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Bibliometric Analysis on Indigenous Communities and Their Adoption of Fintech

By

Abstract

This paper emphasizes on the power of modern computing and the innovation of smart devices which truly reflect the way indigenous peoples see the world. However, we need infrastructure in regions which are populated by indigenous communities to encourage the residents to the next level who are enhancing their knowledge and are interested to tap into these digital finance resources. We have an opportunity to close the digital skill gap for the indigenous communities, for better business participation in the digital finance world, to collaborate with indigenous groups to achieve equity in this digitalization. More than 65% of the Indian population resides in rural areas, out of them only 28% of the rural population has infrastructure like mobile networks and connectivity through the smartphone. The lack of infrastructure, perplexity in the banking process, and literacy level among the indigenous people are very low for this reason it is very difficult for them to adopt digital finance. The increasing penetration of the internet among cities is providing momentum to Fin-Tech in rural areas and the change is already visible to all through the number of transactions available in the database of FinTech transactions. This paper explores the challenges and perception of indigenous peoples and suggests measures to accelerate the inclusiveness of indigenous peoples and their adoption of digital finance. This study finds out that for indigenous people, tourism is an important source of income. People leave their comfort zones and adopt fintech because of the necessity of this platform, which causes them to adapt to digital transactions. According to the analysis, India has produced a significant amount of literature in the fields of digital transactions and fintech adoption. The cluster of keywords we can see includes demonetization, which suggests that demonetization may have had a significant impact on the growth in publications.

Keywords Fin-Tech, Digitalisation, Indigenous peoples, Technology adoption

Introduction

The strength of contemporary computers and the inventiveness of smart devices, which genuinely mirror the worldview of indigenous peoples, are highlighted in this essay. To advance residents who are expanding their knowledge and interested in utilizing these digital finance tools, infrastructure is needed in areas with a high concentration of indigenous communities. We have the chance to work with indigenous groups to achieve equality in this digitalization, to close the digital skills gap for indigenous communities, and for improved business engagement in the digital finance sector. Despite the fact that more than 65% of Indians live in rural areas, just 28% of them have access to infrastructure like mobile networks and smartphone connectivity. The indigenous people find it particularly challenging to accept digital money due to a lack of infrastructure, the complexity of the banking procedure, and a relatively low level of literacy. FinTech is gaining momentum in rural regions thanks to rising internet usage in cities, and the shift is already apparent to all thanks to the volume of transactions that are currently available in the database of FinTech transactions. This essay examines the issues and stereotypes surrounding indigenous peoples and makes recommendations for quickening both their inclusion and their adoption of digital money.

Literature Review

Financial technology adoption

The Technology Acceptance Model (TAM) is an extension of TRA, proposed by (Davis, 1989) to predict the individual's adoption and use of information technology (see Figure 2-3). According to TAM, there are two beliefs that determine the individual's behavioral intention to use a technology; (i) perceived usefulness (PU) which is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance", and (ii) perceived ease of use (PEOU) which is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989). The action planning theory was developed by (Ajzen & Fishbein, 1975). This is a factor that affects a person's behavioral intentions and attitude toward that activity. The first two elements are consistent with rational action theory (Ajzen & Fishbein, 1975). The Technology Acceptance Model has been empirically validated, and supported over the last two decades (Venkatesh, 2000). According to (Venkatesh & Bala, 2008), TAM is able to consistently explain 40% of the variance in individuals' intention. Moreover, TAM is concerned with the system characteristics that will influence individual acceptance. The growth of Information and Communication Technology has brought a lot of changes in the lifestyle of the people. ICT and digitalization has brought great advancements in fields of finance, marketing, economics operation, etc. (Slozko & Pelo, 2015). In the period of Digital innovation and ICT there have been a lot of changes in the world where business transactions have shifted from cash to digital (Roy & Sinha, 2014). With the introduction of the digital payment system the payment system in the world had to shift its method of payment to align with the current or latest payment technology for individuals, organizations,businesses, government, etc. (Odi & Richard, 2013). The digitization has forced the payment system around the world from paper, coins, people started to shift towards the digital payment system as it was very fast, convenient, and beneficial for individuals, organization.

