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5-13-2021

## BIBLIOMETRIC ANALYSIS OF LITERATURES ON DIGITAL BANKING AND FINANCIAL INCLUSION BETWEEN 2014-2020

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AB. AZIZ, MUHAMMAD RIDHWAN; JALI, MOHD ZALISHAM; MOHD NOOR, MOHD NAZRI; SULAIMAN, SYAHNAZ; HARUN, MOHD SHUKOR; and MUSTAFAR, MUHAMMAD ZAKIROL IZAT, "BIBLIOMETRIC ANALYSIS OF LITERATURES ON DIGITAL BANKING AND FINANCIAL INCLUSION BETWEEN 2014-2020" (2021). *Library Philosophy and Practice (e-journal)*. 5322.

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# **BIBLIOMETRIC ANALYSIS OF LITERATURES ON DIGITAL BANKING AND FINANCIAL INCLUSION BETWEEN 2014-2020**

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## **Abstract**

The fastest growing in technology in the recent many of years has changed the way of people live and the conduct of business. The existing of the internet and mobile has led to profound transformation to a various industry from manual-based to automatic-based activity and from offline to online transaction include in banking and financial industry. The objective of this study is to analyze the related literatures on Digital Banking and Financial Inclusion between 2014 until 2020. The methodology that has been applied in this study is descriptive research based on document analysis on previous studies and literatures on digital banking and financial inclusion either from free-of-charge or free-of-registration online journals. The journals and articles are acquired from various sources of channel such as google scholar, science direct and *researchgate.com*. There are 126 articles related in this field were collected and examined. This study perceived at several variables which include authorship patterns, number of articles published, research approach, geographical affiliation, subject and gender of the author. The general finding of this study illustrates that most of the previous study discussed on economic and social development that positively influenced by digital banking and financial inclusion.

**Keyword:** *Digital Bank, Digital Banking, Financial Inclusion, Islamic Banking.*

## **1. Introduction**

The traditional services that served by the banks had no longer meet the changes in consumer behaviour. The customers currently prefer the smooth and the convenience of products and services, while the information about products and services can be found effectively through mobile devices and tablets. Grasping the value of the digital revolution, commercial banks no longer embody in the traditional model of operating through branches (Thuy Thu Nguyen, 2020). The worldwide spread and utilization of internet and mobile has impacted to the transformation of new forms of banking and financial sector in which leads to the establishing of digital banking. Digital banking refers to the utilization of technology to conduct banking transactions in a smooth and convenient way (Varda Sardana & Shubham Singhania, 2020). Commonly digital banking has been used terms such as electronic banking, internet banking, and online banking. Besides that, the adoption of digital banking has transform the banking services towards more efficient and competitive with a competitive advantage (Alex Fahrur Riza, 2019).

Moreover, the adoption digital banking currently has transformed the banking industry in achieving financial inclusion through offering deduction of cost rather than the traditional banking and enable greater accessibility across the usual geographical reach of physical locations (Hyun-Soo Choi, 2020). Financial inclusion is equipped in advance through Digital banking. Since 2010, the initiative for increased financial inclusion in developing countries in order to assist in reducing poverty levels in developing and emerging economies had been led by the G-20 and the World Bank (GPFI, 2010). The relevance of digital banking and financial inclusion for poverty deduction and economic growth is drawing the attention of policy makers, academics and practitioner, largely because of the number of issues that persist which if addressed can make digital banking work better for individuals, businesses, governments and the economy. There are several benefit of digital banking and financial to consumers, digital finance providers, governments and the economy such as provide the accessibility to mobilize financial services toward needy people, decreasing the cost of financial intermediation for banks and Fintech providers, and increasing aggregate expenditure for governments. (GPFI, 2010).

## **2. Literature Review**

### **Concept of Digital Banking and Financial Inclusion**

In general, digital banking is digital bank that conduct a virtual process where banking services are delivered over the internet. The digitization of service that offered by the bank from traditional to digital banking on, from manual-based to automatic-based activity and from offline to online transaction. While financial inclusion generally is referred to endeavors to make financial service and product accessible and moderate to all people and organizations, paying little heed to their own total assets or organization size. Financial inclusion strives to eliminate the hindrances that prohibit individuals from partaking in the financial area and utilizing these services to improve their lives. As it can be perceived, Financial inclusion is provided in advance through digital banking.

