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Mapping Digital Financial Management in Developed and Developing Countries through Bibliometric Analysis

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Abstract

Digital financial management has become an important pillar of global economic progress, transforming the way individuals, businesses and countries manage finances. In developed countries, digital banking and payment systems are rapidly evolving, while in developing countries, the adoption of digital technologies continues to increase, as seen by the widespread access to fintech and mobile banking services. Since 2017, research on technology in financial management has shown an upward trend, with bibliometric analysis used to map trends, challenges and influencing factors across different countries. The early 2000s were a pivotal moment in the evolution of digital financial management, driven by the use of smartphones as the primary access to the internet. Research from 1706 to 2025 recorded exponential growth, especially since 2014. Researchers utilise platforms such as Google Scholar to disseminate information widely. Keywords such as "Fintech," "big data," and "digital finance" indicate further research opportunities. Fintech has revolutionised financial services with technologies such as blockchain and big data, increasing efficiency, transparency, and personalisation of services, and driving innovation in the global financial ecosystem.

Keywords: *Digital Financial Management, Fintech, Big Data, Digital Banking, Mobile Banking.*

1. Introduction

Digital financial management has become a crucial element in the advancement of the global economy. In recent decades, advances in digital technology have overhauled the way individuals, companies and even countries manage and organise their finances. In developed countries, innovations in payment systems, investments, and digital banking are increasingly efficient thanks to technological developments. Meanwhile, in developing countries, although still faced with challenges such as limited infrastructure and low levels of financial literacy, the adoption of digital technology has shown significant progress. This can be seen from the increasing access to digital financial services, including mobile banking, fintech, and digital wallets.

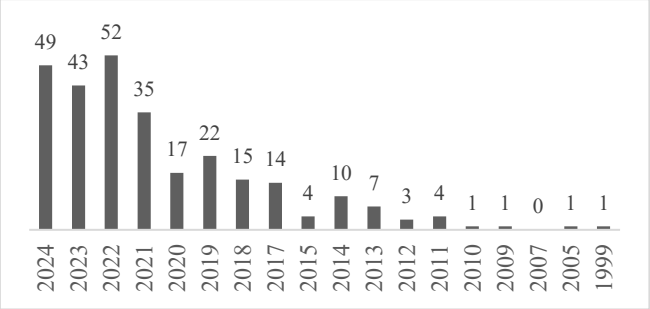

Figure 1. Development of Digital Financial Management Research Themes

Phenomenon Based on the keyword digital financial management using the publish or perish application, the increase in research related to this theme began to develop significantly from 2017 to 2024. The development of research on this theme is inseparable from the existence of companies in developed and developing countries that utilise digital technology in financial management. Financial management using digital technology improves company performance. Companies can improve financial performance by optimising digital finance because utilising this technology can increase the efficiency and effectiveness of the company. This phenomenon leads researchers to identify and map the latest financial management variables, or more precisely, digital financial management.

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The urgency of research related to digital financial management mapping is very important to become a roadmap for research on the theme. Research using bibliometric analysis is needed to recognise the latest variables related to digital financial management. The introduction of the latest variables is the right starting point in determining the development of science. Recognising the variables of digital financial management will increase understanding, the ability to forecast current situations and conditions and control business management. This research will help future researchers recognise the latest variables related to digital financial management.

To gain a deeper understanding of the developments and differences in the application of digital financial management, we can utilise a bibliometric analysis approach. This method uses data from scholarly publications to identify trends, patterns, and make comparisons between different research topics within a given field. In the context of digital financial management, bibliometric analysis gives us insight into how the topic is evolving in developed and developing countries, as well as the factors that influence its adoption and implementation in both groups of countries.

This research aims to map digital financial management in developed and developing countries through bibliometric analysis. With this approach, we can explore the most discussed themes and identify significant differences in approaches as well as challenges faced by these two categories of countries in adopting digital financial technologies. This analysis not only provides deep insights into global trends but also presents recommendations for more effective digital finance development policies and strategies in different countries**.**

2. Literature Review

Almost all groups of people now use digital finance, not just millennials. This makes it easier for various transactions, especially buying and selling products that are mostly done digitally.

The use of technology and certain software to manage financial elements more effectively and efficiently is known as digital financial management. In his book "Financial Management in the Digital Era", James M. Dorsey (2008) explains that digital financial management involves the application of information systems and technology to improve efficiency, transparency, and control in financial management.

