# A BIBLIOMETRIC ANALYSIS ON HALAL COSMETICS OVER TWENTY YEARS

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**ABSTRACT:** Purpose – *Halal* cosmetics area is progressively increasing these days. This bibliometric analysis is intended to systematically evaluate the research to brief researchers about the trend of *halal* cosmetics field. This paper also discloses the limitations of the studies in the area. Design/methodology/approach – This paper adopted bibliometric and network analysis to evaluate the research area. A total of 82 documents obtained from the Scopus database are extracted and analysed. Findings – The paper reports the type of documents available, the years published, authorship and geographical distribution of the published documents in the *halal* cosmetics area. From the keyword analysis, it is found that the most used words are *halal* cosmetics, *halal*, cosmetics, purchase intention, Malaysia, and Islamic marketing. Research limitations/implications – This bibliometric study is conducted using Scopus database; however, Scopus might possibly omit some publications, thus, authors might not report the missing studies. *Halal* cosmetics are still in the early years of publications, and only 82 published documents were analysed in the study. Originality/value – There is no study reported on the network analysis and bibliometric study techniques in the area of *halal* cosmetics.

**KEYWORDS:** Halal cosmetics; Bibliometric analysis

# 1. INTRODUCTION

The Arabic word *halal* means 'permissible' or 'lawful', while its opposite, *Haram*, means prohibited or unlawful, (Hanapi & Khairuldin, 2017). The general understanding is that *halal* products should not be contaminated with pork or alcohol and that livestock should be slaughtered following the Islamic *Syari'ah* law. However, as stated by other literature from Alzeer et al. (2018), the *halal* realm is not solely focused on foods but may extend to all consumables, such as toiletries, pharmaceutical, cosmetics and services including finance, investments, and business.

Other than the halal food industry, halal cosmetic products and pharmaceuticals are also of high demand, with 2.4 billion Muslim end users in the whole world. The halal market is

expected to increase year by year globally. As long as it is not made from constituents derived from or containing pig, reptiles, predatory animals, parts of the human body such as hair, blood, carrion, and insects, all cosmetic products are considered *halal*. If a cosmetic ingredient needs to be derived from a lawful animal, it must be slaughtered following the Islamic law to be considered *halal*. It is known that *halal* products are fundamental for all Muslims. Despite that, non-Muslim consumers also prefer *halal* products as they find *halal* products are of higher quality, (Sugibayashi et al., 2019). This is fact-based as producing a *halal* product requires meticulous, accurate and attentive steps starting from raw material until it is secured in the consumer's hand. *Halal* products also prioritize the safety of products so that the products' efficacy increased and are considered more eco-ethical and natural in every manner, (Hashim & Mat Hashim, 2013).

Many, products that claimed to be *halal* are believed by many to be eco-friendly and more ethical with better production practices. This complies with the 'tayyib' concept, which means good or desirable. *Halal* certification increase ethical standards, and not only that, it covers all aspects in better form, from economy and business management, community, environment, and manufacturing process. Every *halal* company that faithfully obeys the *halal* requirements are directly or indirectly withstanding against environmental pollution, cruelty and starting to initiate green marketing, (Aoun & Tournois, 2015). Not only executing religious requirements, but *halal* products also demonstrate more natural and eco-friendly ways, which portrays that they are protecting the universe wholly.

The current trend of purchasing products by consumers concerns about the *halal*-certified products. Consumers were becoming more conscious in purchasing products to prioritize the *halal*-certified products due to safety and hygiene purposes, (Fahmi, 2017). Fahmi, (2017) also added that the need to purchase *Halal* certified products was due to the increasing level of awareness and obligation about purchasing *halal* products among Muslim consumers. This shows that consumers' attitudes influenced the intention of purchasing *halal*-certified products. As explained by Zaimah et al. (2018), consumer's attitude toward purchasing *halal*-certified products was due to the understanding of the concept of *halal*, which has been stated in the Holy Quran, which it can bring goodness and benefits. Even non-Muslim consumers started to purchase or consume *halal*-certified products as the benefits have been proven through scientific research, (Zaimah et al., 2018).