According to (Peterson K. Ozili, 2018), from a practitioner's opinion, digital banking is financial services delivered through mobile phones, personal computers, the internet or cards linked to a reliable digital banking system. This includes services like money deposits, withdrawals and transfers. Meanwhile, according to (Carmen Cuesta, 2015) the concept of digital banking is a mechanism for generating the supply, distribution channel for of financial products and services virtually, an advancement technology to know customers better and anticipate their needs swiftly and suitably, and an omni-channel solution, or the medium to the customers in communicating with their bank directly via mobile phones and internet.

Moreover, the concept of digital banking could be referred as a process of the digitization (from offline based to online based) of all the traditional banking services and product that historically were only can be accessed by the customers when they come to the bank branch. The services encompass cash deposits, cash withdrawals and transfers, checking or saving account management, applying for financial products, credit and loan management, bill payment and account services (Darryl Proctor, 2019). According to Yoonseock Son (2016) digital banking technology has affected the core of the banking business and has changed financial services operating system, which had been dominated by offline employee-oriented services had turned to online based oriented. The digital banking has improved efficiency and cost-effectiveness of technology-enabled service delivery processes have shifted the managerial focus toward enhancing the efficiency of digital channel operations to reduce operational costs. All the more

significantly, as an expanding number of banks are providing digital banking services, it is imperative that banks understand how customers use the digital services and employ their benefits to foster better customer relationships (Yoonseock Son, 2016).

(Loh, 2020) argued that digital banking has affected many banks in downsizing their physical operations in which occurred in the bank branch. The establishing of digital bank had turned bank client to not rely on transaction inside of bank branch. Moreover, digital banking offers the changes to the banking industry through cost reduction compared to traditional banking and provide abroad accessibility to its customers (Loh, 2020). Last but not least, digital banking can be describes as a new instrument of banking and finance, services or practices, introduction to the new method uses of money, new channels of funds or new ways of handling daily transactions in which all these efforts are becoming part of existing financial institutions and the emergence of new markets. This digital banking is a competitive advantage to the banks to beat the competition, lower their exposure to risk and manage risk better in case it occurs while at the same time responding to the needs of their customer and respond to the market changes (Emily, 2017).

Meanwhile, the concept of financial inclusion is referred to “access to all, at an affordable cost or price, to varied financial services and products in which available with the existing financial institutions that have the ability to maintain themselves. These endeavors directed towards financial inclusion, whereby to focus on every customer or household have the access to utilize the essential financial services and product without taking consideration of income level (World Bank, 2012).

According to (Howard Thomas, 2019) the concept of financial inclusion can be referred as a process that ensures smooth accessibility, availability, and actively utilize of the formal financial system and services to members of an economy, academics, society and practitioner. Importantly, financial inclusion means that individuals and firms not only be able to access the financial services and product and also have availability of financial services but they also capable and willing to utilize them. Based on the World Bank, financial inclusion and access to finance are different concepts. Financial inclusion is determined as a group of adult people who utilize financial services and product offered by financial institution. However, lack of use does not necessarily mean lack of access. Some people may have access to financial services at affordable prices, but they choose not to use them for religious and other reasons, while other

people's access may be restricted by high costs for these services or regulatory barriers. Therefore, the key issue is the extent to which lack of inclusion stems from the lack of demand or the presence of barriers that avoid individuals and firms from accessing financial services ( World Bank, 2014).

The lack of financial inclusion to formal financial services reduces the level of social welfare and also their social protection that may lead to the increasing social tension in society, which ultimately slows the development of the country's economy as a whole as well as social development (Svitlana Naumenkova, 2019). In addition, according to (Ulf Thoene, 2017) numerous countries around the world has made financial inclusion as a key topic on governmental agendas. Governments formulate policies and stimulate social development aimed at establishing the opportunities for individuals excluded from the financial system. Financial inclusion not only offers access to banking products, but also tends to raise the purchasing power and standard of living of low-income populations. Financial inclusion is necessary to boost a country's economy and sustainability (Ulf Thoene, 2017).

