Halal Food and Compliance: A Bibliometric Analysis

Anita Priantina
Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia (USIM), Bandar Baru Nilai, 71800 Nilai, Negeri Sembilan Malaysia
Institut Agama Islam Tazkia, Jl. Ir. H. Djuanda 78 Sentul City Bogor 16810
Tel: +6287 7249 5010 E-mail: anitapriantina@raudah.usim.edu.my

Safeza Mohd Sapiian
Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia (USIM), Bandar Baru Nilai, 71800 Nilai, Negeri Sembilan Malaysia
Tel: +60 19-357 6100 E-mail: safeza@usim.edu.my

Abstract
Purpose: Researchers have been actively investigating various issues concerning food and halal compliance framework. The analysis is focused on descriptions of the characteristics and trends of keywords, authors, journals and citations. This study reviews articles in order to map the problems, models, solution approaches and more importantly, the future directions of this field.
Design/methodology/approach: Our method employs 204 articles on food and halal compliance research indexed by Scopus. Various techniques from statistics, bibliometric, and analytics are systematically deployed to gain insights on how the literature address these topics. The data was then processed and analyzed using the VOSviewer application program to select the bibliometric mapping of research developments on food and halal compliance
Findings: The results showed that the visualization of the mapping of research developments in this theme was divided into three clusters. Cluster one consists of 53 topics, cluster two consists of 42 topics, cluster 3 consists of 32 topics.
Research limitations/implications: This study focuses on articles that discuss food and halal compliance framework.

Keywords: food, halal, compliance, framework, bibliometric analysis

1. Introduction

Facing almost the same pattern of increased demand, halal food market has grown significantly over the last five years, because this type of food has now been consumed by both the Muslim and non-Muslim customers (Rezai, Mohamed & Nasir-Shamsudin, 2012; Vanany, Maarif & Soon, 2019). Subsequently, halal, as a necessary-and-sufficient condition for food for Muslim consumers, is currently a highly active theme of study for researchers in various part of the world. Reuters and Standards (2016) reported that the halal food sector would grow approximately 18.3% of the global food expenditure to US$ 1,914 billion by 2021.

Halal related research has been conducted from various discipline and various issues. In recent years, bibliometric analysis related to halal research have been piloted several times. Interests are shown more towards halal supply chain. Topics such as halal supply chain for manufacturing industries (Ngah, Zainuddin & Thurasamy, 2014), analysis of halal logistics (Ab Talib, Abdul Hamid & Zulkafar, 2013), and halal principles in the supply chain (Tieman, van der Vorst & Ghazali, 2012) have recently been published in various journals. It is disconcerting that these valuable research endeavour, to some extent, are scattered and there has been no effort to provide a systematic review to make them useful for researchers and practitioners in the field.

In this study, we deploy the bibliometric and network analyses to fulfil the needs of such a systematic review. It is widely known that bibliometric and network analyses are among the powerful techniques to identify and cluster the area of research, which can lead to insightful follow-up analysis. Hence, the objective of this paper is to review food safety and halal food discussion in the supply chain context using these powerful techniques.

The bibliometric analysis is a systematic analytical technique to identify the most influential authors, their affiliations, the keywords they use and more importantly how these attributes link one work to the other. The network analysis, on the other hand, is a rigorous method to determine the cluster of the research areas, thus revealing the directions and gaps in the future research. The systematic guidelines for the bibliometric analysis by Fahminia, Sarkis and Davarzani (2015) and network analysis using VOSviewer by Cancino, Merigo, Coronado, Dessouky and Dessouky (2017) were adopted in this research.

This paper is structured as follows: Section 2 introduces the structured research method, including selection of a bibliometric database, including-and-excluding articles and analysing the articles’ attributes. Section 3 reports the statistics of the data and the derived classification analysis. The results and detailed bibliometric and network analyses
will be presented in section 4. Finally, section 5 summarizes the discussion and provides conclusions for the opportunity of future research.

