluster 3	8
Cluster 4	8
Cluster 5	8
Cluster 6	7
Cluster 7	7
Cluster 8	7
Cluster 9	7
Cluster 10	6
Cluster 11	5
Cluster 12	5
Cluster 13	5
Cluster 14	5
Cluster 15	4
Cluster 16	4

Based on the results of network visualization mapping, cluster 1 (Dark Turquoise) has 10 items focused on e-commerce, SME, export, O2O, and innovation. Cluster 2 (Wageningen Green) has eight items focused on economic development, capital structure, multinational companies, and financing. Cluster 3 (Green-Blue) has eight items focused on industrialization, labor markets, migrations, social policy, and state institutions. Cluster 4 (Acid Green) has eight items focused on SMEs, supermarkets, Chinese overseas, ethnicity, and family business. Cluster 5 (Middle Blue Purple) focuses on green economic growth, panel data, green SMEs, sustainable tourism, and association of southeast asian nations. Cluster 6 (Battery Charged Blue) focuses on Malaysia, belt and road initiative, conceptual reviews, strategic locations, and conceptual reviews. Cluster 7 (Orange) focuses on ASEAN, COVID-19, economic recovery, credit guarantee recovery, and policy implications. Cluster 8 (Spicy mix) focuses on MSME, digitations, Jakarta Metropolitan Area, resources, and financial accounting. Cluster 9 (Middle purple) focuses on Small and Medium enterprise, regional trading agreement, government policy, electronics components, and regional production networks. Cluster 10 (American Pink) focused on business environment, financial structure, business drive, philippines dan external auditor. Cluster 11 (Light Green) focuses on small and medium-sized enterprises, business strategy, information and communication technology strategy, Singapore construction industry, and strategic alignment. Cluster 12 (Pale Cornflower Blue) focuses on conventional HRM, financial resources, E-HRM, expertise, and employees' attitudes. Cluster 13 (Medium Spring Bud) focuses on ergonomics, occupational health, small and medium enterprises (sme), work ability, and work environment. Cluster 14 (Tropical Violet)

focuses on IPR Policy, IPR and SMES, IPR strategy, ASEAN technology transfer, and copying. Cluster 15 (Non-photo Blue) focuses on fossil fuel extraction, green education, green transformation, and sustainable power generation. Cluster 16 (Mellow Apricot) focuses on fuzzy-ahp, GVCS, international trade, and LDCS.

Each cluster is related to each other. The keyword ASEAN (cluster 7) is the largest item because it has the largest total link strength among other items. The keyword ASEAN is related to keywords including MSMEs, IPR policy, covid-19, business environment, and manufacturing sectors, which means that research with the keyword ASEAN usually also discusses topics related to these topics. The second item with the largest total link strength is Malaysia (cluster 6), which is related to the keywords ASEAN, Small and Medium-sized enterprises, economic development, manufacturing sectors, and industrialization. The third item with the largest total link strength is SMES (cluster 4), which is related to keywords innovation, IPR policy, business drive, business environment, and Chinese overseas.

In the network visualization results, the keyword MSMEs appears with a total link strength of 10, and some of them are related to the keywords ASEAN, Business environment, philippines, digitization, and resources. The keyword Small and Medium enterprise appear with various abbreviations and have many connections with other keywords. From the result of the mapping that is related to policy, there are keywords social policy, policy implications, government policy, minimum wage policy, and IPR Policy. The keyword Social policy has a connection with the keywords Malaysia, industrialization, labor markets, migration, state institutions, and economic development. The keyword policy implications has a connection with COVID-19, economic & financial risks, and ASEAN. The keywords government policy has a connection with the keywords small and medium enterprises, regional trading agreements, electronics components, and Malaysia. The keyword minimum wage policy is related to the keywords asean and malaysia. The keyword ipr policy is related to keywords including innovation, asean technology transfer, SMES, copying, and ASEAN. The keyword MSME policy or SMEs Policy do not appear in the network mapping results. The keyword ASEAN has been discussed previously, is the largest item, and is related to other keywords.