Indigenous peoples

Odisha is unique among Indian states since so many different tribes call this country home. Odisha has 62 tribal groups, or 22.8 percent of the state's total population. In Odisha, there are 95,90,765 indigenous people, according to the 2011 census. Indigenous languages spoken in Odisha are classified into three main linguistic groupings. They are Indo-Aryan, Dravidian, and Austroasiatic (Munda). Every community has its own language. The official language of Odisha is Odia. It is employed in educational institutions at all levels, from basic education up to the administrative level.the governmental level of administration. Indigenous people have several challenges since they are not acclimated to the Odia language. Many people belonging to these communities are poor and also struggle to comprehend the government's development strategy. As a result, grassroots efforts to adopt government programmes are often unsuccessful. The assessment of initiatives to combat poverty identifies a number of issues. That is, (i) complicated management, (ii) high management expenses that are sufficient to exceed the value of the benefits that arise in many initiatives, and (iii) several undefinable objectives, including accountability and quality. And (iv) poor management, which is mostly to blame for the high rates of poverty in rural regions.

Objective and Scope

For investigating and analyzing vast amounts of scientific data, bibliometric analysis techniques are applied. It allows us to explore the subtleties of the adoption of fintech and digital transactions. The bibliometric analysis was conducted for indigenous people, taking the

CSV file from the Scopus database. This will help in illuminating the frontiers of the three keywords that were searched. The objectives of this study are i) to conduct a systematic literature network analysis, ii) to find the number of documents published in the area of adoption of FinTech and digital transactions, and iii) to find the countries that have worked on these areas.

Research Methodology

A subsequent analysis of the subset of pertinent articles obtained through a bibliographic network analysis, specifically the citation network analysis, the co-occurrence networks analysis, and the basic statistics like countries and documents. In contrast to the bibliometric review, which provides more objective insights using quantitative and statistical data, the first qualitative evaluation is mostly focused on the researchers' judgments regarding the selection of keywords and depends on an explanatory approach (Aliyev et al., 2019). Only a few examples of the bibliographic information analyzed by bibliometric techniques include the names of the most significant authors, journal titles, article titles, article keywords, and publication years (Block & Fisch, 2020). The objective is to "supplement the standard content-based literature evaluations and reflect the dynamic expansion of the scientific production of a discipline" by extracting quantitative data from bibliographic networks and spotting developing difficulties (Strozzi et al. 2017), because it emphasizes the growth of the literature, identifies author networks and topic clusters, assesses gaps and criticalities, and suggests new paths of investigation, this dynamic approach has proven successful in a range of research topics. The primary goal of SLNA is to assess the conceptual framework of the field and its development over time, in contrast to narrative literature reviews, which attempt to summarize the information in the works in a particular study subject (e.g. how has the number of studies evolved, how have the topics evolved, how have the outlets evolved, etc.). It goes beyond a straightforward descriptive presentation of past works by encouraging a conversation of what we know and where we can go. By identifying multidisciplinary connections, it also permits the monitoring of the knowledge dissemination inside and between fields. By selecting precise keywords, exclusion/inclusion criteria, and adopting clear boundaries at every stage to ensure a systematic search of papers (Block & Fisch, 2020) and (Fetscherin & Heinrich, 2015) quantitative bibliographic studies also enable the avoidance of the researchers' selection bias, to the point where the process can be replicated at any time. This differs from conventional approaches, which don't have a clear methodological framework. Last but not least, SLNA stands out for having a more current and broad scope (in terms, for example, of the journals and publication years covered), which reduces the possibility of the authors presenting an excessively reflective and biased argument and instead results in evidence-based conclusions. Figure 1 details each phase of the process in full. Scopus was chosen as the research's reference database because of its breadth, usability, and compliance with the most recent literature. According to (Block & Fisch, 2020) and (Pitsouni et al. 2017), Scopus has a greater selection of journals and performs citation analyzes more quickly and thoroughly than other research databases like Web of Science (WoS), (Chadegan et al. 2013) found that whereas WoS is limited to more recent papers, Scopus covers a larger number of journals, while (Bergman, 2012) found that Scopus also delivers higher citation counts than Google Scholar and WoS. These findings have been corroborated by other researchers. The following are the most frequently occurring literary phrases that were also employed in this study: digital transactions, fintech, blockchain, mobile payment, covid19, e-commerce, India, China, tourism, smartphones, P2P network, intention to use, adoption, demonetization, privacy and entrepreneurship. The literature on fintech is extremely diverse, so the terms above were limited to three streams of search in the section "Article title" to include only articles that were strictly related, focused on the topic, and did not address it in a peripheral way, as well as to obtain a