2. Research Method

This study is conducted to attain the big picture of research in food and halal compliant. The procedures are comprehensively performed using iterative cycles of defining relevant and informative keywords, querying the literature database, and performing rigorous analytics (Saunders, Lewis & Thornhill, 2009). We adopted a review of research methods from Fahimnia et al. (2015) and Wamba and Mishra (2017), in which a five-stage research method to achieve similar study objectives are proposed. These five stages are as follows: (1) defining search terms, (2) including-and-excluding articles, (3) selecting the process of articles, (4) performing preliminary data analysis and (5) conducting bibliometric and network analysis. We elaborate each of these stages to assure the validity of our findings and to enable the readers to implement this method for systematically performing an analysis-based literature review in their study.

We chose the Scopus database. We define the search terms or the keywords used for data collection as “Food”, and “halal compliance”. The keywords are “halal” AND “compliance”, “halal” AND “compliant”, “halal” AND “governance”, “halal” AND “regulation”, “halal” AND “standard”, “halal” AND “certificate”, “halal” AND “certification”, “halal” AND “integrity”, “halal” AND “assurance”, “halal” AND “security”, “halal” AND “secure”, “halal” AND “framework”, “halal” AND “law”, “halal” AND “requirement”, “halal” AND “legal”. Those keywords are chosen considering similar meaning or interpretation to compliance.

Harzing Publish or Perish is utilized in the searching process. Using these search terms, we query the database and perform our next stage. Our query returned 2770 articles. For wider coverage, the search was not limited only for journal article. The search results including essential attributes of the articles, such as the name of the author(s), title, year, citation count, affiliations, abstracts, keywords and references were stored in RIS format for analytical purposes. By further processing the query results, we removed article duplication. We also exclude news articles, and some papers which have topics related to Islamic finance, halal cosmetics, articles in non English language such as German, Korean, and Japanese. The final number was reduced into 204 articles. The bibliometric analysis is later implemented using VOSviewer.

3. Results

3.1 Statistical Result

In this section, we will discuss our results from the analytical tools and highlight some interesting insights regarding the articles on food and halal compliance. Total number of articles found using the keywords are:

- “halal” AND “compliance”: 16 articles
- “halal” AND “compliant”: 5 articles
- “halal” AND “governance”: 2 articles
- “halal” AND “regulation”: 14 articles
- “halal” AND “standard”: 21 articles
- “halal” AND “certificate”: 8 articles
- “halal” AND “certification”: 106 articles
- “halal” AND “integrity”: 20 articles
- “halal” AND “assurance”: 20 articles
- “halal” AND “security”: 3 articles
- “halal” AND “secure”: 1 articles
- “halal” AND “framework”: 28 articles
- “halal” AND “law”: 9 articles
- “halal” AND “requirement”: 7 articles
- “halal” AND “legal”: 11 articles

Frequency of articles with the chosen keywords based on year published is as follows:
From the figure above, we can see that the trend of the number of articles published with the intended keywords is relatively increasing. It started by only one article in 2000 and the trend is relatively increasing, only decreasing in 2013, and reach the top in 2020 by 35 articles. The number of articles in 2021 is potentially increasing too as the year is still on going.

From those articles, the statistics of paper based on citation number is as follows:

<table>
<thead>
<tr>
<th>Cites</th>
<th>Authors</th>
<th>Title</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td>S. Marzuki</td>
<td>Restaurant managers' perspectives on halal certification</td>
<td>2012</td>
<td>Journal of Islamic Marketing</td>
</tr>
<tr>
<td>80</td>
<td>M. van der Spiegel</td>
<td>Halal assurance in food supply chains: Verification of halal certificates using audits and laboratory analysis</td>
<td>2012</td>
<td>Trends in Food Science and Technology</td>
</tr>
<tr>
<td>64</td>
<td>S. Rajagopal</td>
<td>A Comparative Analysis of Global Halal Certification Requirements</td>
<td>2011</td>
<td>Journal of Islamic Marketing</td>
</tr>
<tr>
<td>64</td>
<td>I. Latif</td>
<td>Halal certification: Implication for marketers in UAE</td>
<td>2014</td>
<td>Journal of Food Products Marketing</td>
</tr>
<tr>
<td>60</td>
<td>A. Ngah</td>
<td>Applying the TOE framework in the Halal warehouse adoption study</td>
<td>2017</td>
<td>Journal of Islamic Accounting and Business Research</td>
</tr>
<tr>
<td>60</td>
<td>J. Henderson</td>
<td>Halal food, certification and halal tourism: Insights from Malaysia and Singapore</td>
<td>2016</td>
<td>Tourism Management Perspectives</td>
</tr>
<tr>
<td>57</td>
<td>J.M. Soon</td>
<td>Halal integrity in the food supply chain</td>
<td>2017</td>
<td>British Food Journal</td>
</tr>
<tr>
<td>54</td>
<td>M.H. Ali</td>
<td>A supply chain integrity framework for halal food</td>
<td>2017</td>
<td>British Food Journal</td>
</tr>
<tr>
<td>45</td>
<td>S.Z.S. Marzuki</td>
<td>Restaurant Manager and Halal Certification in Malaysia</td>
<td>2012</td>
<td>Journal of Foodservice Business Research</td>
</tr>
<tr>
<td>44</td>
<td>B. Badruddin</td>
<td>Clients' perception towards JAKIM service quality in Halal certification</td>
<td>2012</td>
<td>Journal of Islamic Marketing</td>
</tr>
<tr>
<td>41</td>
<td>S. Bahrudin</td>
<td>Tracking and tracing technology for halal product integrity over the supply chain</td>
<td>2011</td>
<td>Proceedings of the 2011 International Conference on Electrical Engineering and Informatics, ICEEI 2011</td>
</tr>
<tr>
<td>38</td>
<td>M. Neio Demirici</td>
<td>Positioning food safety in Halal assurance</td>
<td>2016</td>
<td>Food Control</td>
</tr>
<tr>
<td>36</td>
<td>K. Tan</td>
<td>The impact of external integration on halal food integrity</td>
<td>2017</td>
<td>Supply Chain Management</td>
</tr>
<tr>
<td>35</td>
<td>A. Abd Rahman</td>
<td>Influence of perceived benefits and traceability system on the readiness for Halal Assurance System implementation among food manufacturers</td>
<td>2017</td>
<td>Food Control</td>
</tr>
<tr>
<td>35</td>
<td>M. Ali</td>
<td>Eleven shades of food integrity: A halal supply chain perspective</td>
<td>2018</td>
<td>Trends in Food Science and Technology</td>
</tr>
<tr>
<td>35</td>
<td>M.S. Ab Talib</td>
<td>Emerging Halal food market: an Institutional Theory of Halal certificate implementation</td>
<td>2016</td>
<td>Management Research Review</td>
</tr>
<tr>
<td>33</td>
<td>M. Halim</td>
<td>The possibility of uniformity on Halal standards in organization of Islamic Countries (OIC) country</td>
<td>2012</td>
<td>World Applied Sciences Journal</td>
</tr>
<tr>
<td>30</td>
<td>J. Fischer</td>
<td>Markets, religion, regulation: Kosher, halal and Hindu vegetarianism in global perspective</td>
<td>2016</td>
<td>GeoForum</td>
</tr>
<tr>
<td>30</td>
<td>M. Ab Talib</td>
<td>Linking Halal food certification and business performance</td>
<td>2017</td>
<td>British Food Journal</td>
</tr>
</tbody>
</table>

