

Islamic Banking Innovation: A Text Analytics Research

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Every business needs to make a breakthrough continuously so that consumers do not feel bored with the products they have often consumed. In addition, every entrepreneur must also be aware that, in addition to the problem of saturation or the problem of saturation, what is no less scary and needs to be used as a challenge is the competitors themselves. Therefore, it is necessary to constantly innovate the products produced and marketed. The financial industry has also experienced this, namely the business in the banking world, especially Islamic banking. This study aims to determine the development map and trend of Islamic banking innovation published by well-known journals in the field of Islamic economics and finance. The data analyzed were more than 115 Scopus indexed research publications. The export data is then processed and analyzed using the R Biblioshiny application program to determine the bibliometric map of the development of Islamic banking innovation. The results show that the number of publications on the development of the role of Islamic economics and finance research continues to increase.

Keywords: Islamic Banking; Innovation; Text Analytics

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INTRODUCTION

Every business needs to make a breakthrough continuously so that consumers do not feel bored with the products they have often consumed. In addition, every entrepreneur must also be aware that, apart from the problem of boredom, what is no less scary and needs to be challenged is the competitors themselves (Abdul-Majid et al., 2010; Manaf & Amiruddin, 2019). Therefore, it is necessary to constantly innovate the products produced and marketed. The financial industry has also experienced this, namely businesses in the banking world, especially Islamic banking when compared to conventional banking (Azis & Kamal, 2019; Miskam et al., 2018).

Conventional banking has long played its role as a financial institution that serves the Indonesian people for a very long time when compared to Islamic banking. So, like it or not, Islamic banking must be more active in product innovation if it wants to have more market share while gradually being able to win the competition even if it is predicted that it will take a very long time (Alrawi & Elkhatib, 2011; Aris et al., 2013; Bakar & Hashim, 2011).

As stated by Tho'in (2017), that to gain trust, banks must be able to work professionally as expected by customers from a financial perspective, in terms of services, and marketing strategies that must be managed properly, and banks must also be more efficient. creative in producing new products desired by the public or customers, so that the existence of this institution can be maintained in the midst of competition.

Thus, Islamic banks are willing to develop product innovations that will be able to survive the fierce business competition in financial institutions, and which will be able to retain their existing customers, and be able to realize the expectations and needs of consumers or customers. Because consumer satisfaction will be achieved if the quality of the products and services provided is in accordance with their needs (M. Ali & Puah, 2017; Ramli et al., 2019; Rani et al., 2020).

Thus, the company has a greater opportunity to grow and develop in the long term than other companies that only prioritize profit without maintaining and maintaining the quality of the products and services they produce. So Islamic banks have a harder task in realizing quality products and services and developing product innovation continuously (Hakim & Irawan, 2019; Rabbani et al., 2021; Robani & Salih, 2018).

Various studies on Islamic banking including its innovations have been carried out by many researchers. Some of the ideas and ideas of Islamic banking innovations have been published in Scopus indexed scientific journals, where some of these innovations have been implemented in several Islamic banking countries in the world. However, there has been no research that has mapped the development of literature on this theme.

This research has several objectives. Among them are seeing the development of research trends in the theme of Islamic banking innovation through bibliometric mapping. This mapping can be used as a basis for developing new research in the future by identifying themes or keywords that are often used.

In addition, this study also analyzes the innovations that have been carried out by banks in the context of digitization through a literature review that is the object of research. This is done to see the extent to which scientific research contributes ideas and ideas that can be applied in Islamic banking.

LITERATURE REVIEW

According to Law no. 19 of 2002, innovation is research, development, and or engineering activities carried out with the aim of developing practical applications of new scientific values and contexts, or new ways to apply existing science and technology into products or processes. production. Meanwhile, according to Urabe (1998), innovation is any activity that cannot be produced in one hit, but is a long and cumulative process, covering many decision-making processes, from idea discovery to its implementation in the market. Financial product innovation and Islamic banking are the main points in the development of the Islamic banking industry, of course, development must be supported by human resource competencies, which in addition to being reliable, still adhere to sharia principles (Tho'in, 2016).

Islamic banks must have innovative products that are increasingly diverse in order to develop properly. Innovation must also be carried out so that Islamic bank products are not monotonous and dominant with certain contracts amidst the varied business needs of the community. Therefore, the Financial Services Authority (OJK) continues to encourage Islamic finance industry players to continue to innovate to meet the needs of the community. OJK also describes several product innovations that can be carried out by Islamic financial institutions, as contained in the 2017-2019 Islamic Finance Development Roadmap.

In carrying out its business activities, Islamic banking is based on the principle of profit sharing (Masulah, 2014). The characteristics that exist in this Islamic banking product, provide an alternative banking system that is mutually beneficial for both parties, namely the community and banking, and prioritizes aspects of fairness in transactions, ethical investments, values of togetherness and brotherhood in production, and avoids speculative activities. in transactions (Apriyanti, 2018).