### **The Benefit of Digital Banking and Financial Inclusion**

The advancement of digital banking currently helps in economic growth and social development in a numerous country all around the world. There are a lot of benefits that can gain from digital banking while achieving financial inclusion encompass all level of household and financial institutions.

According to (John Vong, 2016) digital banking can benefit both the rural population and the rural bank branches in which aims to reduce poverty and improves the standard of living of the rural population. As such, the financial sector not only contributes to GDP growth but also reduces poverty. Digital banking is cost effective time efficiency, and flexibility to a bank to deliver banking services by reaching the rural population. Moreover, based on (Ivo Jenik and Kate Lauer, 2017) digital banking may improve financial inclusion in which offering new, affordable products or services that address the needs of the excluded and underserved customer segments. Besides that, digital banking is a distribution channels that can conveniently reach out to unbanked populations smoothly in remote and rural areas.

In addition, (Ivo Jenik and Kate Lauer, 2017) also argued that digital banking offered operational efficiencies that allow financial services providers to serve low-margin clients profitably and business models that allow financial services providers to serve marginalized clients to achieve scale. Last but not least, the adoption of digital banking may increase the competition to the financial institutions that may prompt incumbents to focus more attention on unserved and underserved segments to keep their revenues steady.

In term of customers perspective, (North, 2018) had stressed that digital banking has benefiting customers in term of time constraints in which the customer no need to spend time and expenses as they are not compulsory to travel to the bank branch in order carry out transactions. They also do not need to wait in unending queues solely to conduct simple transaction like transfer the money or even pay for utility bills and so the online bill payment (North, 2018). In the other hand, according to (GDS Modellica, 2020) digital banking offered 24 hours per day and the customer no need to wait to make banking transaction as it can make it possible for customer to sit in the comfort whether in home or office, or in a vehicle while travelling, and carry out transactions without having to wait for longer time.

Digital banking also provides more product information through online whereby the users can easily find information about services and products features. All of this helps customers keep in touch with the bank and better attended to. Increased user confidence: electronic banking has the tools, protocols and levels of security that make searches and transactions safe and secure. These protocols range from security certificates to strengthened data encryption. (GDS Modellica, 2020) stressed in the article that digital banking can increase transparency in services and transactions are made completely secure through the use of complex encryption methods to prevent from cybercrime (GDS Modellica, 2020).

### **3. Research Methodology**

This article had applied bibliometric and descriptive analysis based on literatures related to digital banking and financial inclusion between 2014 until 2020. 126 articles had been collected for the study based on online Google Scholar, Science Direct and *researchgate.com*. from various conference papers, journal and articles. The bibliometric review focuses specifically on the articles written in the areas of digital banking and financial inclusion. The literature



works and articles will be analyzed to extract the data encompassing digital banking and financial inclusion knowledge and issues which can be used by students, scholars as well as practitioner in banking and finance in improving the current digital banking development.

#### 4. Result

##### a) Number of Annual Journal Publications

Subject of Article	2014	2015	2016	2017	2018	2019	2020	Total
Business & Management	2				1		1	4
Composition Theory			1	1	3	1	5	11
Economic and Social Development	1	3	1	2		7	22	36
Electronic Banking System					2	2	4	8
Financial Services Marketing	2	2	2	1	1	5	8	21
Information Management		1			1	1	1	4
Innovative Business & Management			2	2	1	2	5	12
International Business and Finance				2				2
Social Science	1	2	1	1	2	5	12	24
Science Technology & Management				1		1	2	4
<b>Total</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>24</b>	<b>60</b>	<b>126</b>

Table 1: Number of Annual Journal Publications

There were 126 articles had been analyzed from the year 2014 to 2020 related to digital banking and financial inclusion. Table 1 shows in detail about digital banking and financial inclusion articles that have been analyzed over the years.