This process includes transaction management, budget planning, and asset and liability management by utilising digital software and applications. All financial transactions, including income, expenses, and cash flow, can be neatly recorded by using accounting software or digital financial applications. Accurate and organised records are essential to produce precise and sustainable financial reports.

The main objective of digital financial management is to inform people, especially businesses, how to properly use digital financial management in every transaction. In addition, to minimise the risk of crime in the digital financial world, it is also important to educate about the importance of maintaining transaction security, especially related to the confidentiality of personal data that must be properly protected [1][2].

Financial management is a field of business management that focuses on the wise use of capital and the selection of appropriate sources of capital to achieve the goals of an organisation. Digital financial management is the application of digital technology in financial management, covering various aspects, considered an essential requirement for entrepreneurial development, product development, growth, and profitability of SMEs. Financial management practices encourage more strategic consideration of risk and the application of appropriate sources of capital to achieve organisational goals [3][4].

Financial management involves monitoring the financial condition of the organisation, optimising the distribution of resources, and ensuring operational continuity. In high-risk sectors, where safety and operational efficiency are paramount, effective financial management must incorporate safety factors into every financial decision. Harnessing global digitalisation provides opportunities for innovation as well as the development of digital infrastructure. Digitalisation also provides substantial benefits for social and economic growth, and increases the readiness of business entities to adopt digital technologies [5][6].

The adoption of digital financial management in developed countries brings major benefits from digitalisation, especially in terms of social and economic growth. In addition, the readiness of business entities to utilise digital technologies highlights the importance of government priorities in supporting the adoption of these digital tools, which have the potential to boost overall economic growth. Various economic factors influence the financial performance of companies and the overall business organisation system [6].

The use of digitisation as an innovation to improve efficiency and effectiveness in both the private and public sectors has been widely recognised in the information systems literature. Digitisation refers to the use of digital technologies to transfer physical activities and documents from offline formats to online platforms, thus enabling electronic interactions. In general, digital technologies include computer network-based platforms connected via the internet to support online interactions. In developing countries, large populations need to be educated and have the skills to generate income to meet their needs while utilising digital financial services, such as e-banking [7][8].

Table 1. External Stimulus Factors

Factor	Description	Reference
Gevornment	The government plays a role in regulating, supervising and supporting digital financial management. This role includes the preparation of legal frameworks, policies, and infrastructure development that ensures smoothness, security, and transparency in digital-based financial transactions.	[9] [10] [11]
Accountability	Describes the responsibility and transparency of the parties involved in digital-based financial management to ensure that every financial action, decision and outcome can be accounted for in accordance with standards, laws and community expectations.	[12] [11]
Transparency	The transparency principle ensures that information about the management, transactions, policies, and use of funds in the digital financial system is available, easily accessible, clear, and understandable to all stakeholders. This enables effective oversight, enhances accountability, and increases public trust in the digital financial system.	[13][14]
Budgeting	Using digital technologies for financial planning, management, and monitoring for efficiency and transparency, and using digital tools and platforms to improve budget accuracy and transparency.	[9][15][16]
Public funds management	Planning, collecting, allocating, monitoring and reporting using digital technology to ensure efficiency, transparency, accountability and alignment with development priorities.	[17][18]
Artificial intelligence	Machine learning, natural language processing and advanced analytics improve the speed, efficiency and accuracy of digital finance with AI.	[19][20]
Digital Transformation	Using technologies such as artificial intelligence, big data, blockchain and cloud, digital financial transformation improves efficiency, accuracy, transparency and decision-making processes.	[21][22]
Financial Management	For data-driven efficiency, transparency, and accuracy, digital financial management uses AI, data analytics, blockchain, and the cloud.	[23][24]
Asset Manajement	Oversight of digital assets to support financial goals, manage risk, and maximise value.	[25][26]
Digital platform economy Fintech	Fintech is a digital ecosystem that automates financial services to improve efficiency, speed, and accessibility.	[25][27]
Global Financial	Global finance encompasses cross-border transactions, policies and services supported by digital technologies, contributing to global economic integration.	[28][29]
Networks BlackRock	Investments are optimised with advanced technologies such as AI, big data, and blockchain, according to global asset manager BlackRock.	[30][31]
Technology adoption	The adoption of technology in financial management improves efficiency, transparency and control through the use of digital tools and platforms.	[32][33]
bank performance	In addition to conventional financial indicators, digital bank performance includes operational effectiveness, technology adoption, and customer experience.	[34][35]
financial services	Financial services improve efficiency, accessibility and user experience through technology-enabled products and solutions.	[36][37]
network innovation	By improving the infrastructure and interaction of financial entities, the development of digital financial networks increases efficiency, transparency and accessibility.	[38][39]
SWIFT	To facilitate international transactions between banks, SWIFT is a secure global network.	[34][40]