In another article by Ngah et al. (2019), it was stated that *halal* cosmetics manufacturers have started to comply *halal* concept even in the transportation services of their products. Cosmetics manufacturers had started to apply *halal* transportation services due to the awareness and consciousness to perceive benefits, provide safe transportation environment, and preserve intention of application, (Sugibayashi et al., 2019). In research conducted by Ngah et al. (2019) the increase of intention in adopting *halal* transportation services was due to the increase of perceived benefits provided by the *halal* transportation provider that will be received by the manufacturers. Tieman et al. (2012) described *halal* supply management principles, which involved supply chain resources, supply chain network structure, and supply chain business processes. The *halal* supply chain is a crucial factor even in the cosmetics industry as it ensures the product is undoubtedly *halal*, right from the manufacturing process until the product is in the hand of the consumers.

Meanwhile, Samori et al. (2014) described *halal* standards' development as a contemporary standard in modern lifestyle. *Halal* standards should be developed as guidance or standard in which manufacturers must achieve to obtain *halal* recognition for their products. The

implementation of *halal* standards in cosmetics allowed committee from Department of Islamic Development Malaysia (JAKIM) to critically evaluate cosmetics products that were eligible for *halal* certification, (Jusoh et al., 2016). With that being said, cosmetics *halal* standards also served as a medium for monitoring and enforcing *halal* certification obligation in a way failure to comply with those standards resulting in serious actions taken to certificate holders.

After all, even researches are actively being done and reported in the halal area, to the best of the authors' knowledge, no study has been done using bibliometric and network analysis techniques in the subject area of halal cosmetics. Thus, this paper will utilize bibliometric analysis to review the available literature in the area of halal cosmetics from the year 2000 until recently (2000-2020). The bibliometric analysis is intended to systematically evaluate the research to brief researchers about a specific area's trend.

#### 2. METHODS

This paper emphasized the bibliometric analysis used to explore and classifying the literature reported in the halal cosmetics area. The bibliometric study aimed to quantitatively analyze halal cosmetics' research area to understand how the area had progressed in twenty years. The research methodology implied in this study is shown in Figure 1. The first step in conducting this analysis was defining the analysis topic by setting four research questions: How many publications have been published related to halal cosmetics?; Which country contributed to the most publications regarding halal cosmetics from the year 2000 until 2020?; When are the active years of publication regarding halal cosmetics?; What is the relationship between halal and cosmetic?. The second step was identifying keywords and time frame for the analysis, and in this analysis, the keywords identified were 'halal' and 'cosmetics' meanwhile, the time frame was set from the year 2000 until 2020 in which the correspondent years were targeted to be the years active of halal cosmetics publications being published. The third step was the selection of data surface in which Scopus database was used while conducting this analysis. The fourth step was data retrieval, in which all data from Scopus database were exported in excel (CSV) format for further analysis. The fifth step was including analysis of data in which summary tables, related calculations, and bibliometric measures were produced. The sixth step was visualizing results obtained in the form of tables, geographical maps, and VOSviewer. Geographical maps visualized maps with detailed descriptions of graphs which contained two important characteristics, the distance between variables and proximity between variables, (Melo & Queiroz, 2019). Meanwhile, VOSviewer provided three different visualizations, network visualization, overlay visualization and density visualization in which the data was exported from citation database such as Scopus. The last step in conducting this analysis was evaluating the findings by referring to other journals as validation for the results obtained as well as discussing the findings for better understanding.

### 3. BIBLIOMETRIC ANALYSIS AND DISCUSSIONS

For this study, the Scopus database of 82 documents related to halal cosmetics was downloaded in a.csv (comma-separated value) file format according to the requirements VOSviewer, the program used for data analysis. The data retrieved from the downloaded SCOPUS database is the year published, author names and affiliations, keywords, languages

used, and geographical distribution of the articles. The same information of the halal cosmetics SCOPUS Scopus database is also saved in Excel format to generate graphs and tables to determine the, year of database trends, for example, the document type, year published, and keywords frequency in