Based on the results of the overlay visualization mapping, which illustrates the average publication time of articles, as shown in Figure 9. Based on Figure 9, the color of each item describes the publication period. The darker the color of the items, the more past when the keyword was published. Marked in dark blue, including the keywords "industrialization", "labor markets", "business strategy", "financial resources" and "asean technology transfer" were published on average in 2007-2008. In 2010-2013, the keywords "minimum wage policy", "economic development", "multinational enterprise", "capital structure" and "financing" were marked in aqua blue. The keywords "work environment", "ergonomic", "strategic locations", "ecommerce", and "asean" marked in ocean green were published in the 2014-

2019 period. For green-yellow items such as keywords "international trade", "sustainable power generator", "green transformation", "business environment", and "export" are published on average in the 2020-2024 period. The keywords "policy implications", "economic & financial risks", "covid-19", and "green smes" are widely published, and even for cluster 15 with the keywords "fossil fuel extraction", "green education", "green transformation", and "sustainable power generation" are all published in 2024, and cluster 16 which focuses on "fuzzy-ahp", "GVCS", "international trade", and "LDCS" is widely published in 2023.
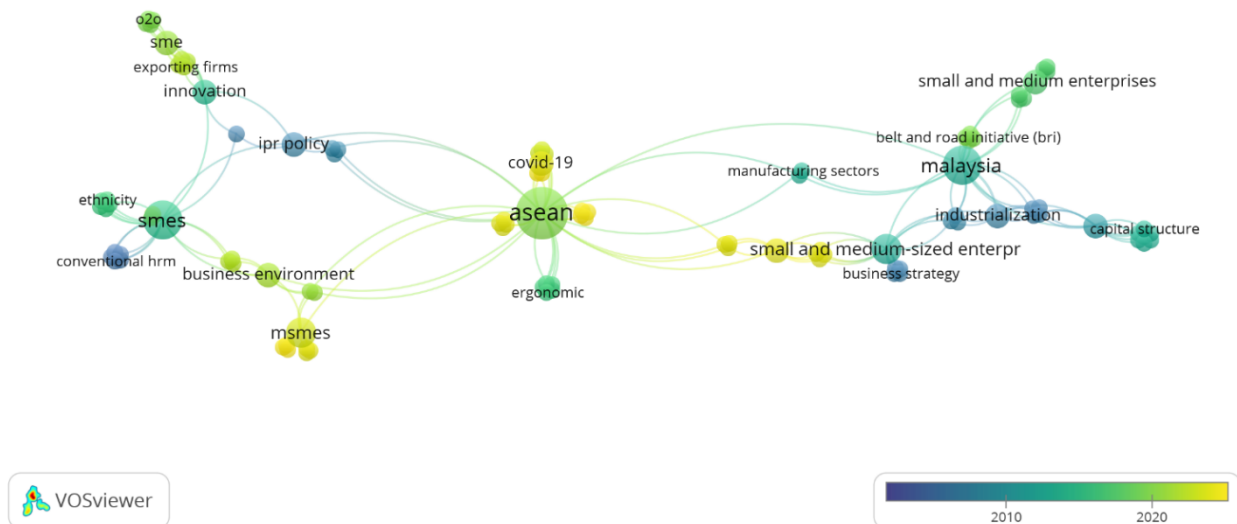

Figure 9. Map of Overlay Visualization

Keywords related to micro small medium enterprises appear in several terms, such as "small and medium-sized enterprises", "SME", "small and medium enterprises", "MSMES" and "SMES", and these items are popular topics throughout 2003-2024 which are topics related to the search for MSME policy topics in ASEAN. The keyword "ASEAN" is marked in green, which shows the average publication time that occurred in 2019. Keywords related to policy, the keyword "social policy" was published on average in 2007, the keyword "policy implication" was published on average in 2024, the keyword "government policy" was published on average in 2017, and the keyword "IPR policy" was published on average in 2007. If we look at this, the last 5 years of discussions related to ASEAN MSME policies have discussed topics around the green economy, sustainability, global cooperation, and COVID-19, if compared to 2007-2019 around economic development.