large enough sample size to conduct the analysis. This systematic literature review is most appropriate when there are not unusually few or many papers. Based on the findings of this inquiry, it was able to include: Business, Social sciences, Economics, Econometrics and finance, psychology, arts and humanities, decision sciences, environmental science, and multidisciplinary. Papers written in languages other than English were not accepted. The study's actual operating year 2022 was considered in favor of only considering papers from earlier and recent years when determining the time period. Finally, since they provide incredibly explicit citations and provide the greatest results, only articles and conference papers were included in the search. In Table 1, the complete specification is presented. VOS Viewer (Van Eck, 2010) and (Waltman, 2010) were used to analyze the subset of 1,172 papers that were published between 2001 and 2022 in order to find the main citation path emerging from the citation network as well as important concepts and trends. The essential data of the entire subset of publications was then assessed in order to provide some overarching findings. This involves looking at the development of the literature through time and space, the main subject areas, the top 10 most cited works, and the most prominent authors and journals. It is possible to explain this pattern as follows: The discipline first evolved gradually because the topic was unique; nevertheless, as the topic gained popularity and different research tendencies formed, referencing articles and literature reviews started to appear. In order to both identify the key ideas provided in each work and, more significantly, to understand how the field has changed over time, the most pertinent papers were analyzed based on the prior research. The key findings, which are the result of a quantitative study and weren't selected by the authors based on a discretionary criterion, are reported in the next section, which provides a panorama of the scientific literature on the topic of innovations in financial institutions. The authors have compiled a list of publications relating to the keywords innovations, banking, information technology, social sciences, decision-making, financial services and institutions, and economics from a reservoir of academic databases like Scopus. 1,172 papers were retrieved from this pool, and 60% of these 1,172 papers were ultimately selected, with a higher keywords repetition more than 20 being put in.