A total of 25 articles have been generally subject to economic and social development and it indicates the highest number of articles in this subject. While the articles subject to financial

marketing services and social science are 21 articles and 24 articles had been recorded, followed by innovative business and management of 12 articles. Furthermore, composition theory recorded with 11 articles followed by the articles subject to electronic banking system with 8 articles. Moreover, information management, business and management and science technology and management had the equal number of articles with total of 4 articles. The lowest number articles is subject related to international business and finance with a total of only 2 articles.

The highest number of articles produced is in 2020 with 60 articles. In 2019, the total number articles produced were 24 articles. Meanwhile, there were 11 articles and 10 articles in 2018 and 2017. In 2016 and 2015, there were a slight difference number of articles in which recorder 7 articles and 8 articles. Lastly, the lowest number of articles had been recorded on 2014 with 6 articles.

**b) Types of Study by Journal Articles Publication Year**

Publication Year	Data Analysis				Total
	Exploratory	Descriptive	Analytical	Empirical	
2014	1	1	4		<b>6</b>
2015	3	1	4		<b>8</b>
2016	3		4		<b>7</b>
2017	1	2	7		<b>10</b>
2018	5	1	5		<b>11</b>
2019	10	6	6	2	<b>24</b>
2020	24	14	19	3	<b>60</b>
<b>Total</b>	<b>47</b>	<b>25</b>	<b>49</b>	<b>5</b>	<b>126</b>

Table 2: Types of Study by Journal Articles Publication Year

Table 2 shows that this study focuses on 4 approaches that are commonly used in previous studies which are analytical, descriptive, empirical and exploratory. Based on the analysis done on the 126 articles, most researchers use analytical approaches with a total of 49 articles. This is followed by an exploratory approach with 47 research articles. The second lowest approach that had been recorded is descriptive approach with 25 articles. The lowest research approach recorded is 5 articles in which used an empirical approach.

**c) Research Approach Based on Journal Articles Publication**

Publication Year	Research Approach			Total
	Qualitative	Quantitative	Mix-Method	
2014	4	1	1	6
2015	5	1	2	8
2016	4		3	7
2017	7	2	1	10
2018	5	1	5	11
2019	6	7	11	24
2020	18	15	27	60
<b>Total</b>	<b>49</b>	<b>27</b>	<b>50</b>	<b>126</b>

Table 3: Research Approach Based on Journal Articles Publication

Table 3 illustrated there were three method used by authors to collect the data of the study (qualitative, quantitative and mixed method). Based on the research data collected over the past 7 years, mix method research design recorded 50 articles in which the highest number of articles that used this method to collect the data needed. Secondly, the qualitative design with 49 articles. Lastly, the least commonly used study design is quantitative with 27 articles only.

**d) Authors' Gender and Relationship Between Authors**

Gender	Author						Total
	One	Two	Three	Four	Five	Six & above	
Male	24	24	7	3			<b>58</b>
Female	19	8	6	2	1		<b>36</b>
Mixed gender		15	8	6	1	2	<b>32</b>
<b>Total</b>	<b>43</b>	<b>47</b>	<b>21</b>	<b>11</b>	<b>2</b>	<b>2</b>	<b>126</b>

Table 4: Authors' Gender and Relationship Between Authors

Table 4 shows the statistic of authors' gender and relationship between authors that based on the total 126 articles examined. The total number of two authors for male and female gender is higher than the single author for male and female in which both 47 articles and 43 articles. Meanwhile, for the total number of three male, female and mix gender authors, the total articles are 21 authors compared to four male, female and mixed gender of authors in which 11 articles only. There were equal number between the total number for five male, female and mixed gender author and six and above authors which were 2 articles.