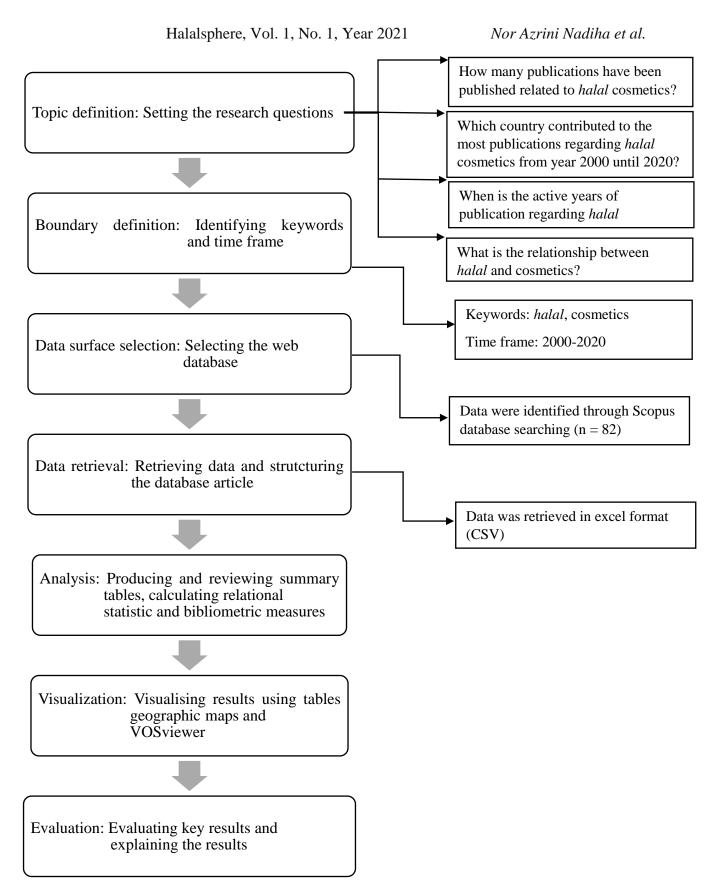


Fig. 1: Research methodology adopted in the bibliometric analysis on *halal* cosmetics over twenty years.

the documents. The following sub-sections present the document and source types of publications, language used in documents, keywords frequently used, and geographical distribution as acquired from the bibliometric analysis.

From the analysis that had been done, it can be said that *Halal* as a whole research area has high potential as the demand for *halal* is increasing year by year. However, other halal research areas such as *halal* cosmetics are limited because people tend to associate *halal* with only food, but not as a way of life. This is tally with a bibliometric review from, (Haleem et al., 2020), which stated that researchers are more interested in *halal*'s food aspect and inferred that *halal* is only for Muslims. The most active country publishing in *halal* cosmetics is Malaysia, followed by Indonesia. This is in agreement with the increasing market of *halal* cosmetics in both countries. Malaysia is also one of the largest Malaysian export markets compared to Southeast Asian neighbors for *halal* products. Though the *halal* area is being explored nowadays, *halal* cosmetics' progress is still in the early stage. Sugibayashi et al. (2019) stated that non-halal cosmetics manufacturers still govern cosmetics production, which can cause doubt for the Muslim consumers because the production process might not meet the *halal* requirements. Thus, there is a strong need to introduce *halal* concept worldwide, not only in Muslim countries. This is where researchers from all the countries should alleviate the works in the *halal* cosmetics area.

### 3.1 Document and Source Types

The document and source types are extracted using Excel. As listed in Table 1, the most frequent document type for *halal* cosmetics area is article with 80.49%, followed by conference paper (7.32%), book chapter (4.88%), review (3.65%), and book, note, and short survey with (1.22%) each. The dominating source type is mostly journals. This might be because there is increasing demand for *halal* cosmetics topics in various journals. *Halal* conferences around the world keep expanding, and this might be the factor conference papers comes in second. *Halal* cosmetics topic written in book, note and short survey is the least as it might be more challenging to publish in these types of documents. The source type analysis is quite similar to the document type, which is portrayed in Table 2.

**Document Type Frequency** % (N=82) 80.49 Article 66 Conference Paper 6 7.32 **Book Chapter** 4 4.88 3 Review 3.65 Book 1 1.22 Note 1 1.22 Short Survey 1 1.22 82 100.00 **Total** 

Table 1: Document type.

Table 2: Source type.

Source Type	Frequency	% (N=82)	
Journals	70	85.36	
Conference Proceedings	6	7.32	
Books	5	6.10	
Trade Publications	1	1.22	
Total	82	100.00	

#### 3.2 Year Publication

The first Scopus-indexed article published in the *halal* cosmetics area is in 2006, and then the second one took quite some time to be published in 2011. There might be less interest in *halal* cosmetics in the early years of the publications, but articles keep adding each year, with 2019 become the most active year for writers to publish their papers. As the millennial Muslim consumers tend to be more observant of Islamic principles, they tried to incorporate *halal* into their lifestyle. Thus, new opportunities are opening up in cosmetics and personal care categories. Researches might have been intently done on *halal* cosmetics a few years before, so in 2019, papers are published intensively. In 2019, 21 publications were published, as stated in Table 3.

Table 3: Year of publications.