Currently, sharia banking products are continuously being developed, namely by providing a variety of banking products and services with more varied financial schemes. This effort is an effort called innovation in Islamic banking products. This Islamic banking product innovation is the main pillar in the

development of Islamic banking (Nazaritehrani & Mashali, 2020).

This effort can make Islamic banking an alternative to a credible banking system that can be enjoyed by all classes of Indonesian society without exception. Product innovations that are in line with meeting community needs can give birth to varied bank products (Indriati, 2011). Product innovations carried out by Islamic banking can be in the form of products that will be repackaged (repackaged) or new products (Ramdhoni & Fauzi, 2020).

The development of sharia banking product innovations must comply with international standards and refer to the formulation of sharia banking development strategies. This alignment is mainly applied in the design of the developed product instrument. In addition, product development must also be adjusted to product quality, HR reliability, and the reach of the sharia banking office network (Aliyu et al., 2017).

Islamic banks can develop products that already exist in the codification of sharia banking products that have been established. Product development in accordance with the codification will facilitate Islamic banking in developing new products, because banks can focus more on developing product instruments according to the stipulated codification. This can also be done easily, because this development model does not require a special permit from the OJK, it is only required to report the realization to the OJK. If the Islamic bank will develop a product, but it is not yet in the codification, then the product development must obtain permission from the OJK.

In carrying out product innovations, Islamic banking can use the rules of fiqh in sharia, namely that the law (muamalah) can change due to changes in times, places, circumstances, customs, and intentions. This fiqh rule can be used as a basis by Islamic banks in product innovation. Based on these fiqh rules, the muamalah law applied in Islamic banking products can change

following the developments and needs of the times, places and contemporary conditions. The fulfillment of public preferences for banking products that are adapted to the needs of the times, places and contemporary conditions must also be guided by the MUI fatwa that has been set by the MUI National Sharia Council (DSN).

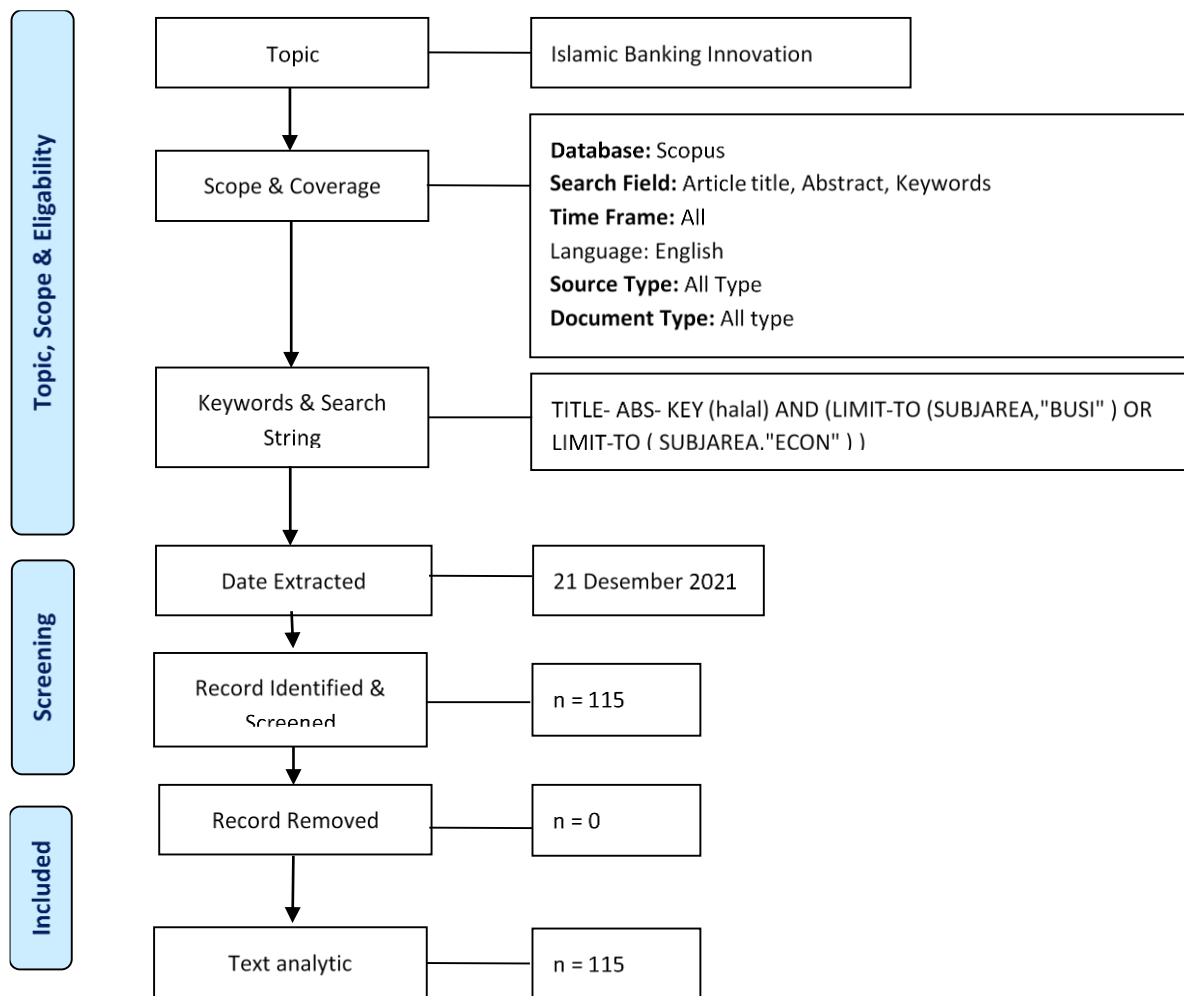
In carrying out product development, Islamic banks must remain compliant with sharia principles. In order to meet product variations, Islamic banks can issue new products that are already in the codification of Islamic banking products, as well as products that are not yet in the codification. Every product issued by a sharia bank must comply with the provisions relating to product licensing, in accordance with sharia principles, and in accordance with applicable laws and regulations. There are two different treatments for the two types of products, namely:

1. For products that have been included in the codification of sharia banking products, when a sharia bank issues a new product, OJK approval is not required. Banks are only required to report the realization within seven working days after the new product is issued.
2. Banks must apply for approval 30 days before new products are issued to OJK and are also required to report realization reports within 7 working days.

RESEARCH METHODS

The review process was carried out on December 21, 2021. Figure 1 illustrates the three steps in identifying research documents, namely eligibility, screening, and inclusion, which are involved in the systematic review process. The keywords that will be used in this study try to answer the research questions above. Some general statistics from the data set are presented to get an overview of research related to good governance. All articles that fulfill the search query are evaluated from the aspect of text analysis.

Figure 1: Research Flowchart



Then the research documents were analyzed using the biblioshiny software, a free software supported by the R environment (CRAN, The Comprehensive R Archive Network, <https://cran.r-project.org/>) which provides a set of tools for quantitative research in bibliometrics and scientometrics (Aria & Cucurullo, 2017). In the bibliometric literature, the greatest attention is on the construction of bibliometric maps. Research is concerned with the effect of differences on the similarity of measures (Ahlgren et al., 2003), and they were tested with different mapping techniques (Boyack et al., 2005) Next, text analysis will be carried out on the results of bibliometric mapping related to "word".

Text analysis was performed using R-studio and biblioshiny software developed by Massimo Aria and Corrado Cucurullo from the University of Naples and Luigi Vanvitelli from the University of Campania (Italy). The text of the analysis is carried out by analyzing more deeply in searches related to words that often appear in the theme of Islamic banking innovation. This is intended to add references that can be made by the government in tackling economic problems based on existing studies from all over the world.

To explore the results of the meta-analysis, this section will present a visual mapping chart of 115

documents related to Islamic banking innovation. The results of the keyword mapping analysis become the basis for mapping together important or unique terms contained in certain documents. Mapping is a process that enables one to recognize elements of knowledge and their configuration, dynamics, interdependencies and interactions.

RESULTS AND DISCUSSION

The following is a table of document types used in the study with the keywords Islamic banking innovation. The number of documents analyzed were 115 documents which were divided into 4 types of documents, including journal articles (76 documents), anthology/book chapters (19 documents), conference paper (14 documents), and review (6 documents).