**e) List of Journals and Number of Articles Published from The Year 2014 To 2020**

No	Title	Country	Publication Year							Total
			2014	2015	2016	2017	2018	2019	2020	
1	Influence of Affordability of Digital Banking on Customer Satisfaction: A Case of National Bank of Kenya Bungoma County	Africa			✓					14
2	Digital Banking and Financial Inclusion of Women Enterprise in Narok County, Kenya	Africa							✓	
3	Factors Affecting The Adoption Of Digital Banking In Kenya: A Case Study Of Commercial Banks	Africa							✓	
4	Factors Influencing Adoption Of Digital Banking Services By Customers In Kenya: A Case Of Commercial Banks In Thika Sub County- Kenya	Africa	✓							
5	Influence Of Digital Banking On Customer Satisfaction: A Case Of National Bank Of Kenya Bungoma County.	Africa		✓						
6	Financial Inclusion In Burundi: The Use Of Microfinance Services In Semi-Urban Areas	Africa							✓	

7	Digital Financial Services in Africa Improving Financial Inclusion through Digital Savings and Credit	Africa							✓	
8	Effects Of Digital Credit On Financial Inclusion Of The Youth In Kenya: A Survey Of Kangemi, Nairobi County	Africa							✓	
9	Financial Inclusion in Ethiopia: Is It on the Right Track?	Africa							✓	
10	Mobile Money, Financial Inclusion And Development: A Review With Reference To African Experience	Africa							✓	
11	Financial Stress and Depression Among African Refugees in the Southern United States: A Serial Multiple Mediation Analysis of Financial Self-Efficacy and Financial Anxiety	Africa						✓		
12	Impacts of Financial and Digital Inclusion on Poverty in South Asia and Sub-Saharan Africa	Africa							✓	
13	Blockchain and catching-up in developing countries: The case of financial inclusion in Africa	Africa						✓		
14	Effect of Digital Banking on Customer Satisfaction: A case of National Bank of Kenya, Bungoma County	Africa		✓						
15	Consumer acceptance of internet banking: the influence of internet trust	Austria		✓						1
16	Financial Inclusion in Nepal: Progress and Constraints	Bangladesh							✓	1

17	Promoting China's Inclusive Finance Through Digital Financial Services	China							✓	1
18	Digital Transformation And Financial Inclusion	England							✓	1
19	A theory of financial inclusion and income inequality	Europe							✓	2
20	The Power Of Financial Inclusion	Europe							✓	
21	On Some Misconceptions Concerning Digital Banking and Alternative Delivery Channels	Finland			✓					6
22	Examining Consumers' Intention, Behavior, and Beliefs in Mobile Banking Adoption and Continuous Usage	Finland			✓					
23	Users' Satisfaction of Digital Banking Services in Finland	Finland					✓			
24	The Accessibility Of Digital Banking Services To 18-26-Year-Olds	Finland						✓		
25	Older Finnish Consumers' Experiences Of Digital Banking Services	Finland						✓		
26	Customer Response on the Digitalization of the Retail Banking Services	Finland						✓		
27	Intensifying financial inclusion through the provision of financial literacy training: a gendered perspective	Ghana						✓		1
28	Transforming And Empowerment Of Digital Banking In India	India						✓		22
29	Usage Of Digital Banking	India				✓				
30	Digital technology in the realm of banking: A review of literature	India					✓			
31	Financial Inclusion In India	India							✓	

32	Insurance Inclusion: A Tool For Financial Inclusion In India	India							✓
33	Financial Inclusion and poverty reduction in India	India						✓	
34	Role of Financial Inclusion in the Development of Indian Economy	India	✓						
35	Effect Of Demonetization On Financial Inclusion In India	India				✓			
36	Digital Financial Inclusion: A Catalyst for Socio-Economic Transformation of Scheduled Castes and Scheduled Tribes in Kerala	India							✓
37	Does Financial Inclusion Spur Economic Growth In India	India							✓
38	Digital Revolution in the Indian Banking Sector	India							✓
39	The Concept Of Financial Inclusion In Digitalised India	India					✓		
40	Financial Inclusion in India – a Review of Initiatives and Achievements	India	✓						
41	Financial Inclusion in India – a Review of Initiatives and Achievements	India	✓						
42	Promoting Gender Equality and Inclusive Growth Through Financial Inclusion	India						✓	
43	Financial inclusion, banking the unbanked: Concepts, issues, and policies for India	India					✓		
44	District Level Assessment of Financial Inclusion in India	India							✓
45	An Empirical Study On Technology And Banking Services In India	India							✓
46	Digitalization in Banking Sector	India					✓		