Based on the results of density visualization mapping, which illustrates the level of publication of the keywords "policy", "MSME", and "ASEAN" in Figure 10. The denser the yellow color, the more the keywords are published, and vice versa, the closer to the blue color in the keyword area, the fewer keywords are published. The keyword area "MSMES" is marked in yellow, as are the keywords "SMES", "SME", and "Small and medium enterprises" which are mostly dominated by yellow, which indicates that the topic has been widely published. For keywords related to policy, such as "social policy", the area around the keyword is green, indicating that the keyword are few published. The color of the area around the keyword "implication policy" is yellow, indicating that the related topic has been widely published. The keywords "government policy", "minimum wage policy", and "ipr policy" are marked in bluish color, indicating that there are still a few published articles on that topics. The keyword "ASEAN", whose area is marked in yellow, indicates that the keyword has been widely published. Other topics such as keywords "covid-19", "economic & financial risks", "digitation", "globalization", and "fossil fuel extraction", where the area of the keyword is marked in yellow, which means that the topic has been widely published. Meanwhile, for keywords including "green economic growth", "sustainable tourism", "asean technology transfer", "innovation", and "business environment", where the area of the keyword is green to blue, therefore that it shows that there are still few published articles on the topic.
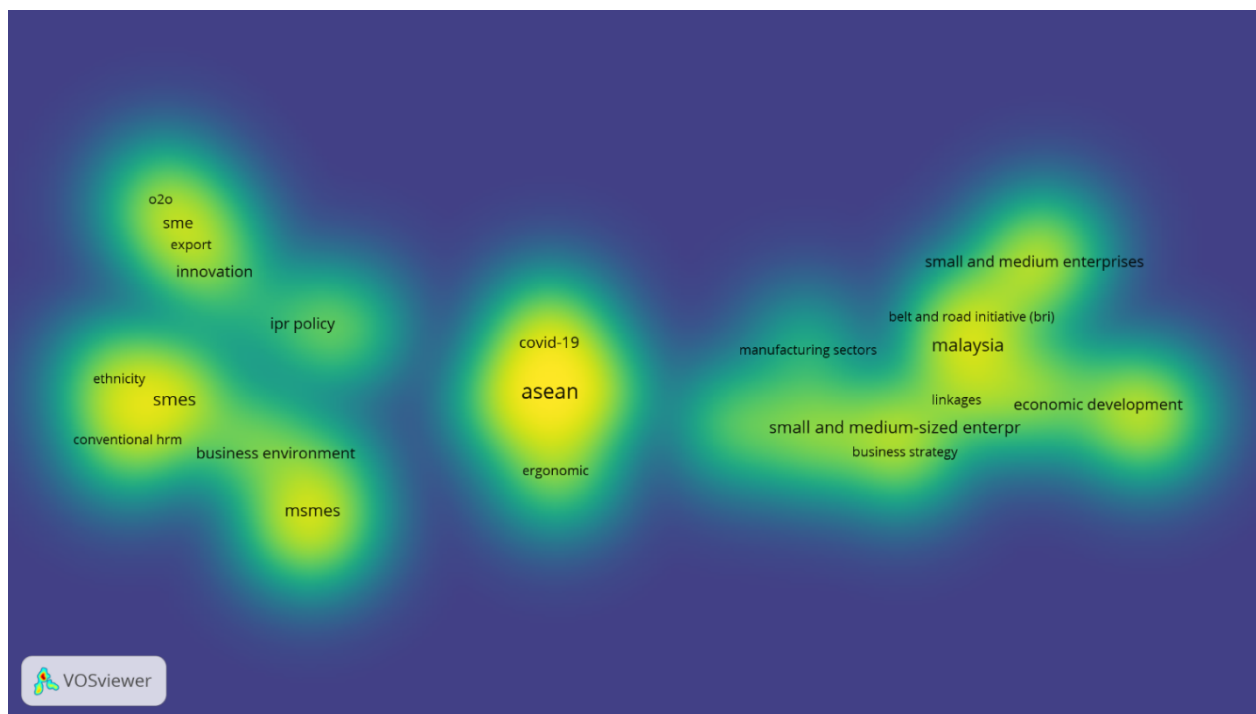

Figure 10. Map of Density Visualization

Based on density visualization, keywords related to MSMEs have mostly been published, as well as the keyword ASEAN. Meanwhile, the keyword policy is still few published, therefor, the topic of MSME policy can create renewal. In addition, discussions about green economic growth, innovation, and

ASEAN technology transfer are still few articles discussing this, therefore discussions about MSME policies that concentrate on these topics can create renewal in the world of research.

4. Conclusion

The importance of research-based policies makes research positions important to be carried out, hence this research was conducted to obtain an overview of MSME policy research in ASEAN. The results obtained through bibliometric analysis reveal important findings that contribute to the understanding and reflection of this issue. Topics related to ASEAN MSME policies have increased and also show that the ability to publish research and ideas in scientific publications has increased, but because the level of publication on this topic is still few published, there is an opportunity to create new research on this topic. The research related to a green economy, innovation, and global economy that can be discussed through the perspective of ASEAN MSMEs policies, accordingly that researchers take part in the preparation of MSME policies based on research which is expected to be able to solve emerging problems and can encourage MSMEs in ASEAN to be more empowered and increase economic strength in the ASEAN region.

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