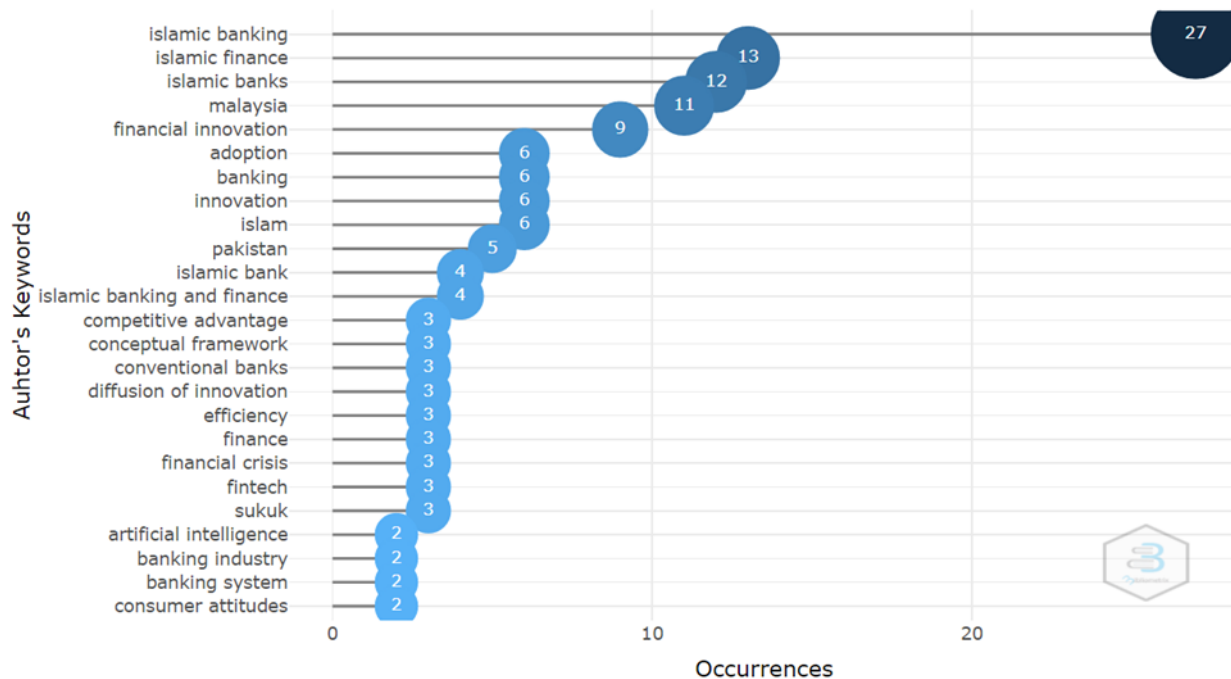
Table 1: Document Types

No	Year	N. of Docs	Percentage
1	Journal Articles	76	66.08%
2	Book Chapter	19	16.52%
3	Conference Papers	14	12.17%
4	Review	6	5.23%
Total		115	

A Based on the results of the grouping of document types above, the most widely used document types as research subjects with the keyword "Islamic banking innovation" are journal articles with a percentage of 66.08% or as many as 76 documents, and

documents with the lowest percentage are reviews where the percentage is 5.23% or a total of 6 documents. Based on the type of document, it can be concluded that the references used are quite valid because most of them come from Scopus indexed scientific journals.

Figure 2: Most Relevant Words



The most relevant word analysis was carried out on keywords from each document, where there were several words with a number of occurrences between 0 to 27 times. The image above shows the 25 most relevant words used in the research collection related to the keyword "Islamic banking innovation".

The top word with the highest number of occurrences and the most relevant to the keyword Islamic banking innovation is the word Islamic banking itself, with the highest number of occurrences of 27 times. The second most relevant word related to the theme of Islamic banking innovation is Islamic Finance with 13 occurrences. Furthermore, the third and fourth most relevant words related to the theme of Islamic banking innovation with the occurrence of the word 12 and 11 times, namely the words Islamic Banks and Malaysia.

The study, entitled *Leveraging the Potential of Islamic Banking and Finance for Small Businesses* (Mohd Thas Thaker, et al., 2021) explains that small businesses are considered a source of innovation, productivity, and dynamism in many countries. Thus, to translate innovative ideas into sustainable businesses, access to capital becomes an integral part of the small business life cycle. Despite their potential importance for economic development, small businesses face difficulties in attracting external financing in the early and mid stages of the entrepreneurial life cycle in many

countries, including developed and developing countries.

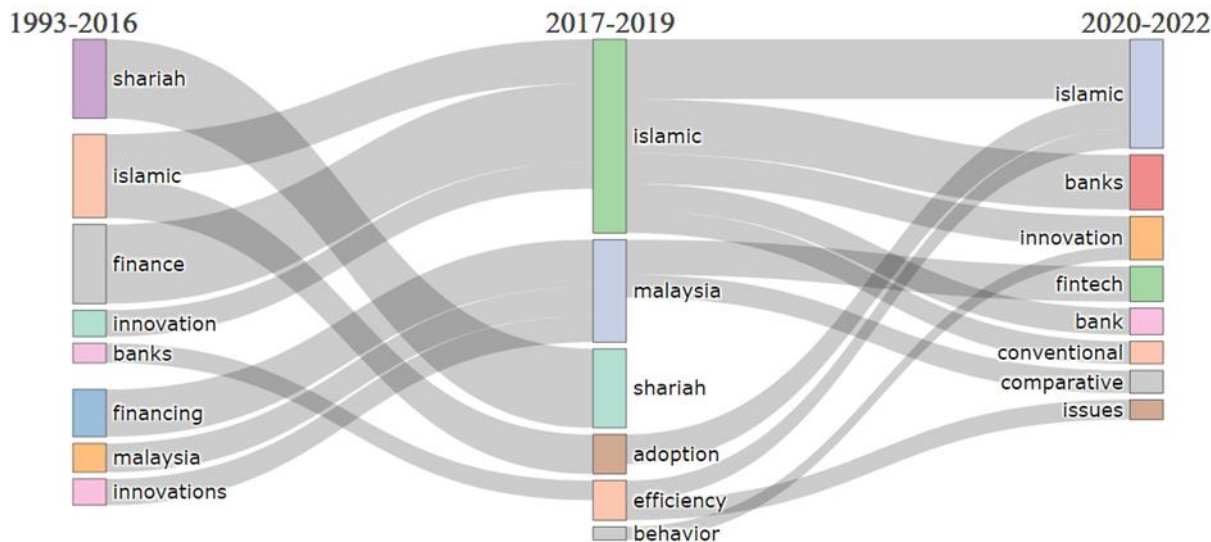
Islamic banking and finance is a broad framework that has great potential to support development financing, especially those related to small businesses, given its fundamental criteria that emphasize positive social impacts. The main objectives covered in this chapter are: (i) to identify and unlock innovative financing opportunities in Islamic banking and financial instruments such as Mudharabah (profit sharing), Musyarakah (profit sharing), Murabahah (sales at cost plus profit margin), Ijarah [Islamic leasing]), and Salam (forward sale) as a potential solution to address the small business funding gap; and (ii) initiating the development of systematic principles for the use of Islamic banking and financial instruments in financing small businesses.