3. Methods

In this article, qualitative research uses a historical approach to find trends, developments, or mappings in Digital Financial Management research. The research is conducted in two stages. In the first stage, structured data collection is required. This data comes from articles published in reputable international journals.
The second stage involved analysing the collected articles using a bibliometric approach. This approach aims to analyse and compile data in the form of words or phrases taken from the titles and abstracts of published articles. Bibliometric analysis serves to identify the latest developments, trends and mapping of research related to digital transformation, so that the results can provide recommendations on relevant research themes or variables for future researchers.

3.1. Data Collection Methods

The data collection consisted of research articles from six groups of leading journal publishers: Taylor & Francis, Emerald, Springer, Research Gate, Wiley Online Library, and Elsevier. These articles were collected from databases accessible by these six journal publishing groups.
By using Publish or Perish (PoP), this software helps to find articles relevant to your research topic. The data collection process is shown as follows:

1. The first keyword used as search criteria is digital financial management.
2. From the digital financial management keywords, we obtained the most frequently occurring keyword combinations, which were grouped into 4 keyword search groups. Group 1: Government; accountability; transparency; budgeting; public funds management. Group 2: Artificial intelligence; digital transformation; financial management. Group 3: Asset management; Digital platform economy Fintech; Global Financials; BlackRock Networks, and group 4: Technology adoption; bank performance; financial services; network innovation; Swift.

3. The research collected by the software is then focused on English journals. The articles selected are from highly reputable sources.
4. The search can only include related journal articles in the fields of scientific management, business, economics, social sciences, information, and entrepreneurship. Conference and meeting proceedings are not included in the data collected in this study.
5. The articles to be analysed are checked for "title", "abstract", and "keywords".
6. When selecting articles for processing, consider the following information: DOI, publishing journal, publisher, article URL, number of citations, GS rank, citations per year, citations per author, and author count.

The articles collected from the search using Publish or Perish from 1706 to 2025 amounted to 3331 articles. With the combination of search titles and keywords as shown in Table 1.

3.2. Data Analysis Method

Bibliometric analysis is a statistical and mathematical analysis method to measure and evaluate the production, distribution, and impact of scientific research. This analysis utilises metadata from scientific publications such as journals, conferences, and books to understand. Data analysis was conducted using the Vosviewer application.
The results of the analysis are used to map and develop reference fields of study. Scientific mapping analyses the trends and development patterns of scientific research related to the results of research studies on digital financial management.
VOSviewer analyses scientific publications and visualises the development of knowledge with network visualisation and cluster labelling. In other words, VOSviewer provides information about research updates and the amount of research that has been done in the field.
Maps and networks based on co-citation data or keyword maps based on co-citation data of highly detailed keyword occurrence and relevance are displayed by VOSviewer. Each data cluster has a different colour for the visualisation of keyword maps and networks. The overlay network displayed in VOSviewer shows the development of articles over time. The overlay network displays the time span (years) over which the relatedness of each keyword is presented in the form of a network. By using the overlay network visualisation, we can find out how far the research on digital financial management has progressed. In addition, there is a density visualisation. This visualisation shows how often concepts or constructs are used in research.

4. Results and Discussion

4.1. Number of Years Published

The early 2000s witnessed the evolution of Digital Financial Management with the widespread use of digital finance, which became a potential ecosystem for the public in various countries, such as developed and developing countries. The number continues to grow with the emergence of smartphones as a public access channel to connect to the internet. Changes in the technological environment that drastically change other macro environments change the landscape of financial management. This condition makes many researchers conduct research related to digital transformation, either as an article title or as a keyword in the article. The search results are 3880 articles from 1706 to 2025, as shown in the following table.

Table 2. Number of Publication Years 1706-2025

Year	Year of Publication	Year	Year of Publication	Year	Year of Publication
1706	1	2002	19	2015	61
1924	1	2003	17	2016	82
1948	1	2004	17	2017	114
1978	1	2005	29	2018	186
1990	4	2006	27	2019	218
1993	1	2007	37	2020	295
1994	2	2008	34	2021	316
1996	4	2009	36	2022	392
1997	7	2010	39	2023	498
1998	7	2011	37	2024	511
1999	3	2012	55	2025	12
2000	10	2013	55	Total	3880
2001	9	2014	50		

Values show the change from 2014 to 2024. As research on digital financial management continues to increase, this research topic has become popular in this context.