From all publication, those with articles more than two with the keyword in search is as follow:

| Table 2: Top Publication based on Number of Articles |
|-----------------------------------------------|----------|
| Source                                         | Number of Articles |
| Journal of Islamic Marketing                   | 25        |
| International Journal of Supply Chain Management | 15       |
| British Food Journal                           | 8        |
| Asian Social Science                           | 7        |
| IOP Conference Series: Earth and Environmental Science | 7 |
| International Business Management              | 5        |
| Lecture Notes in Engineering and Computer Science | 5        |
| AIP Conference Proceedings                     | 4        |
| Journal of Critical Reviews                    | 4        |
| Trends in Food Science and Technology          | 4        |
| The Routledge Handbook of Halal Hospitality and Islamic Tourism | 3 |
| World Applied Sciences Journal                 | 3        |
| Advanced Science Letters                       | 2        |
| Food Control                                   | 2        |
| Food Research                                  | 2        |
| Halal Matters: Islam, Politics and Markets in Global Perspective | 2 |
| International Food Research Journal            | 2        |
| International Journal of Economics and Management | 2 |
| International Journal of Innovation, Creativity and Change | 2 |
| IOP Conference Series: Materials Science and Engineering | 2 |
| Journal of Legal, Ethical and Regulatory Issues | 2 |
| Journal of Physics: Conference Series          | 2        |
| Journal of Telecommunication, Electronic and Computer Engineering | 2 |
| Pertamakaan Journal of Social Sciences and Humanities | 2 |

Journal of Islamic Marketing has 25 articles on this topic. International Journal of Supply Chain Management is on the second rank with 15 articles. Other than journals, there are books and conference proceedings with at least two articles included in this study. Among books are Lecture Notes in Engineering and Computer Science and Halal Matters: Islam, Politics and Markets in Global Perspective. Among Conference Proceedings are IOP Conference Series: Earth and Environmental Science and IOP Conference Series: Materials Science and Engineering.

While the first authors with at least two articles on these issue are as follows:

<table>
<thead>
<tr>
<th>Author</th>
<th>No</th>
<th>Cites</th>
<th>Title</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S. Ab Talib</td>
<td>5</td>
<td>30</td>
<td>Linking Halal food certification and business performance</td>
<td>2017</td>
<td>British Food Journal</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td></td>
<td>Motivations and benefits of halal food safety certification</td>
<td>2017</td>
<td>Journal of Islamic Marketing</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
<td>Halal food standard implementation: are Malaysian firms proactive or reactive?</td>
<td>2018</td>
<td>British Food Journal</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td></td>
<td>Can halal certification influence logistics performance?</td>
<td>2016</td>
<td>Journal of Islamic Marketing</td>
</tr>
<tr>
<td>M.Z.M. Sulaiman</td>
<td>5</td>
<td>1</td>
<td>The issues of halal inspection process from the perspective of demand and supply side in Malaysia halal certification system</td>
<td>2018</td>
<td>Communications in Computer and Information Science</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>Halal virtual inspection requirements for food premise inspection process towards the virtualization of Malaysia Halal certification system</td>
<td>2018</td>
<td>Proceedings - International Conference on Information and Communication Technology for the Muslim World 2018, ICT4M 2018</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>Halal inspection process at federal and state level: A case study of Halal Certification system in Malaysia</td>
<td>2017</td>
<td>2017 IEEE Conference on Open Systems, ICOS 2017</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>Halal virtual inspection requirements for food premise inspection process towards the virtualization of Malaysia Halal certification system</td>
<td>2018</td>
<td>Proceedings - International Conference on Information and Communication Technology for the Muslim World 2018, ICT4M 2018</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>A preliminary study of halal virtual inspection: A case of halal certification in Malaysia</td>
<td>2017</td>
<td>Proceedings - 6th International Conference on Information and Communication</td>
</tr>
</tbody>
</table>