Furthermore, relevant words in research related to the theme of Islamic banking innovation will be displayed on the document title in the form of a word cloud. The word cloud is a description of words that often appear in a collection of data papers that are researched with keywords from the title with the theme "Islamic banking innovation".

The world cloud displays an image of the words displayed in various sizes according to the quantity of the number of words that appear. In terms of placement, word clouds tend to be random but the words that dominate are placed in the middle so that they are more visible with a relatively larger size. In this study, the

results of the world cloud were obtained based on an analysis of the document title.

Figure 3: Thematic Evolution



The theme used in the paper that is the object of research continues to change, especially from papers that have been recently published when compared to papers that have been published for a long time. The picture above shows the evolution which is analyzed based on themes with research related to Islamic banking innovation which consists of themes that are depicted as rectangles with a larger size, the more widely used. Although the theme of this research is Islamic banking innovation, the data obtained shows that there are several sub-themes that are widely used.

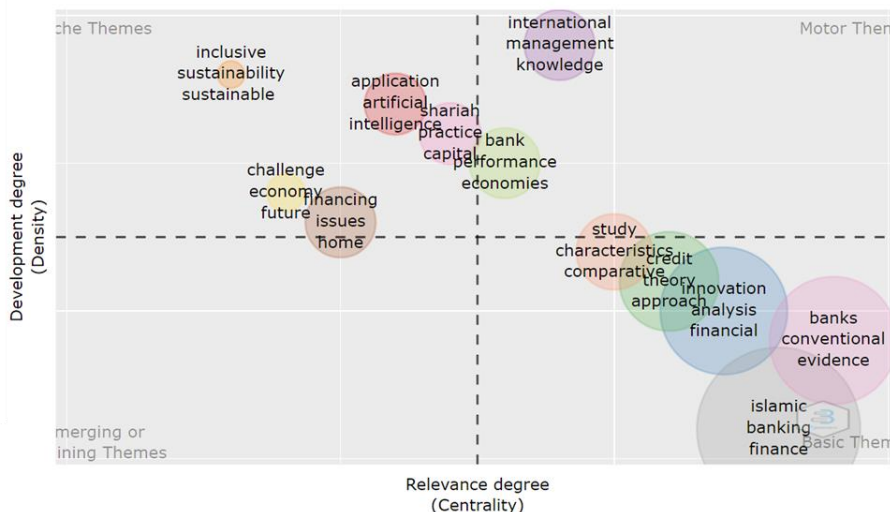
The Thematic Evolution is divided into 3 parts. Where the left side shows several themes that are widely used from 1993 to 2016, there are 8 themes listed with different sizes depending on the quantity of use of these themes. The "Islamic" theme ranks first, followed by the "Finance" theme.

The second or middle section shows the most frequently used themes in the period between 2017-

2019. There are 6 themes listed, of which the 2 themes are an evolution of the themes that emerged in the previous period, namely the "Islamic" theme, "Shariah" which is an extension of several themes shown by colorful plots. The last section or the right shows the most used themes from 2020-2022. There are 8 themes, of which there are 3 evolutionary themes from the previous period, namely "Islamic", "Banks", "Innovation" which is an extension of several themes shown by colorful plots.

This research will also analyze the thematic map that appears based on density and centrality which is analyzed based on the title of the document with the research theme of Islamic banking innovation which is divided into 4 quadrants. This result is obtained from a semi-automatic algorithm by reviewing the titles of all references to the object of research.

Figure 4: Thematic Map



The upper left quadrant is a highly developed and isolated themes. Quadrants show specific themes and are rarely studied, but have high development, which is indicated by high density but low centrality. The themes in this quadrant are Inclusive, Sustainability, Sustainable, Application, Artificial, Intelligence, Shariah, Practice, Capital, Challenge, Economy, Future, Financing, Issues. While the lower left quadrant represents emerging or declining themes, this quadrant shows themes that have been used for a long time but experience an increasing or decreasing trend with low density and centrality. The theme in this quadrant is Home. Seeing developments with the sub-theme of Islamic banking innovation in recent years, the trend of words contained in this quadrant has increased.

While the upper right quadrant is a motor theme or driving theme which is characterized by high density and centrality, so it needs to be developed and is important to be studied in further research. The themes that appear in this quadrant are International, Management, Knowledge, Bank, Performance, Economies. Finally, the lower right quadrant is the basic and transverse themes which are characterized by high centrality but low density. These themes are important to be included in the research because they are general topics that are commonly used. The themes that appear in this quadrant are Study, Characteristics, Comparative, Credit, Theory, Approach, Innovation, Analysis, Financial, Banks, Conventional, Evidence, Islamic, Banking.