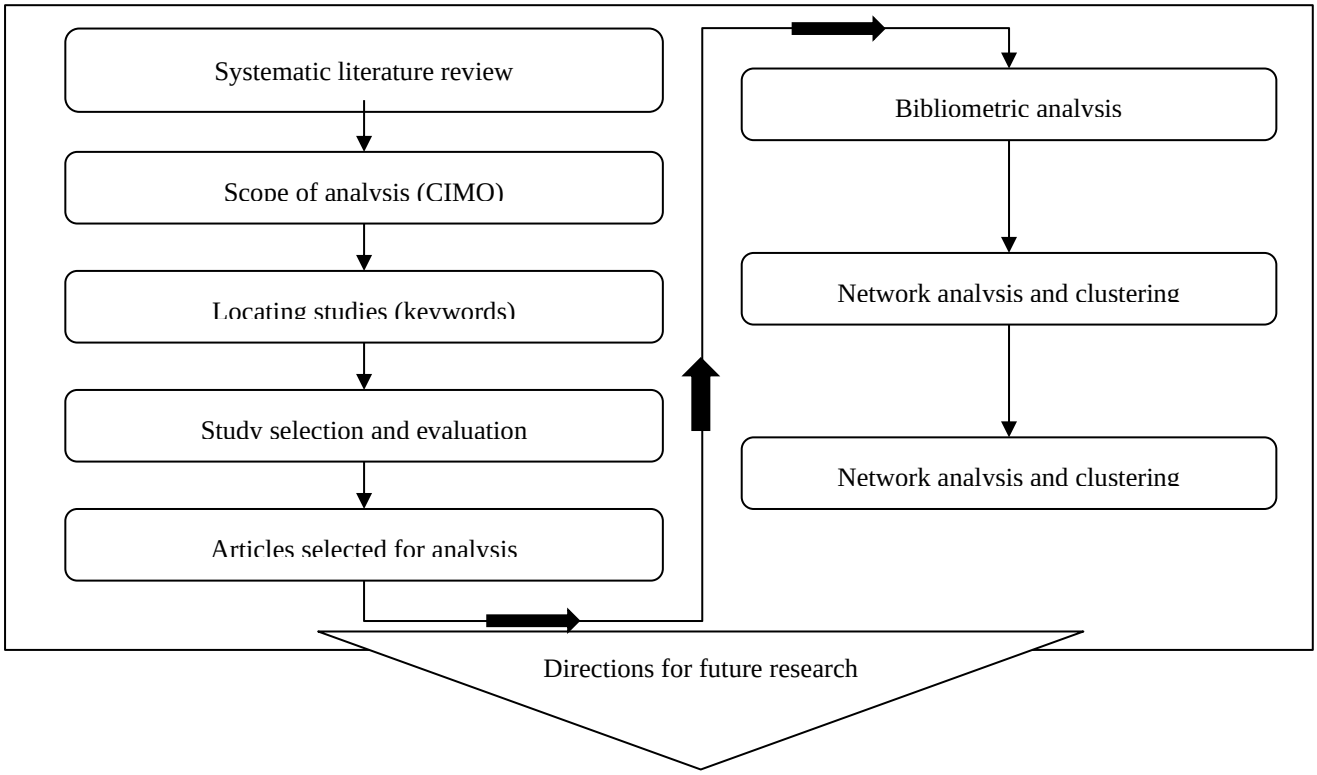

Fig. 1 *Flow of the research*

Data Analysis

The co-occurrence network was utilized as the basis for this research, which concentrated on the authors' keywords. Co-occurrence analysis makes the assumption that the article keywords selected by different writers adequately describe the content or the connection that the paper develops between the topics under investigation (Strozzi, 2017). The analysis's goal was to frame how the research trends evolved over time: if numerous co-occurrences can be found around a term, this is probably indicative of a certain study pattern for the subject. In order to ensure cluster uniformity in terms of content and dimension, an occurrence threshold of 10 was chosen. As seen in Fig. 2, a collection of the top 17 relevant keywords was gathered and separated into three groups. The network's nodes are the 181 publications' authors' keywords, and the connection weights are the number of times each term appears in the papers. While the dimension of the node represents the total link strength, three colors—red, blue, and green—distinguish the terms in one cluster from those in other clusters. The keyword clusters are investigated in the part after this in order to discuss the most pertinent research trends in the literature. In order to address the most popular keywords in the literature and identify research paths within each cluster, the issues below have been examined using the results of a quantitative analysis.