4.2. Citation Analysis

Google Scholar (GS) is used to perform author analysis; GS performs the same task as the Thomson ISI Web of Knowledge, which produces Journal Impact Factors (JIF), which assess the impact factor of articles [41]. The

advantage of GS ranking is free access to articles; this allows researchers to reference articles even if their research institution does not have adequate funding.

Table 3. Active Publications per Year 1706-2025

Author name	Title	Rank GS
LA Petrova, TE Kuznetsova (2020)	Digitalisation in the Banking Industry: Digital Transformation of Environment and Business Processes	980
MF Deaf, SE Shehata, D Nasan (2023)	The Effect of digital transformation on audit Quality	979
F Morandi, CE Morandi, L Finini (2017)	Come sviluppare una digital bank di successo: un nuovo banking model	977
M Fang, F Liu, SS Xiao, K Park (2023)	Hedging the bet on digital transformation in strategic supply chain management: A theoretical integration and an empirical test	976
A Beltratti, A Bezzecchi (2020)	Asset/Wealth Management NeXt: ESG-investing, tecnologia e il nuovo paradigma della centralità del cliente	976
SK Sia, C Soh, P Weill (2016)	How DBS Bank pursued a digital business strategy.	974
OL Yershova, LI Bazhan (2021)	Artificial Intelligence as the Technological Basis of the Digital Transformation of the Economy	971
PCY Yau, D Wong (2022)	Powering Financial Literacy Through Blockchain and Gamification: How Digital Transformation Impacts Fintech Education	970
K Mettenheim (2012)	A Brazilian municipal bond market: theory, repression and prospects	969
L Atemba, RW Otuya (2017)	Integrated Financial Information System (IFMIS) and National and County Government Performance in Kenya: Critical Analysis	968
L Xiong, Q Luo, W Wo (2024)	On the Training Model of Higher Vocational Teachers' Information-Based Teaching Ability Enhancement in the Background of Education Digital Transformation	968

GS ranking can be seen from the author's contribution in producing articles each year. The data collected shows that ten authors are actively writing. The number of author contributions in the creation of articles per year is shown in Table 4.

Citation analysis shows how many articles are cited or referenced by other researchers. Researchers related to digital financial management continue to fluctuate, especially from 2014 to 2024.

Environmental changes are driving digital financial management challenges that require innovation. Financial managers, both in large enterprises and SMEs, must be able to adapt to these changes by developing innovative strategies and technologies that are relevant to this digital era. Increased adaptation also encourages a high commitment from researchers to continue developing scientific knowledge to provide digital-based financial management solutions that can break through traditional boundaries and create relevant services in an evolving market. The journal with the highest number of innovative product publications is Taylor & Francis, as shown in Table 4.

Table 4. Top 25 Authors and Articles Cited in Digital Financial Management Publications

Author Name	Publisher	Frequency Cited
KSR Warner, M Wäger	Elsevier	2849
P Dunleavy, C Hood	Taylor &Francis	2675
P Gomber, RJ Kauffman, C Parker	Taylor &Francis	2134
A Ustundag, E Cevikcan	Springer	1218
K Zhu, KL Kraemer, J Dedrick	Taylor &Francis	1143
A Di Vaio, R Palladino, R Hassan, O Escobar	Elsevier	1021
SL Wamba-Taguimdje, SF Wamba	emerald.com	998
J Bughin, E Hazan, P Sree Ramaswamy, W DC, M Chu	dln.jaipuria.ac.in	989
Y Pan, L Zhang	Elsevier	988
M Zachariadis, S Scott, M Barrett	JSTOR	900
V Kumar, B Rajan, R Venkatesan,	journals.sagepub.com	893
G Hileman, M Rauchs	papers.ssrn.com	878
S Ransbotham, D Kiron, P Gerbert	search.proquest.com	867
AFS Borges, FJB Laurindo, MM Spínola	Elsevier	802
D Belanche, LV Casaló, C Flavián	emerald.com	796
J Melkers, K Willoughby	Wiley Online Library	749
A Correani, A De Massis, F Frattini	journals.sagepub.com	742
V Chang, P Baudier, H Zhang, Q Xu, J Zhang	Elsevier	679
JKU Brock, F Von Wangenheim	journals.sagepub.com	653
J Guthrie, O Olson, C Humphrey	Wiley Online Library	624

4.3. Bibliometric Analysis

Bibliometric analysis helps researchers map and determine the progress of research on digital financial management. The results of this study allow researchers to find relevant and recent research themes or variables, thus clarifying the potential impact of ongoing research.