47	Digital Banking in India: A Review of Trends, Opportunities and Challenges	India				✓				
48	Adoption of digital banking channels in an emerging economy: exploring the role of in-branch efforts	India							✓	
49	Digital payment: empirical study on usage of digital platform in making digital payments	India							✓	
50	Accelerating Financial Inclusion Through Digital Banking	Indonesia						✓		
51	Customer acceptance of digital banking in Islamic bank: Study on millennial generation	Indonesia						✓		
52	Trust Role in Acceptance of Digital Banking in Indonesia	Indonesia							✓	
53	Enhancing Financial Inclusion through Social Capital in Indonesia: A Case Study of Women Micro Enterprise Group in Bogor Regency, West Java	Indonesia							✓	
54	Case Study of Financial Services Authority: The Role of Digital Financial Innovation in Supporting Financial Inclusion in Indonesia	Indonesia							✓	
55	E-Link Service Synergy, Perceived Risk Management, and Tri Hita Karana in LPD in Driving Financial Inclusion	Indonesia							✓	
56	Construction Of Financial Inclusion Behaviour Models In The Implementation Of Fintech At Fishermen SMEs Carita, Purwakarta	Indonesia							✓	
57	The Socioeconomic Effects Of Financial Inclusion In Indonesia	Indonesia							✓	



58	Financial Inclusion, Financial Stability and Sustainability in the Banking Sector: The Case of Indonesia	Indonesia							✓	
59	The Intention of Using Cell Phones In Digital Banking Service Base on External Factors and Internal Factors	Indonesia							✓	
60	The potential of digital banking to handle the Covid-19 pandemic crisis: Modification of UTAUT model for Islamic finance industry	Indonesia							✓	
61	Developing A Digital Banking Framework in the Iranian Banks: Prerequisites and Facilitators	Iran					✓			2
62	Challenges of the Iranian E-Banking Business Model in Digital Transformation	Iran						✓		
63	Electronic Banking-Marketing And Its Impact On Enhancing Attract Customers A Case Study Of The Rafidain Bank In Dhi Qar Governorate	Iraq							✓	1
64	Financial inclusion, mobile money, and individual welfare: The case of Burkina Faso	Japan							✓	
65	Does financial inclusion impact CO2 emissions? Evidence from Asia	Japan							✓	3
66	Financial Inclusion, Poverty, and Income Inequality in Developing Asia	Japan		✓						
67	Factors Influencing Behavioural Intention Towards Adoption Of Digital Banking Services In Malaysia	Malaysia							✓	3

68	Determinants of Branchless Digital Banking Acceptance Among Generation Y in Malaysia	Malaysia					✓			
69	The Effect of Digital Banking Service Quality on Customer Satisfaction: A Case Study on the Malaysian Banks	Malaysia							✓	
70	Digital banking: Investigating the use of social media and mobile applications in building relationships, loyalty and reducing churn	New Zealand	✓							1
71	Effect Of Digital Banking On Customer Satisfaction Within The Federal Capital Territory, Nigeria	Nigeria							✓	3
72	Bridging the financial inclusion gender gap in smallholder agriculture in Nigeria: An untapped potential for sustainable development	Nigeria							✓	
73	Impact Of Financial Inclusion On Performance Of Banks In Nigeria	Nigeria						✓		
74	Impact of Customers' Digital Banking Adoption on Hidden Defection: A Combined Analytical-Empirical Approach	Not Stated						✓		19
75	Concept of Online Customers Experience in Digital Banking	Not Stated							✓	
76	Financial inclusion and economic growth in OIC countries	Not Stated				✓				
77	Social safety and behavioral aspects of populations financial inclusion: A multicountry analysis	Not Stated							✓	
78	The Financial Inclusion Landscape in the Asia-Pacific Region: A Dozen Key Finding	Not Stated						✓		