FINDING

This study found that the scientific literature has researched many banking innovations, both Islamic banking and conventional banking. Some studies provide innovations that can be applied by Islamic banking in improving its performance as a bank that implements digitalization.

Table 2: Banking Innovations

Banking Innovation	Sources
Branchless Banking Service	(Abdullah et al., 2017; K. M. Ali et al., 2019; Haqqi, 2020)
Digital Savings	(Kahveci & Wolfs, 2018; Kamdzhlov, 2020)
Digital Account Opening	(Miskam et al., 2018; Ozili, 2018; Zain et al., 2019)
Inhouse Application Development	(Al-Jarhi, 2017; Amin et al., 2011)
Open Core Banking System	(Ibrahim & Ismail, 2020; Imerman & Fabozzi, 2020)
Realtime online Disdukcapil	(Budiman et al., 2020; Manan, 2019)
Payment of public utilities	(Ahmed et al., 2018; Ibrahim & Ismail, 2020)
Fintech/start-up incubation	(Alam et al., 2019; Seman & Jamil, 2019)
Internal customer chatbot	(Rabbani et al., 2021; Syed et al., 2020)
Utilization of big data platforms	(Arner et al., 2020; Rahmawati et al., 2018)

Branchless banking is a significant alternative to branch-based banking. This innovation enables banks to offer financial services outside of traditional bank premises. Branchless banking innovation is considered a more cost-effective innovation to provide banking services to rural areas compared to providing ATMs or building local branches. Furthermore, digital savings, which are electronic deposits of money, allow easy access to customer funds from anywhere at any time. This innovation is safe and secure to use and helps to track customer spending online.

Banking digitization innovations including digital account opening, in-house application development, real time online Disdukcapil, public utility payments, internal customer chatbots and the use of big data platforms from Islamic banking will cut banking costs to a lower level. With this innovation, Islamic banking does not need to pay overhead costs for physical branches or employees to become their staff. They also pass these cost savings on to their customers in the form of lower costs.

The open core banking system provides the advantage of an opportunity for Islamic banks to learn in detail the financial status of their customers by looking at the overall financial picture that can help them analyze risks and offer the best financial service requirements. Fintech incubation innovations and startups by Islamic banking can give Islamic banks the ability to deliver solutions that help improve the overall customer experience through the personalized and digital-only experiences consumers expect today. The purpose of startup incubators is to help entrepreneurs grow their businesses.

In the end, all of these innovations can be applied in Islamic banking, making it easier for customers to make transactions, check their account balances or even make transfers via digital devices.

CONCLUSION

This study attempts to evaluate the topic of Islamic banking innovation using text analysis until 2021. The conceptual structure of R 'biblioshiny' provides the network and main research themes. We have identified two research networks in the Islamic banking innovation literature using a co-occurrence network. This research network is "Islamic" and "Banking". A total of 115 documents used in this study indicate that research with the theme of Islamic banking innovation is quite popular in the scientific literature.

Keywords that are often used in Islamic banking innovation research are Islamic banking, Islamic finance, Islamic bank. As for its development, research on Islamic banking innovation continues to evolve according to technological developments to the application of digitalization, but cannot be separated from research on Islamic economics and finance. In addition, based on the Islamic banking innovation literature, there are several examples of innovations that can be applied by Islamic banking in improving its quality. Therefore, this research with the theme of Islamic banking innovation needs to be developed in the future.

The advice for banking practitioners is that they must ensure that research in Islamic banks is better and innovations in banking products are continuously developed to give customers more choices. Also, Islamic bank practitioners can use the results of this study to be implemented in Islamic banking. As for suggestions for academics, Islamic banking innovations should continue to be researched by adding new documents to the literature, which will help to increase the limitations of the research. Technology also needs to be utilized to help the market grow by providing good service. After the use of technology, it is expected that the market share of Islamic banks will grow.

Academics can also keep their research methodologically up-to-date by using other software that can create bibliometric maps, such as VOSviewer.

So, more research is expected to find ways to increase productivity, with different updates depending on the time period. The advice for regulators is to support all forms of innovation in Islamic banking, especially in the development of digitalization.