4.4. Joint Authorship Analysis

In the Co-authorship analysis, there are authors associated with other authors' names. The results of this analysis show that the authors collaborated in conducting research related to digital transformation, as shown in Figure 2. Wang conducted 8 collaborations with other authors, as listed in Table 5.

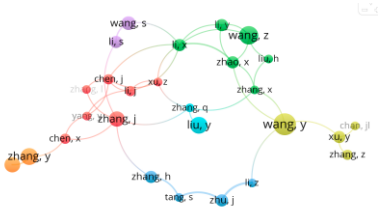

Figure 2. Author Network

Table 5 shows the titles of the studies that conducted this research. The collaboration of the authors shows a strong commitment to continuing research on digital financial management.

Table 5. Author Collaboration

Author Name	Title
Y wang, M Xiong, H Olya (2019)	Toward an Understanding of Responsible Artificial Intelligence Practices
Y wang, H WU (2024)	Digital transformation and corporate risk taking: Evidence from China
Y wang, F Jia, L Chen, Y xu (2024)	Does digital transformation foster carbon emissions reduction? Evidence from China's manufacturing supply chain
Y wang, L Cui (2023)	Can corporate digital transformation alleviate financial distress
Y wang, B Dou, SL Guo, XC Chang (2023)	Corporate digital transformation and labour structure upgrading.
Y wang, L Liu, Z Li, S Deng, Y zhao (2023)	The Digital Transformation of Power Grid in the Background of Artificial Intelligence
Y wang, Xin su (2025)	Factor conditions and capability building of artificial intelligence empowered digital transformation in the banking sector: a case study of a Chinese bank.
Y wang, Y Xiong, J liu (2023)	Policy Analysis of Educational Missions and Tactics in the EU Artificial Intelligence Strategy in the Era of Digital Transformation

4.5. Bibliometric Network Visualisation Analysis

The results of the analysis with VOSviewer, which performs co-occurrence analysis, found 670 keywords related to digital transformation. To produce more specific keywords in the analysis of title and abstract keywords, the occurrence of keywords is limited to 3. From the limitation of nine occurrences, 570 keywords are obtained, which are divided into 8 clusters as in Table 6.

Table 6. Keyword Grouping

Cluster	Keywords
Cluster 1	county government, accordance, account, accounting, accounting system, accrual,accrual accounting, accrual budgeting, african nation, allocation, architecture, architecture, auditing, australia, basis, best practice, budget, budget management, budget process, budget transparency, budgetary accounting, budgetary control, budgetary information, budgetary process, budgetary system, budgetary transparency, budgeting practice, budgeting process, budgeting system, capital budgeting, cash, cash flow, cash management, central government, citizen, citizen participation, collection, commitment, compliance, control, coordination, corruption, county government, credibility, critical analysis, debt, degree, e budgeting, e budgeting implementation, e government, effectiveness, emphasis, ethic, execution, existence, expenditure, extra budgetary fund, financial accountability, financial administration, financial management practice, financial report, financial reporting, financial statement, financial transparency, fiscal management, fiscal rule, fiscal transparency, future challenge, gao, gender budgeting, gender equality, gender responsive budgeting, general accounting, general accounting office, general public, ghana, globalization, good governance, government accountability, government accountable, government accounting, government accounting reform, government accounting standard, government accounting system, government budget, government budgeting, government finance, government operation, governmental accounting, greater accountability, greater transparency, greece, hand, high level, increase transparency, instrument, integrated financial management information system, integrity, internal control system, international, international public sector accounting standard, ipsas, iraq, italy, kenya, lack, legal framework, legislature, link, local budget, local government, local government accountability, local public finance, ministry, nepal, new public financial management, nigeria, openness, oversight, parliament, participation, participatory budgeting, performance budgeting, pfm, politic, position, predictability, principle, procurement, program budgeting, public, public accountability, public administration, public budget, public budgeting, public expenditure, public finance, public finance act, public finance management, public finance management act, public finance management system, public finance system, public financial accountability, public financial management, public financial management practice, public financial management reform, public financial management system, public fund, public funds management, public investment management, public money, public