79
<table>
<thead>
<tr>
<th>Item</th>
<th>Author(s)</th>
<th>Title</th>
<th>Conference/Journal/Proceedings</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B. Othman</td>
<td>Evaluation of knowledge, halal quality assurance practices and commitment among food industries in Malaysia</td>
<td>3rd International Halal Management Conference (3rd IHMC 2021)</td>
<td>2016</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>The influence of knowledge, attitude and sensitivity to government policies in halal certification process on organizational performance</td>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>The potential of ASEAN in halal certification implementation: A review</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>6</td>
<td>F. Ahmad</td>
<td>Delay as a challenge in prosecuting non-compliance in the halal industry</td>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>Halal logistics legal framework: Malaysia perspective</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>2</td>
<td>F. Dubé</td>
<td>The role of cluster governance in the process of firm internationalization: Based on the example of two Malaysian halal industrial parks</td>
<td></td>
<td>2015</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Halal certification system as a key determinant of firm internationalisation in the Philippines and Malaysia</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>2</td>
<td>H. Iberahim</td>
<td>Halal compliance decisions by food suppliers based on analytic hierarchy process</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>Halal development system: The institutional framework, issues and challenges for halal logistics</td>
<td></td>
<td>2012</td>
</tr>
<tr>
<td>2</td>
<td>I. Giyanti</td>
<td>Halal standard implementation in food manufacturing SMEs: its drivers and impact on performance</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>Prioritizing important factors for the successful of halal food standard practice in Small Medium Enterprises</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>2</td>
<td>J. Fischer</td>
<td>Islam, standards, and technoscience: In global halal zones</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>Markets, religion, regulation: Kosher, halal and Hindu vegetarianism in global perspective</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>2</td>
<td>J.M. Regenstein</td>
<td>Kosher and halal regulations for nutraceutical and functional foods</td>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>A brief introduction to some of the practical aspects of the kosher and halal laws for the poultry industry</td>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>2</td>
<td>A. Haleem</td>
<td>Conceptualising a framework linking halal supply chain management with sustainability: an India centric study</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Halal certification, the inadequacy of its adoption, modelling and strategising the efforts</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>2</td>
<td>A. Fuseini</td>
<td>Halal food marketing: an evaluation of UK halal standards</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Halal food Certification in the UK and its impact on food businesses: A review in the context of the European Union</td>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>2</td>
<td>A. Rafiki</td>
<td>The human capital and the obtainment of halal certification</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Determinants on the obtainment of halal certification among small firms</td>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>1</td>
<td>S.A. Baharuddin</td>
<td>Halal compliance impact on organizational performance: The role of religiosity</td>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>The moderating effect of religiosity on halal certification among food manufacturers in Malaysia</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>2</td>
<td>S. Takeshita</td>
<td>Halal certification or ingredient disclosure: A comparative analysis of serving food in Japanese tourist destinations</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>Strategies for attracting muslim tourists without obtaining halal certification: A case study of Takayama city in Japan</td>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>6</td>
<td>N. Katuk</td>
<td>The application of blockchain for halal product assurance: a systematic review of the current developments and future directions</td>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Halal certification for tourism marketing: the attributes and attitudes of food operators in Indonesia</td>
<td></td>
<td>2020</td>
</tr>
</tbody>
</table>

M.S. Ab Talib, and M.Z.M Sulaeman both contributes five articles related to the issue. B. Othman contributes three articles published in journal related to the topics.
3.2 VosViewer Result

The visualization of VosViewer results is as follows:

1. Cluster one has 53 topics: addition, analysis, company, concept, context, data, design methodology, effect, affort, factor, food industry, halal assurance system, halal food, halal food certification, halal food industry, halal food supply chain, halal integrity, impact, implementation, importance, industry, influence, insight, knowledge, limitation, literature, manager, model, organization, originality value, paper, perception, performance, practical implication, practice, questionnaire, raw material, relationship, research, research limitation implication, resource, respondent, response, role, smes study, supply chain, survey, total, type, understanding, value.