Year	Frequency	% (N=82)	Cumulative Percent	
2000-2005	0	0	0	
2006	1	1.22	1.22	
2011	1	1.22	2.44	
2012	5	6.10	8.54	
2013	4	4.88	13.42	
2014	4	4.88	18.30	
2015	7	8.53	26.83	
2016	8	9.75	36.58	
2017	9	10.98	47.56	
2018	17	20.73	68.29	
2019	21	25.61	93.90	
2020	5	6.10	100.00	
Total	82	100.00		

# 3.3 Language of Documents

The documents are actively being written in English as 81 over 82 of the publications are written in English and the remaining is in Turkish, as stated in Table 4. English is a very important international lingua franca in many places all over the globe. Undoubtedly, it is why the documents are mostly written in English. More people will understand and be aware of the *halal* cosmetics topic if written in English.

 Language
 Frequency\*
 % (N=1114)

 English
 81
 98.78

 Turkish
 1
 1.22

 Total
 82
 100.00

Table 4: Languages used for publications.

#### 3.4 Keyword Analysis

Using VOSviewer and Excel, Figure 2 and Table 5 were obtained. From Figure 2, it can be seen from the connection that most of the words are related to each other. The size of the word shows the frequency of the words used related to halal cosmetics. For example, halal cosmetics is the largest number and is tally with the frequency of author keywords shown in table 5. The similar color of the words means similar keywords are shared between the topic. It can be seen from the color light blue in Figure 2. Islamic marketing keywords are mostly related to other keywords, such as consumer behavior and the Muslim consumer. Table 5 shows that the most frequent words used are halal cosmetics with approximately 15.12 %, followed by the words; halal, cosmetics, purchase intention, Malaysia, and Islamic marketing. Even though the keywords chosen are halal cosmetics, it is not surprising that halal food and halal logistics still appeared in the table. This is because the keywords might be related to each other in certain sources, such as review papers or books. Other than that, countries such as Malaysia and Indonesia also make it on the top list. These two countries might be the most active countries in halal research or publications. Keywords such as purchase intention, Islamic marketing and consumer behavior also indicate that displaying these topics is currently being studied by some researchers. There are also science-related keywords such as polymerase chain reaction, which shows that science-based research has been done although lesser than social science study on halal cosmetics. Surprisingly; the keywords fish appear three times in the author's keywords, which portrays that it could be a new alternative ingredient in halal cosmetics. From the frequency of the author keywords analyzed in this study, researchers could continue their study on existing topics or embark on new research on new topics. For instance, studies can also be focused more on science-based *halal* cosmetics researches.

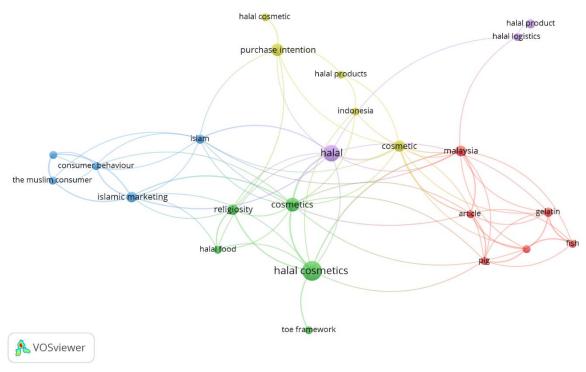


Fig. 2: Network visualization map of the author keywords.

Table 5: Frequency of author keywords.

<b>Author Keywords</b>	Frequency	Percent	
article	3	2.52	
consumer behavior	3	2.52	
cosmetic	6	5.04	
cosmetics	9	7.56	
fish	3	2.52	
gelatin	4	3.36	
halal	13	10.92	
halal cosmetic	3	2.52	
halal cosmetics	18	15.12	
halal food	3	2.52	
halal logistics	3	2.52	
halal market	3	2.52	
halal product	4	3.36	
halal products	3	2.52	
Indonesia	3	2.52	
islam	4	3.36	
Islamic marketing	5	4.20	
Malaysia	5	4.20	
pig	3	2.52	
polymerase chain reaction	3	2.52	
purchase intention	7	5.88	
religiosity	5	4.20	
the Muslim consumer	3	2.52	
toe framework	3	2.52	

#### 3.5 Geographical Distribution of Publications – The Most Influential Countries

Table 6 listed the top ten countries, which mainly contributed to publications related to *halal* cosmetics between 2000 until 2020. It can be seen that Malaysia contributed to the most publications, which covered 51.16% of the total publications, followed by Indonesia and India with 22.09% and 8.14%, respectively. The huge gap of *halal* cosmetics publications can be discussed based on two aspects, which were top *halal* cosmetics producing countries and awareness for *halal* cosmetics in the countries. The rising of *halal* cosmetics brands among these countries, especially Malaysia and Indonesia, had attracted various researches conducted in this area (Che Mohd Hashim & Musa, 2013). For example, in Malaysia, Safi was the first cosmetic brand to obtain *halal* certification and ranked 34 out of 170 of the most used brands globally, (Hussain, 2012).