	mony, public official, public participation, public policy, public procurement, public resource, public sector, public sector accounting, public sector financial management, public trust, reform, region, reliability, reporting, republic, responsibility, responsiveness, revenue, road, romania, rule, rwanda, service delivery, south africa, spending, transparent budgeting, transparent management, treasury, treasury single account, uganda, uzbekistan, village financial management.
Cluster 2	absence, acquisition, ai application, aladdin, algorithm, artificial intelligence application, artificial neural network, asset management, asset management company, asset management industry, asset manager, big tech, black rock, blackrock inc, blockchain network, broker, capital market, cent, central bank, ceo, charles schwab, client, competition, consumer, contrast, convergence, corporate finance, corporation, crypto, cryptocurrency, customer, decentralized finance, deep learning, defi, digital asset, digital network, digital service, diversity, ecosystem, eg blackrock, esg, etfs, exchange, fidelity, finance industry, financial advice, financial adviser, financial advisor, financial asset, financial capital, financial infrastructure, financial institution, financial intermediary, financial risk, financial services industry, financial stability, financial technology, fintech, fintech company, fintech ecosystem, fintech firm, fintech industry, fintech platform, fintech revolution, fintech sector, fintech start, fintech start up, fintech startup, fintechs, footnote, fund manager, futureadvisor, generative ai, global finance, global financial crisis, global financial network, global financial system, global network, google, green fintech, hedge fund, incumbent, individual, innovative way, instance, institutional investor, insurance, investment advice, investment management, investment manager, investment strategy, investor, jp morgan, largest asset management firm, largest asset manager, larry fink, lending, loan, london, march, market, network effect, networking, neural network, online platform, payment, peer, platform, platform economy, player, political economy, portfolio, portfolio management, portfolio management service, portfolio manager, potential, pressure, private equity, private equity industry, product, profit, provider, recent development, recent year, regtech, retail banking, retail investor, return, rise, risks, robo, robo advice, robo advisor, robo advisory, saudi arabia, scale, social, social medium, social network, stablecoins, startup, state street, sustainable finance, sustainable investing, tech, today, tokenization, trading, traditional financial firm, traditional financial institution, usa, vanguard, venture capital, wave, wealth, wealth management, wealth management firm, wealth management industry, wealth management service, wealth manager, worlds largest asset manager.
Cluster 3	advancement, ai technology, availability, bangladesh, bank performance, banking industry, banking service, black rock desert, business performance, concentration, cooperation, corporate digital transformation, corporate innovation, credit, dfi, difference, diffusion, digital banking, digital finance, digital financial development, digital financial inclusion, digital financial service, digital inclusive finance, digital payment, digital transformation process, empirical evidence, empirical study, enterprise innovation, entrepreneurship, environmental sustainability, financial access, financial development, financial flexibility, financial inclusion, financial literacy, financial network, financial service, financial supervision, financial support, financial sustainability, financing constraint, fintech adoption, fintech innovation, fintech service, firm performance, generative artificial intelligence, green innovation, green technology innovation, higher education, higher education institution, hospitality industry, ict, inclusion, innovation performance, interplay, key factor, kind, knowledge management, long term effect, lot, mechanism identification, mediating effect, mediating role, medium enterprise, medium sized enterprise, member, mobile banking, moderating role, move, msmes, network innovation, new perspective, new technology, outcome, output, productivity, profitability, robo advisors, sale, sample, share, sme, smes, swift, swift adoption, tam, tanzania, technological adoption, technological innovation, technology acceptance, technology acceptance model, technology adoption, technology innovation, third, threat, tourism, transaction, type, vietnam, widespread adoption.
Cluster 4	accountant, advanced technology, advent, age, agriculture, analytic, artificial intelligence algorithm, artificial intelligence system, author, automation, banking sector, big data, big data analytic, big data technology, bigtech, business intelligence, business management, business model, business model innovation, business strategy, business transformation, cloud, cloud computing, cornerstone, current trend, customer experience, cyber security, data analysis, data analytic, depth, digital bank, digital business transformation, digital revolution, digital tool, digital transformation strategy, digitization, disruption, e commerce, energy, enterprise digital transformation, enterprise financial management, erp, european union, financial accounting, financial service provider, goldman sachs, green finance, heart, help, identification, innovative technology, internet, intersection, iot, islamic banking, islamic finance, key technology, keyword, ledger technology, life, machine, management accounting, mobile application, new digital technology, new era, operational efficiency, path, planning, poland, robotic, robotic process automation, russia, sense, successful digital transformation, supply chain, supply chain management, systematic review, technological advancement, thesis, thing, traditional finance, wide range.
Cluster 5	asia, beyond, consumer protection, content, democracy, digital strategy, digital transformation impact, economic growth, financial product, financial times, fintech solution, fourth industrial revolution, france, global financial market, green budgeting, http, investment bank, leverage, limit, new development, oecd country, panacea, private sector, public investment, sustainable growth, taxation, woman.
Cluster 6	big, bitcoin, digital currency, financial instrument, financial instruments, handbook, human, web.
Cluster 7	Brazil, misuse, new public management, open budget, philippine, presentation, public funding, South Korea.
Cluster 8	Cybersecurity, regulator