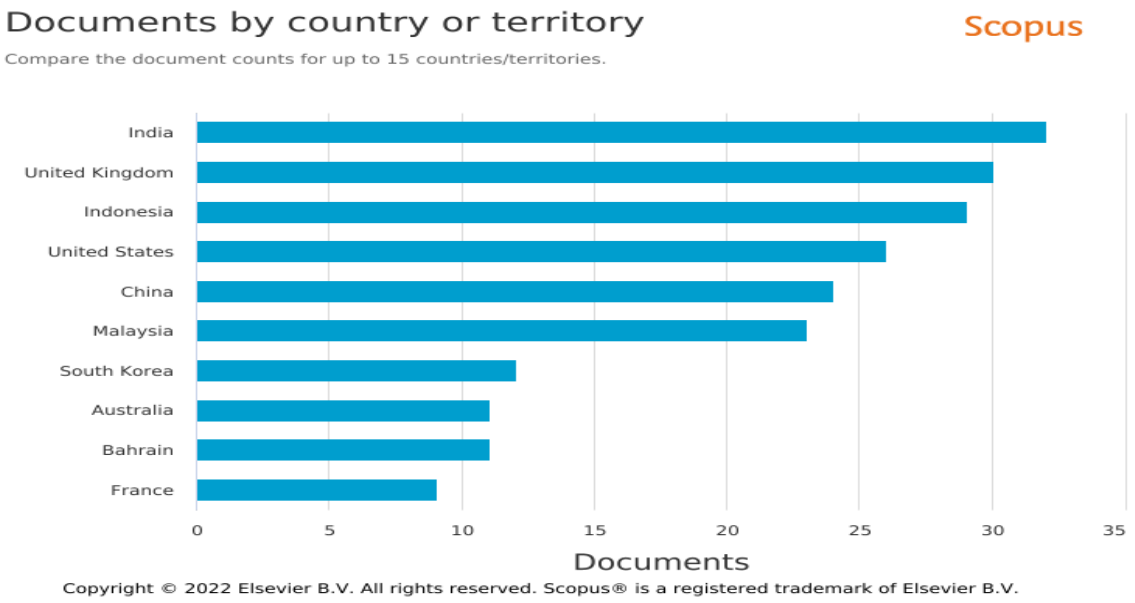

Fig. 2 *Documents by country*

Table 1: *Documents By Country And Citations*

COUNTRIES	DOCUMENTS	CITATIONS
INDIA	119	1274
UNITED STATES	98	2767
UNITED KINGDOM	75	1738
INDONESIA	65	353
CHINA	62	840
MALAYSIA	52	267
GERMANY	31	495
ITALY	31	744
SPAIN	29	541