REFERENCES

- Abdul-Majid, M., Saal, D. S., & Battisti, G. (2010). Efficiency in Islamic and conventional banking: An international comparison. *Journal of Productivity Analysis*, 34(1), 25–43. <https://doi.org/10.1007/s11123-009-0165-3>
- Abdullah, M. A., Wahab, S. N. A. A., Sabar, S., & Abu, F. (2017). Factors determining Islamic financial literacy among undergraduates. *Journal of Emerging Economies and Islamic Research*, 5(2), 67. <https://doi.org/10.24191/jeeir.v5i2.8805>
- Ahmed, E. R., Islam, M. A., Alabdullah, T. T. Y., & bin Amran, A. (2018). Proposed the pricing model as an alternative Islamic benchmark. *Benchmarking*, 25(8), 2892–2912. <https://doi.org/10.1108/BIJ-04-2017-0077>
- Al-Jarhi, M. A. (2017). An economic theory of Islamic finance. *ISRA International Journal of Islamic Finance*, 9(2), 117–132. <https://doi.org/10.1108/IJIF-07-2017-0007>
- Alam, N., Gupta, L., & Zamani, A. (2019). Fintech and Islamic finance: Digitalization, development and disruption. In *Fintech and Islamic Finance: Digitalization, Development and Disruption*. <https://doi.org/10.1007/978-3-030-24666-2>
- Ali, K. M., Hassan, M. K., & Ali, A. elrahman E. S. (2019). Revitalization of Waqf for Socio-Economic Development. In *Revitalization of Waqf for Socio-Economic Development, Volume I: Vol. I*. <https://doi.org/10.1007/978-3-030-18449-0>
- Ali, M., & Puah, C. H. (2017). Acceptance of Islamic banking as innovation: a case of Pakistan. *Humanomics*, 33(4), 499–516. <https://doi.org/10.1108/H-11-2016-0085>
- Aliyu, S., Hassan, M. K., Mohd Yusof, R., & Naiimi, N. (2017). Islamic Banking Sustainability: A Review of Literature and Directions for Future Research. *Emerging Markets Finance and Trade*, 53(2), 440–470. <https://doi.org/10.1080/1540496X.2016.1262761>
- Alrawi, K., & Elkhatib, S. (2011). A new initiative of knowledge management practices in Dubai Islamic Bank operations. *International Journal of Business Innovation and Research*, 5(1), 17–28. <https://doi.org/10.1504/IJBIR.2011.037254>

- Amin, H., Rahim Abdul Rahman, A., Laison Sondoh, S., & Magdalene Chooi Hwa, A. (2011). Determinants of customers' intention to use Islamic personal financing: The case of Malaysian Islamic banks. *Journal of Islamic Accounting and Business Research*, 2(1), 22–42. <https://doi.org/10.1108/17590811111129490>
- Apriyanti, H. W. (2018). Model Inovasi Produk Perbankan Syariah di Indonesia. *Economica: Jurnal Ekonomi Islam*, 9(1), 83–104.
- Aris, N. A., Othman, R., & Azli, R. M. (2013). Pyramid of Maslahah for Social and Economic Welfare: The Case of Bank Islam Malaysia Berhad. *Journal of Energy Technologies and Policy*, 3(11), 457–470.
- Arner, D. W., Buckley, R. P., Zetsche, D. A., & Veidt, R. (2020). Sustainability, FinTech and Financial Inclusion. *European Business Organization Law Review*, 21(1), 7–35. <https://doi.org/10.1007/s40804-020-00183-y>
- Azis, Y., & Kamal, I. (2019). Innovation in Islamic banking towards conventional banking: A study on customer in Bandung. *International Journal of Business Innovation and Research*, 20(4), 511–526. <https://doi.org/10.1504/IJBIR.2019.103322>
- Bakar, A. R. A., & Hashim, R. (2011). Knowledge Management Innovation: Perspectives from the Islamic Development Bank. *Journal of Organizational Knowledge Management*, 2011, 1–8. <https://doi.org/10.5171/2011.227698>
- Budiman, H., Seminar, K. B., & Saptono, I. T. (2020). Formulasi Strategi Pengembangan Digital Banking (Studi Kasus Bank Abc). *Jurnal Aplikasi Bisnis Dan Manajemen*, 6(3), 489–500. <https://doi.org/10.17358/jabm.6.3.489>
- Hakim, R., & Irawan, M. D. (2019). Islamic Rulings and Financial Technology (Fintech): An Analysis on the Relevance and Implications. *Madania*, 23(2). <https://doi.org/10.1108/978-1-78973-545-120191019>
- Haqqi, A. R. A. (2020). Strengthening Islamic Finance in South-East Asia Through Innovation of Islamic FinTech in Brunei Darussalam. *Economics, Business, and Islamic Finance in ASEAN Economics Community*, 202–226. <https://doi.org/10.4018/978-1-7998-2257-8.ch010>
- Ibrahim, W. H. W., & Ismail, A. G. (2020). Do Regulation, Maqasid Shariah and Institutional Parameter Improve Islamic Bank Efficiency? *Journal of Islamic Monetary Economics and Finance*, 6(1), 135–162. <https://doi.org/10.21098/jimf.v6i1.1195>
- Imerman, M. B., & Fabozzi, F. J. (2020). Cashing in on innovation: a taxonomy of FinTech. *Journal of Asset Management*, 21(3), 167–177. <https://doi.org/10.1057/s41260-020-00163-4>
- Indriati, H. (2011). Analisis Faktor-Faktor Yang Mempengaruhi Inovasi Produk Perbankan Syariah Di Indonesia. Jakarta: Universitas Indonesia.
- Kahveci, E., & Wolfs, B. (2018). Digital banking impact on Turkish deposit banks performance. *Banks and Bank Systems*, 13(3), 48–57. [https://doi.org/10.21511/bbs.13\(3\).2018.05](https://doi.org/10.21511/bbs.13(3).2018.05)
- Kamdzhlov, M. (2020). Islamic Finance and the New Technology Challenges. *EJIF – European Journal of Islamic Finance*, 1–6.
- Manaf, A. W. A., & Amiruddin, N. binti. (2019). Fintech and the Challenge of Digital Disruption in Takaful Operation. *Asia Proceedings of Social Sciences*, 4(1), 1–3. <https://doi.org/10.31580/apss.v4i1.527>
- Manan, Y. (2019). Sistem Integrasi Proteksi & Manajemen Resiko Platform Fintech peer to peer (P2P) Lending dan Payment Gateway untuk Meningkatkan Akslerasi Pertumbuhan UMKM 3.0. *Ihtifaz: Journal of Islamic Economics, Finance, and Banking*, 2(1), 73. <https://doi.org/10.12928/ijiefb.v2i1.847>
- Masulah, S. (2014). Strategi Pengembangan Perbankan Syariah di Indonesia. *Jurnal Akuntansi Unesa*, 2(2).
- Miskam, S., Mohd Shahwahid, F., & Sholehuddin, N. (2018). Catching the Fintech Wave in Islamic Finance: Regulatory Approach for Malaysia. 4th Muzakarah Fiqh & International Fiqh Conference (MFIFC 2018), October, 223–235.
- Nazaritehrani, A., & Mashali, B. (2020). Development of E-banking channels and market share in developing countries. *Financial Innovation*, 6(1). <https://doi.org/10.1186/s40854-020-0171-z>
- Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18(4), 329–340. <https://doi.org/10.1016/j.bir.2017.12.003>
- Rabbani, M. R., Ali, M. A. M., Rahiman, H. U., Atif, M., Zulfikar, Z., & Naseem, Y. (2021). The response of islamic financial service to the covid-19 pandemic: The open social innovation of the financial system. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1). <https://doi.org/10.3390/JOITMC7010085>
- Rahmawati, L., Tanjung, I., & El Badriati, B. (2018). Analisis Permintaan dan Perilaku Konsumen Fintech Syariah Model Crowdfunding. *Profit: Jurnal Kajian Ekonomi Dan Perbankan Syariah*, 2(1), 35–49. <https://doi.org/10.33650/profit.v2i1.552>
- Ramdhoni, M. I., & Fauzi, F. A. (2020). Islamic Banks Performance: An Assessment using Sharia