The results of the Network Visualisation Analysis show that there are many small nodes representing the keywords generated from the analysis, as shown in Figure 3. This visualisation shows that there is still a lot of room for research related to digital financial management. For example, the digital node “Fintech” is not yet connected to the digital nodes of the “Accounting” or “Public Financial Management” models. More research is needed to uncover the causality at each node. The results of this research will provide a scientific understanding that is able to explain causal relationships, and support efforts to understand, analyse and manage digital financial management.

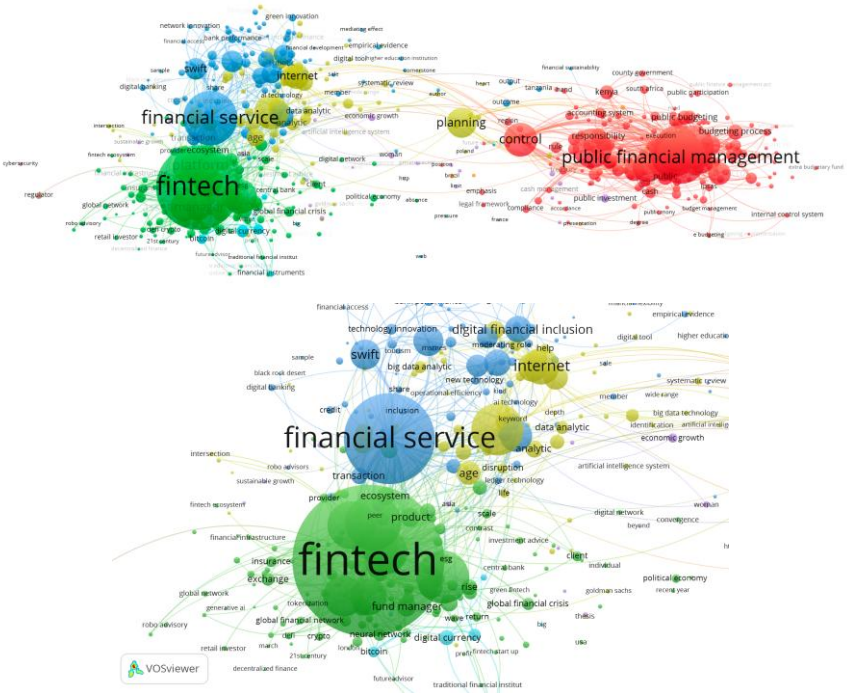

Figure 3. Network Visualisation in Digital Financial Management

Financial technology, also called fintech, is an innovation in financial services that uses contemporary digital technology. Fintech and financial services are closely linked and impact each other. Fintech enables financial transactions to be faster, more efficient and economical through digital platforms. Services such as mobile banking, e-wallets, and digital payments facilitate people's access to financial services. Fintech drives innovation of new financial products and services that better suit the needs of modern consumers.

In the image fintech is associated with financial services, platform, client, traditional financial institution, online platform, asset manager, neural network, technology adoption, big data, age, bigtech, digital finance, transaction, ecosystem, provider, investment manager, wealth, financial infrastructure, insurance, engine, global financial crisis, retail investor, esg, scale, wealth management service, product, robo-advisor, digital asset, vanguard, startup, capital market, sustainable finance, fund manager, social network.