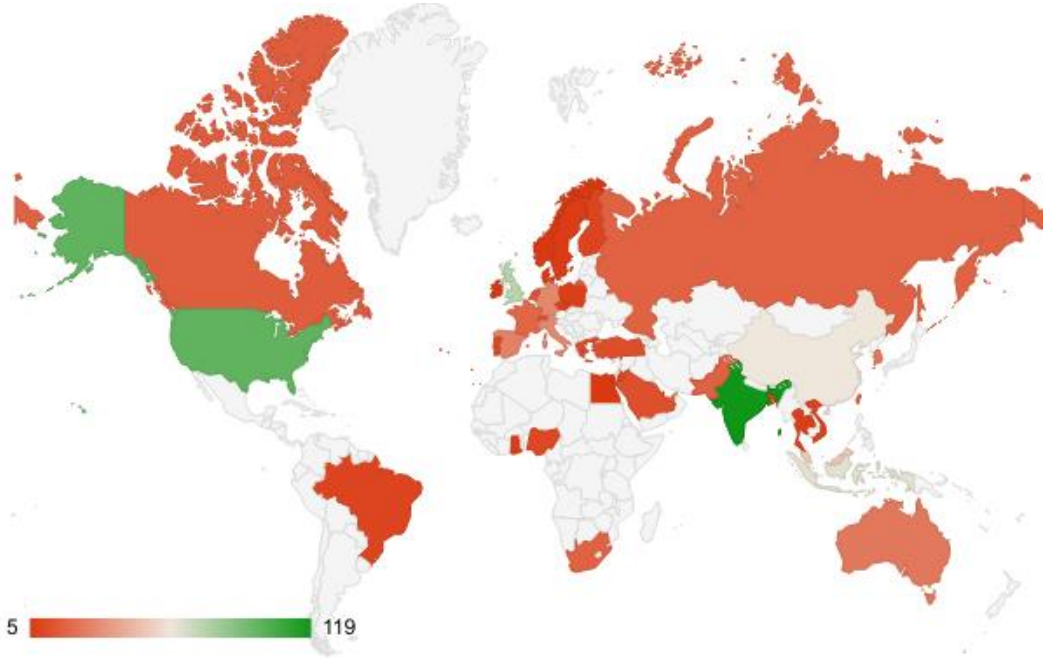

Fig. 3 *Documents by countries*
Source: *Analysis done by the author using VOSviewer software (v1.6.18; Nees Jan van Eck and Ludo Waltman) and Scopus (https://www.scopus.com).*

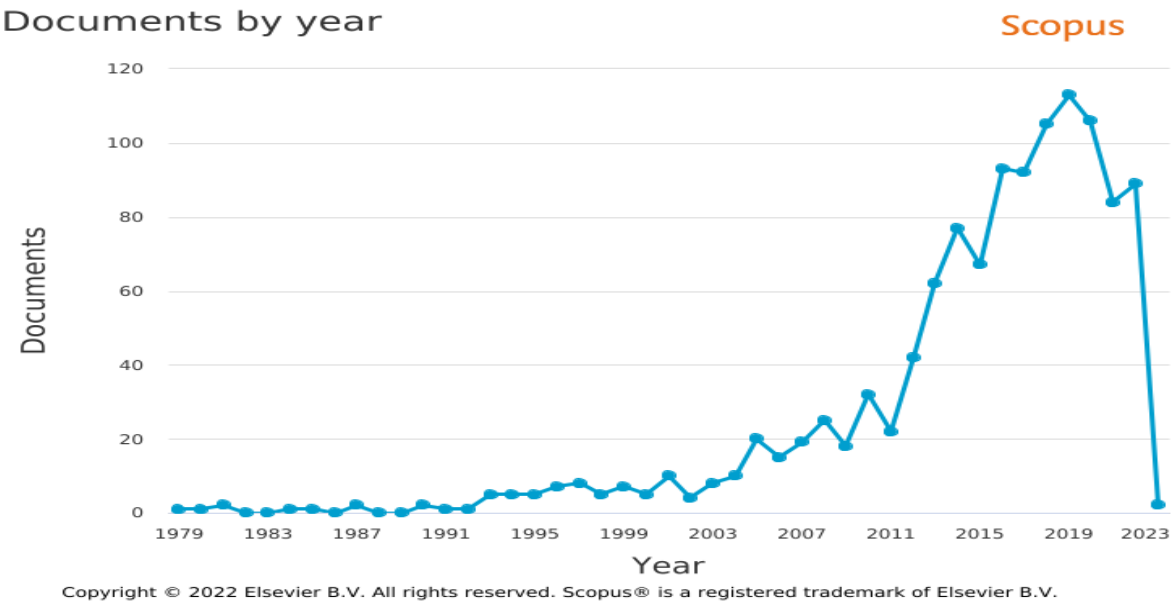

Fig. 4 *Documents by year*
Source: Scopus (https://www.scopus.com).

As seen in Fig. 3, a collection of the top 17 relevant keywords was gathered and separated into three groups. The network's nodes are the 1,172 publications' authors' keywords, and the connection weights are the number of times each term appears in the papers. While the dimension of the node represents the total link strength, three colors—red, blue, and green—distinguish the terms in one cluster from those in other clusters. The keyword clusters are investigated in the part after this in order to discuss the most pertinent research trends in the literature. In order to address the most popular keywords in the literature and identify research paths within each cluster, the issues below have been examined using the results of a quantitative analysis.