Meanwhile, the first declared *halal* cosmetic brand in Indonesia was Wardah, which was rapidly exported throughout the globe, (Sukesi & Hidayat, 2019). Besides, an increase in awareness and demand for *halal* cosmetics in these countries accelerated this field's studies. In Malaysia, a study conducted by Mohezar et al. (2016) revealed that most Muslim and non-Muslims consumers chose *halal* cosmetics products due to their confidence in the safety, pureness, and quality. In fact, 37.7% of Muslims in Indonesia were aware of using *halal* cosmetics products and will definitely purchase them once the products are released in the market, (Rahim et al., 2015).

Table 6: Top 10 countries contributed to the publications.

Country	Frequency	% (N=86)
Malaysia	44	51.16
Indonesia	19	22.09
India	7	8.14
Turkey	3	3.49
United Arab Emirates	3	3.49
United States	3	3.49
Iran	2	2.33
Pakistan	2	2.33
Thailand	2	2.33
Australia	1	1.15
Total	86	100.0

# 3.6 Authorship

The number of the author(s) for each published document and article were listed in Table 7., The top ten most productive authors according to the respective number of documents they published were listed in Table 8. It can be seen that the highest number of authors per document recorded was four authors with a frequency of 23, covering 28.05% of the total. The least number of authors per document recorded were six authors with a frequency of two and covered 2.44% of the total. The most active authors recorded were Ngah A. H and Rohman A., with three documents published, which covered 13.64% of the total. The other eight authors recorded two documents published for each of them. The table explained some of the authors had published more documents than the others as most of their research was continuous and of the same influential institutions or organizations.

Table 7: Number of author(s) per document.

Author count	Frequency	% (N=82)
1	9	10.98
2	21	25.61
3	16	19.51
4	23	28.05
5	8	9.75
6	2	2.44
7	3	3.66
Total	82	100.0

Table 8: Top 10 most productive authors.

Author's name	No. of documents	% (N=22)	
Ngah, A.H.	3	13.64	
Rohman, A.	3	13.64	
Abdinagoro, S.B.	2	9.09	
Abdullah, N.A.B.	2	9.09	
Ainin, S.	2	9.09	
Al Rashid, H.	2	9.09	
Ali, M.E.	2	9.09	
Ali, M.H.	2	9.09	
Anuar, N.B.	2	9.09	

Arbak, S.	2	9.09
Total	22	100.0

Figures 3, 4, and 5 were the network visualization map of co-authorship obtained using VOSviewer. Figure 3 showed the relationship between authors who published at least two articles or documents with at least two authors' citations. It can be seen that four authors met the requirements, and they were related to each other. Meanwhile, Figure 4 showed the organizations involved regarding the authors of the published articles with at least one document for each organization. Figure 5 indicated the relationship between countries and the respective authors, contributing to the publications related to *halal* cosmetics. It showed that Malaysia was positively related to other countries such as Indonesia, Thailand, the United Arab Emirates, and India. This is because, Malaysian *halal* cosmetic industry had been growing for an extended period, and most of the *halal* cosmetics products were being exported to these countries such as Middle East countries and ASEAN countries, consequently enabling collaborative studies to be conducted within these countries, (Mohezar et al., 2016).

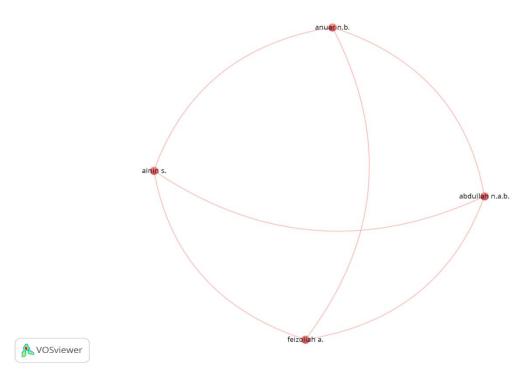


Fig. 3: Network visualization map of co-authorship.