2. Cluster two has 42 items as follows: awareness, business, case study, certification, compliance, concern, confidence, consumer, country, customer, difference, food, food product, halal, halal certification, halal product, halal standard, Indonesia, ingredient, Islam, law, market, muslim, muslim consumer, muslims, ned, number, opportunity, order, person, procedure, producer, product, quality, reason, regulation, religion, requirement, safety, standard, time, world.

3. Cluster three has 32 items: application, area, article, authority, benefit, case, challenge, demand, development, framework, government, halal certificate, halal certification process, halal industry, halal status, halal supply chain, information, interview, issue, jakim, Malaysia, part, perspective, problem, process, researcher, review, service, system, term, use, and way.
Using atlas.ti, the most keywords appear is depicted by the following graph:

Looking at the biggest size words, the words halal and food are the most mentioned by 29,961 times and 11,991 times. The word certification is then mentioned 4,628+3216 times. Two countries are also mentioned on the word cloud: Malaysia by 3751 mentions and Indonesia by 1274 mentions. The number of articles written per authors and total link strength is as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Author</th>
<th>Documents</th>
<th>Total Link Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ali, Mohd Helmi</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Tan, Kim Hua</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Haleem, Abid</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Khan, Mohd Imran</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Khan, Shahbaz</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Dubé François</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Haijuan, Yang</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>Ijun, Huang</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Makhbul, Zafir Mohd</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Afif, Sazelina</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Ali, and Tan shared total link strength with each 9 articles. Ali has the most articles with 7 publications on the topics.

4. Discussion and Conclusions

This paper presented an overview of the distribution of literature on food and halal compliance by bibliometric and network analyses. A set of 204 papers published collected by querying Scopus database using predefined keywords. The pre-processing by analysing the title of the papers and their abstracts, and by removing those that are irrelevant to the topic, is also conducted to ensure the validity of the analysis. These results yield to some clusters of influential keywords found in the literature, which could be utilized as a guide for next researchers to gain further insights regarding the emerging areas of research in context of food and halal compliance.

Among other keywords, “certification” resulted in the most articles by 108 articles. It seems that researchers are interested in studying on halal topics related to certification issues. Other keyword “framework”, “standard”, “integrity”, and “assurance” are on the next list with each resulted in 28, 21, and 20 articles. The keyword “compliant” resulted in 16 articles, however this term is considered as having broader meaning from the other keywords so this keyword is made as the title for this study.

Covid Pandemic does not decrease authors to write on these issues. the highest number of articles on these terms are resulted in 2020. Looking at the most cited articles, we can see that most articles cited are on perceptions on both
consumers and producers on halal certificate. From consumers' perspective, whether halal certificate influence their purchase decision is the most interesting. From producers' perspective, their opinion and determinants regarding the intention to apply for halal certificate is the most topics referred to.

Based on the top publication for the articles studied for this research, it seems that the most field related to food and halal compliance is on marketing and supply chain related topics. These issues are published mostly in Journal of Islamic Marketing and International Journal of Supply Chain Management. This study, however, did not include supply chain on the keyword for it has been studied several times in previous bibliometric studies.

VosViewer analysis resulted in three clusters. In all clusters, the terms halal, food, and supply chain appears. Related to methodology, the words data, factor, and effect are among the keywords. It seems that most of the articles on this study uses quantitative approach. Related to data collection, interview and questionnaire are among the keywords mentioned. It hints that most studies use primary data on these topics.

Based on atlas.ti word cloud, Malaysia and Indonesia are mentioned among the most mentioned country on these topics. These countries as muslim majority populated countries. Case studies conducted in these two countries may inspire other researchers to do similar topics or interest in other object of studies.

Based on type of data, future research has potential to employ secondary quantitative data. The challenge may be on the availability of the data source. Until today, proxy for halal food industry in the terms of national or sectoral contribution to the economy may still be limited. Based on topics, certification issue is still interesting, some research suggests logistic and supply chain certification for the future discussion.

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Halal AND legal