- Maqashid Index , Sharia Conformity and Profitability and CAMELS. *INTERNATIONAL JOURNAL OF APPLIED BUSINESS RESEARCH*, 2(1), 15–30. <https://doi.org/10.35313/ijabr.v0i0.79>
- Ramli, M. A. R., Mohamed, M. K. A., & Basary, N. F. (2019). the Concept of Future Islamic Automobile Financing Based on Maqasid Shariah. *Research Colloquium*, 1(September), 22–25.
- Rani, L. N., Sukmaningrum, P. S., & Salleh, M. C. M. (2020). A comparative analysis of the productivity of Islamic banking in Indonesia, Malaysia and Brunei Darussalam during the period 2012-2017. *International Journal of Innovation, Creativity and Change*, 11(11), 470–491.
- Robani, A., & Salih, K. (2018). Positioning islamic gift economy for sustainable development at the local level. *Humanities and Social Sciences Reviews*, 6(2), 111–120. <https://doi.org/10.18510/hssr.2018.6214>
- Seman, J. A., & Jamil, N. N. (2019). The Impact of Fintech On The Sustainability Of Islamic Accounting And Finance Education In Malaysia. *Journal of Islamic, Social, Economics and Development (JISED)*, 4(17), 2–15. www.jised.com
- Syed, M. H., Khan, S., Rabbani, M. R., & Thalassinos, Y. E. (2020). An Artificial Intelligence and NLP based Islamic FinTech Model Combining Zakat and Qardh-Al-Hasan for Countering the Adverse Impact of Covid-19 on SMEs and Individuals. *International Journal of Economics and Business Administration*, VIII(2), 351–364. <https://doi.org/10.35808/ijeba/466>
- Tho'in, M. (2016). Kompetensi Sumber Daya Manusia Bank Syariah Berdasarkan Prinsip-Prinsip Syariah Islam (Studi Kasus Pada BNI Syariah Surakarta). *Jurnal Ilmiah Ekonomi Islam*, 2(03).
- Urabe, K., Child, J., & Kagono, T. (Eds.). (1988). *Innovation and management: International comparisons*. Berlin: de Gruyter.
- Zain, N. R. M., Mahadi, N. F., & Noor, A. M. (2019). The Potential in Reviving Waqf Through Crowdfunding Technology: the Case Study of Thailand. *Journal of Islamic Thought and Civilization of the International Islamic University Malaysia (IIUM)*, 89–106.