Unit of analysis: authors
Maximum number of authors per document: 25
Minimum number of documents of an author: 2
Minimum number of citations of an author: 2



Fig. 4: Network visualization map of the most influential organizations.

Unit of analysis: organizations
Maximum number of organizations per document: 25
Minimum number of documents of an organization: 1
Minimum number of citations of an organization: 0

#### 3.7 Most Influential Institution

Table 9 below listed the top ten most influential institutions with a minimum of one publication. It can be seen that Universiti Malaya and Universiti Utara Malaysia produced the highest number of publications (3), contributing to 18.75% of the total publications. Both of these universities have their own *halal* institute, which might impact the journal published on *halal* cosmetics. However, other *halal* institutions from Malaysian Universities do not publish their papers on *halal* topics might be downgrading as they might not focus their research on *halal* cosmetics but other topics such as food or logistics.

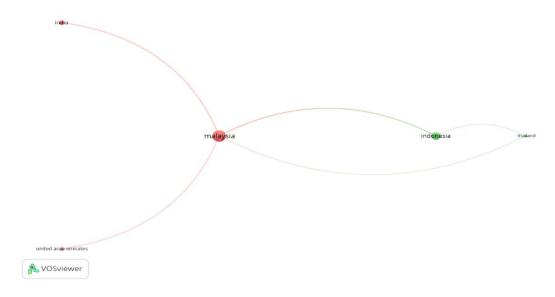


Fig. 5: Network visualization map of active countries in publishing journals in halal cosmetics.

Unit of analysis: countries

Maximum number of countries per document: 25

Minimum number of documents of a country: 2

Minimum number of citations of a country: 0

Table 9: Top 10 most influential institution with minimum of one publication.

Institution	No. of publication	% (N=16)
Universiti Malaya	3	18.75
Universiti Utara Malaysia	3	18.75
Ministry of Higher Education, Malaysia	2	12.50
Pusat Pengurusan Penyelidikan dan Inovasi, UUM	2	12.50
Institut Pengurusan dan Pemantauan Penyelidikan, UM	1	6.25
Institut Teknologi Sepuluh Nopember	1	6.25
International Islamic University Malaysia	1	6.25
Korea Institute of Planning and Evaluation for Technology in Food, Agriculture, Forestry and Fisheries	1	6.25
Lembaga Penelitian dan Pengabdian Kepada Masyarakat	1	6.25
Ministry of Agriculture, Food and Rural Affairs	1	6.25
Total	16	100.0

# 3.8 Citation Analysis

Table 10 showed the citation metrics of the published publications related to *halal* cosmetics. Table 11 showed the top ten most influential articles. According to the most cited articles, the articles were arranged to the least cited articles with a minimum of ten citations. The most cited article was Intention to Choose *Halal* Products: The Role of Religiosity, written by Mukhtar, A. and Butt, M. M., with 129 citations since it was published in 2012. The least cited article was Exploring Antecedents and Consequences of Indonesian Muslims Youths' Attitude Toward *Halal* Cosmetic Products: A Study Case in Jakarta by Briliana, V., and Mursito, N. with eleven citations.

Table 10: Citation metrics.

Metrics	Data
Publication years	2005-2020
Citation years	15 (2005-2020)
Papers	82
Citations	505
Citation/year	34
Citation/paper	6
Citation/author	51

Table 11: Highly cited articles – The most influential articles.

Authors	Article title	Year	Cites	Cites per
				year
Mukhtar, A., Butt, M.M.	Intention to Choose <i>Halal</i> Products: The Role of Religiosity	2012	129	16
Tieman, M., Vorst, J.G., Ghazali, M.C.	Principles in Halal Supply Chain Management	2012	80	10
Rahman, A.A., Asrarhaghighi, E., Rahman, A.S.	Consumers and <i>Halal</i> Cosmetic Products: Knowledge, Religiosity, Attitude and Intention	2015	63	13
Ngah, A.H., Zainuddin, Y., Thurasamy, R.	Applying the TOE Framework in the <i>Halal</i> Warehouse Adoption Study	2017	34	11
Izberk, B.E., Nakata, C.C.	A New Look at Faith-Based Marketing: The Global <i>Halal</i> Market	2016	26	7
Aoun, I., Tournois, L.	Building Holistic Brands: An Exploratory Study of <i>Halal</i> Cosmetics	2016	18	5