79	The Contribution Of Financial Inclusion In Reducing Poverty And Income Inequality In Developing Countries	Not Stated							✓	
80	Can Islamic banking increase financial inclusion?	Not Stated				✓				
81	Credit cards issued by non-financial companies: An alternative tool for financial inclusion and economic development?	Not Stated						✓		
82	Financial Inclusion: Can It Meet Multiple Macroeconomic Goals	Not Stated		✓						
83	Banking the unbanked: Financial inclusion and economic sustainable development for women?	Not Stated							✓	
84	Financial Inclusion and Economic Growth in OIC Countries	Not Stated				✓				
85	Does the development of mobile financial services have an impact on financial inclusion in Lesotho? The case of M-Pesa and Eco-cash	Not Stated							✓	
86	Financial inclusion: a strong critique	Not Stated							✓	
87	Digital financial innovations in the twenty-first century Do transaction tax exemptions promote mobile money services for financial inclusion in developing countries?	Not Stated						✓		
88	The effect of digital design in retail banking on customers' commitment and loyalty: The mediating role of positive affect	Not Stated				✓				
89	Digital Transformation Metamodel in Banking	Not Stated						✓		

90	Digital Transformation and Customers Services: the Banking Revolution	Not Stated							✓	
91	Fintech in digitalization of banking services	Not Stated						✓		
92	Digitalization of the Banking Industry: A Multiple Stakeholder Analysis on Strategic Alignment	Not Stated				✓				
93	What factors drive the adoption of digital banking? An empirical study from the perspective of Omani retail banking	Oman							✓	1
94	Mobile Banking For Financial Inclusion In Pakistan	Pakistan			✓					1
95	Electronic Banking Strategies and Their Impact on Customers' Satisfaction: Empirical Evidence from Palestine	Palestine						✓		1
96	Security of Digital Banking Systems in Poland: Users Study 2019	Poland						✓		1
97	Literature review of mobile banking and individual performance	Portugal				✓				1
98	The Development Of Digital Banking In Modern Russia	Russia							✓	
99	Development of digital banking services in Russia today	Russia						✓		3
100	Digital Transformation of the Russian Banking Sector in Terms of Pandemic	Russia							✓	
101	The Exclusion of People with Visual Disabilities from Digital Banking Services in the Digitalization Era	Saudi Arabia							✓	
102	Digital payment and banking adoption research in Gulf countries: A systematic literature review	Saudi Arabia							✓	

103	Digital Banking Accelerator: A Service-Oriented Architecture Starter Kit for Banks	Singapore							✓	3
104	Physical Frictions and Digital Banking Adoption	Singapore							✓	
105	Digital banking accelerator: A Service-Oriented Architecture starter kit for banks	Singapore							✓	
106	SME adoption of Digital Banking in South Africa	South Africa					✓			4
107	Legislative and Other Selected Challenges Affecting Financial Inclusion for the Poor and Low Income Earners in South Africa	South Africa							✓	
108	The Adoption of Digital Banking in Namibia	South Africa			✓					
109	An Empirical Framework for Banking Digitally Unbanked Seniors	South Africa							✓	
110	Customers' motivation to embrace digital banking in Sri Lanka; A case study of Sampath Bank PLC	Sri Lanka							✓	1
111	Generation Y and digital banking	Sweden						✓		1
112	Resource fit in digital transformation Lessons learned from the CBC Bank global e-banking project	Taiwan		✓						1
113	Factors influencing customers' adoption of digital banking in Thailand	Thailand		✓						1
114	Digital banking, customer experience and bank financial performance: UK customers' perceptions	United Kingdom					✓			8