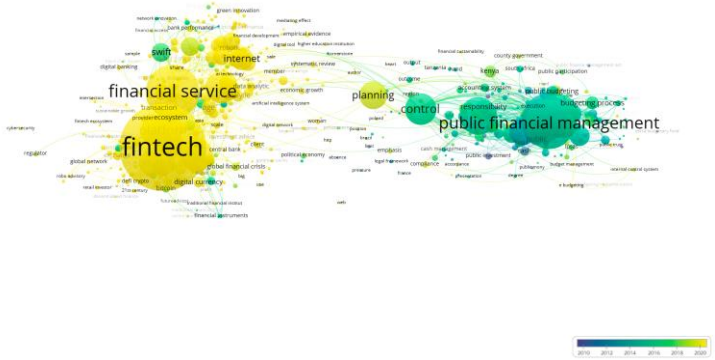

Figure 4. Visualisation of Overlay in Digital Financial Management

Themes related to Fintech, financial services are current research themes. This condition is indicated by the lighter colour of the nodes. The colour of the nodes is between 2020 and now. Fintech, Big Data, Platform, Planning, Internet, Asset Manager, Technological Innovation, Digital Financial Inclusion, Market,

IoT, SMEs, Age, Exchange, client, scale, transaction, digital currency, big data analytics, investment advice, economic growth, digital inclusive finance, supply chain management, capital markets, global financial network, digital banking, transactions, investment manager, business strategy, crypto and so on.

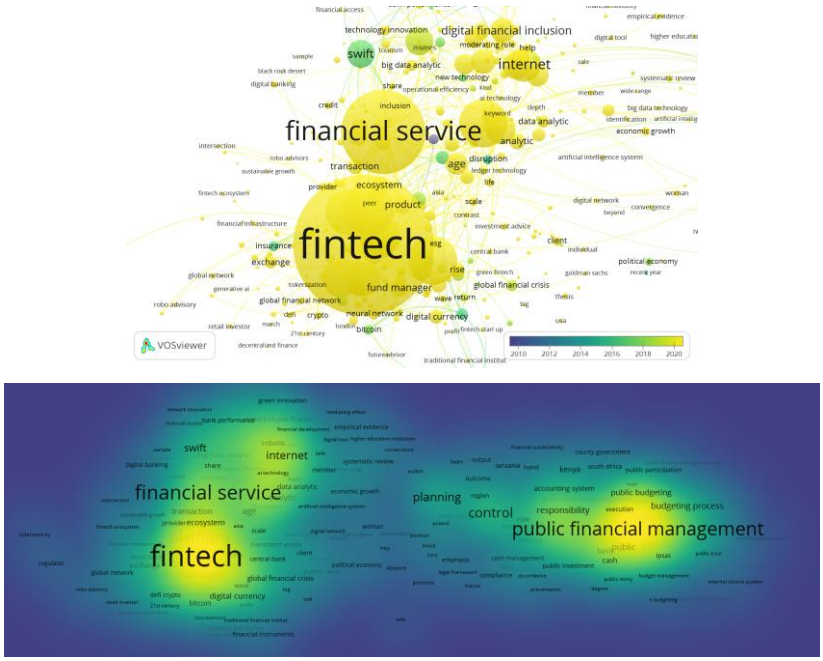

Figure 5. Visualisation of Density in Digital Financial Management

Digital network, digital currency, and financial development are related to the intensity of fintech variables. Fintech has a significant impact on the financial industry as a whole, as it enhances operational efficiency and reduces costs. It increases transparency and security of financial transactions through technologies such as blockchain, and enables personalised financial services based on data and analytics.

5. Conclusion

Bibliometric analysis shows that the scientific mapping of digital financial management research progress still has many research gaps. This research gap is an indication for future researchers to conduct further research related to digital financial management in developed and developing countries. There are several themes recommended for research related to digital financial management in developed and developing countries.

Fintech	Financial service	Ecosystem	Market	Platfromm	Competition	Asset manager	Crypto	Internet
Big data technology	Author	iot	Digital finance	Exchange	Bangking industry	Fintech company	Wealth management	Digital banking
Financial inclusion	invesment advice	Digital network	nonfungible tokens	Largest asset management firm	Economic growth	cilent	Intersection	bigtech
Financial acces	Digital currency	Defi	Retail investor	Scale	Entrepreneurs hip	Financial risk	Machine	Global finance
Corporate finance	Innivative way	Business transformation	Credit	suply chain	emprical evidance	Digital tool	Mediating effect	Erp

Figure 6. Variables Recommended for Further Research

Figure 6 displays a number of variables recommended for future research. A total of 45 variables have been identified as options that can be used by future researchers.

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