Hussin, S.R., Hashim, H., Yusof, R.N., Alias, N.N.	Relationships Between Product Factors, Advertising and Purchase Intention of <i>Halal</i> Cosmetics	2013	14	3
Yener, D.	Factors that Affect the Attitude of Consumers Toward <i>Halal</i> -Certified Products in Turkey	2015	13	3
Garg, P., Joshi, R.	Purchase Intention of <i>Halal</i> Brands in India: The Mediating Effect of Attitude	2018	12	6
Briliana, V., Mursito, N.	Exploring Antecedents and Consequences of Indonesian Muslims Youths' Attitude Toward <i>Halal</i> Cosmetic Products: A Study Case in Jakarta	2017	11	4

Figures 6 and 7 showed the network visualization map of citations related to documents and countries, respectively, using VOSviewer. It can be seen that the highly cited documents or articles in Table 10 can be supported using this map.

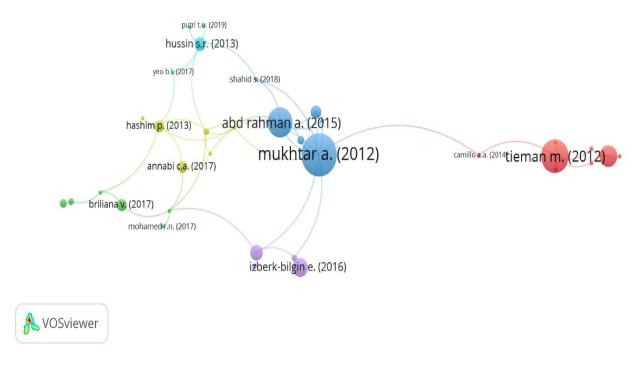


Fig. 6: Network visualization map of citation.

Unit of analysis: documents

Minimum number of citations of a document: 0

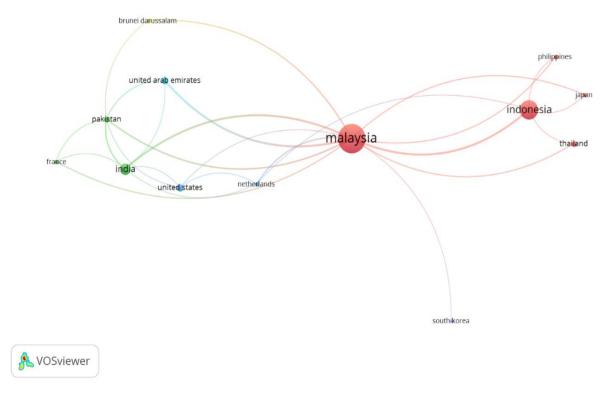


Fig. 7: Network visualization map of countries published the most

Unit of analysis: countries
Maximum number of countries per document: 25
Minimum number of documents of a country: 1
Minimum number of citations of country: 0

# 4. CONCLUSION

This bibliometric review reveals the growing interest of researchers and writers on the *halal* issue, especially in the cosmetics industry, in which the publication on the related subject is increasing each year covering many countries. This summarized that awareness and knowledge regarding the benefits of *halal* products are broadening to the entire world. This review helps the readers access the latest publications regarding *halal* cosmetics and the respective authors who contribute to the publications. Even though the *halal* issue publications are increasing; until now, only 82 publications have been published, which shows that there are still many topics related to *halal* cosmetics that have not been covered yet. Nevertheless, this study has some limitations, as only the Scopus database was used to conduct a systematic review and bibliometric study.

Besides, the selection of keywords might not be accurate. Other than that, the finding shows that the first publication on the halal cosmetics topic was in the year 2006, which means that this review has a limited time frame. Thus, future research needs to be conducted and focus more on the halal issue to provide excellent references for readers. In conclusion, this paper might help researchers find the *halal* cosmetics area gap and increase their work in this field.