115	From User-Centred Design to Security: Building Attacker Personas for Digital Banking	United Kingdom					✓			
116	How to develop a profitable, customer-focused digital banking strategy: Open banking services and developer-friendly APIs	United Kingdom		✓						
117	Financial Inclusion – measuring progress and progress in measuring	United Kingdom			✓					
118	Impact of digital finance on financial inclusion and stability	United Kingdom				✓				
119	The digital revolution in financial inclusion: international development in the fintech era	United Kingdom			✓					
120	Defining and measuring financial inclusion: A systematic review and confirmatory factor analysis	United Kingdom							✓	
121	An Exploratory Spatial Analysis Of Access To Physical And Digital Retail Banking Channels	United Kingdom						✓		
122	Evaluating the relationship between financial inclusion, social inclusion and multidimensional poverty reduction	United State							✓	1
123	Determinants Of Digital Banking Services In Vietnam: Applying Utaut2 Model	Vietnam							✓	3
124	Digital Banking in Vietnam Current Situation and Recommendations	Vietnam					✓			
125	Innovations in Digital Banking Service Brand Equity and Millennial Consumerism	Vietnam							✓	

126	The Impact of Mobile Banking on Financial Inclusion in Zimbabwe: A Case for Masvingo Province	Zimbabwe	✓							1
	Total									<b>126</b>

Table 5: List of Journals and Number of Articles Published from The Year 2014 To 2020

Based on to the publication of the journals above, there are 33 countries and had published 107 articles related to digital banking and remained 19 articles are not stated the place of publication. For all of the published studies, a total of 126 publications of various indexed journals were identified. Most of them are from India.

**f) List of Country for Journal and Number of Articles Published from Year 2010 to 2020**

No	Publishing Country	Number of Articles Published from Year 2010 - 2020
1	Africa	14
2	Austria	1
3	Bangladesh	1
4	China	1
5	England	1
6	Europe	2
7	Finland	6
8	India	22
9	Indonesia	11
10	Iran	2
11	Iraq	1
12	Japan	3
13	New Zealand	1
14	Nigeria	3
15	Oman	1
16	Pakistan	1
17	Palestine	1
18	Poland	1
19	Portugal	1
20	Russia	3

21	Saudi Arabia	2
22	Singapore	3
23	Sri Lanka	1
24	South Africa	4
25	Sweden	1
26	Taiwan	1
27	Thailand	1
28	United Kingdom	8
29	United State	1
30	Vietnam	3
31	Zimbabwe	1
32	Ghana	1
33	Malaysia	3
34	Not Stated	19
	<b>Total</b>	<b>126</b>

Table 6: List of Country for Journal and Number of Articles Published from Year 2014 to 2020

According to the table above, India registered the highest number of articles published at 22 publications. In addition, the second top number of articles published are not stated the published country with total 19 articles followed by Africa with 14 research articles. Last but not least. There were 18 countries that found published only one article and these countries had the lowest number of analyzed article.

## 5. Discussion

The finding of the study acquired from the analysis of 126 articles from 2014-2020 are as follows:

1. The expanding number of articles published each year shows that research related to digital banking and financial inclusion is depicted very relevant and remains a topic of discussion. There are 10 subjects of article that has been emphasized by previous researchers, and economics and social development recorded the highest frequency of publication.
2. The mixed analysis research approach has been widely used by previous researchers to dive further into the digital banking and financial inclusion from the past to the present.



3. The mixed data analysis is more mainstream among researchers contrasted with other analysis designs.
4. The writing pattern of the study is depicted that the highest number of articles written by single male and single female author.
5. The highest number of articles related to digital banking and financial inclusion is contributed by India as India is country that has dense population.

## 6. Conclusion

According to the previous studies, it can be concluded that law maker, practitioner and academic must have a deep knowledge in digital banking and financial inclusion due to the fastest growing of technology in order to caters the mankind need while improving the growth of economics and social development. The result of analysis of the entire articles indicated that there are many studies had been conducted related to this area in the past few years. One possible conclusion is that the study about digital banking and financial inclusion has been quietly famous topic by previous researchers and the study also still ongoing up until this day. In this regard, the researchers need to keep focus and update their study about the current development of digital banking in achieving financial for better improvement in banking and finance industry as well as reference to the next generation.

## Acknowledgements

This research is funded by the Ministry of Higher Education Malaysia (KPT) under FRGS research grant with the title: *Developing Shariah-Compliant Digital Banking Within Maqasid Al-Shariah Framewok For Financial Inclusion*. Research code: (USIM/FRGS/FEM/KPT/50920).

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