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# **REFERENCES**

- Alzeer, J., Rieder, U., Hadeed, K. A. (2018). Rational and Practical Aspects of Halal and [1] Tayyib in the Context of Food Safety. Trends in Food Science & Technology, 71, 264-267. https://doi.org/10.5167/uzh-169451
- Aoun, I., Tournois, L. (2015). Building Holistic Brands: An Exploratory Study of Halal Cosmetics. Journal of Islamic Marketing, 6, 109-132. https://doi.org/10.1108/JIMA-05-2014-0035
- Che Mohd Hashim, A. J., & Musa, R. (2013). Factors Influencing Attitude Towards Halal [3] Cosmetic Among Young Adult Urban Muslim Women: A Focus Group Analysis. Procedia Social and Behavioral Sciences, 130(2014), 129-134. https:// doi.org/10.1016/j.sbspro.2014.04.016
- Fahmi, S. (2017). Halal Labeling Effect on Muslim Consumers Attitude and Behavior. Advances in Intelligent Systems Research, 131, 56-62. https://doi.org/10.2991/icoi-17.2017.26
- Haleem, A., Khan, M. I., Khan, S., Jami, A. R. (2020). Research Status in Halal: A Review [5] and Bibliometric Analysis. Modern Supply Chain Research & Application, 2, 23-41. https://doi.org/10.1108/MSCRA-06-2019-0014
- Hanapi, M. S., & Khairuldin, W. M. K. F. W. (2017). The Halal-Green in Al-Quran: A Conceptual Analysis. International Journal of Academic Research in Bussiness & Social Science, 7, 319–340. https://doi.org/10.6007/IJARBSS%2FV7-I10%2F3380
- Hashim, P., & Mat Hashim, D. (2013). A Review of Cosmetic and Personal Care Products: Halal Perspective and Detection of Ingredient. Pertanika Journal of Science & Technology, 21, 281–292.
- Hussain, N. (2012) A Little Empathy goes a Long Way: How brands can engage the American Muslim consumer. American Muslim Consumer Research, 2-4. https://doi.org 10.1016/j.sbspro.2014.04.016
- Jusoh, A., Kamarulzaman, L., & Zakaria, Z. (2016). The Implementation of Halal Cosmetic Standard in Malaysia: A Brief Overview. In: Ab-Manan, S., Abd-Rahman, F., & Sahri, M. (eds) Contemporary Issues and Development in the Global Halal Industry. Springer.
- [10] Melo, A. V. F., & Queiroz, A. P. (2019). Bibliometric Mapping of Papers on Geographical Information Systems (2007-2016). Bulletin of Geodetic Sciences, 25(3), 1-16. https://doi.org 10.1590/s1982-21702019000300015

- [11] Mohezar, S., Zailani, S., Zainuddin, Z. (2016). Halal Cosmetics Adoption Among Young Muslim Consumers in Malaysia: Religiosity Concern. Global Journal Al-Thaqafah, 6(1), 47-59.
- [12] Ngah, A. H., Ramayah, T., Ali, M. H., Khan, M. I. (2019) Halal Transportation Adoption among Pharmaceuticals and Comestics Manufacturers. Journal of Islamic Marketing. 1-23. https://.doi.org10.1108JIMA-10-2018-0193
- [13] Rahim, N. F., Shafii, Z., & Shahwan, S. (2015). Awareness and Perception of Muslim Consumers on Halal Cosmetics and Personal Care Products. International Journal of Business, Economics and Management, 2(1), 1-14. https://doi.org 10.18488/journal.62/2015.2.1/62.1.1.14
- [14] Samori, Z., Ishak, A. H., Kassan, N. H. (2014). Understanding the Development of Halal Food Standard: Suggestion for Future Research. International Journal of Social Science & Humanity, 4 (6), 482–486. https://doi.org/10.7763/IJSSH.2014.V4.403
- [15] Sugibayashi, K., Yusuf, E., Todo, H., Dahlizar, S., Sakdiset, P., Arce, F. J., See, G. L. (2019). Halal Cosmetics: A Review on Ingredients, Production, and Testing Methods. Cosmetics, 6, 1–17. https://doi.org/10.3390/cosmetics6030037
- [16] Sukesi, S., & Hidayat, W.G.P.A. (2019). Managing the Halal Industry and the Purchase Intention of Indonesian Muslims the Case of Wardah Cosmetics. Journal of Indonesian Islam, 13(1), 200-229. https://doi.org/10.15642/JIIS.2019.13.1.200-229
- [17] Tieman, M., Vorst, J. G. A. J., Che Ghazali, M. (2010). Principles in Halal Supply Chain Management. Journal of Islamic Marketing, 3, 217–243. http://dx.doi.org/10.1108/17590831211259727
- [18] Zaimah, R., Awang, A. H., Sarmila, M. S., Ishak, S., Azima, A. M., Saad, S., & Hussain, M. Y. (2018). Consumer's Perceptions and Behaviours towards Halal Food Products in Malaysia. International Journal of Academic Research in Business and Social Sciences, 8 (13 Special Issue: Community Development & Social Mobility), 151–158. https://doi.org/10.6007/IJARBSS/v8-i13/4819