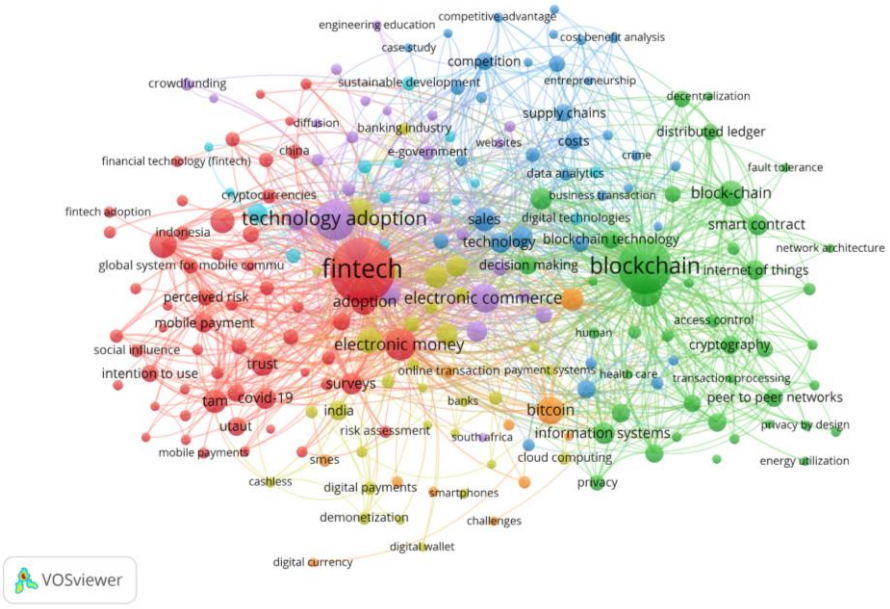

Fig. 5 *Co-occurrence author keywords network*
Source: *Analysis done by the author using VOSviewer software (v1.6.18; Nees Jan van Eck and Ludo Waltman) and Scopus (https://www.scopus.com).*

The advances in financial institutions have been examined in a number of empirical research. In addition, several antecedents and mediating and regulating processes have been studied. They also discovered that innovations result in improved client services. Additionally, the majority of these studies were carried out in the public and private sectors, both of which have demonstrated tremendous success in fostering a variety of advantageous organizational and financial outcomes.

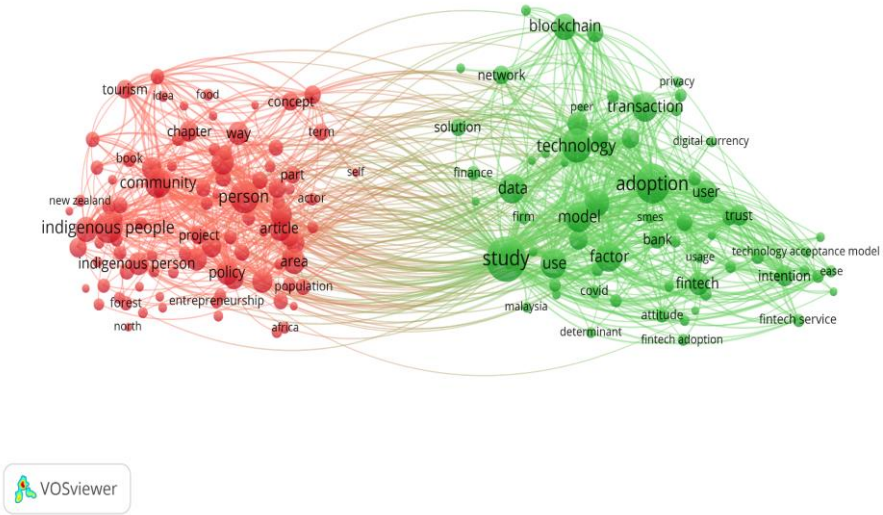

Fig. 6 *Co-occurrence author keywords network*
Source: *Analysis done by the author using VOSviewer software (v1.6.18; Nees Jan van Eck and Ludo Waltman) and Scopus (https://www.scopus.com).*

Regarding the academic researchers who made a significant contribution to the study on adoption of fintech and digital transactions (Fig. 7), some of them are based in countries like India, USA & UK are the three top contributors where these topics are being extensively researched.

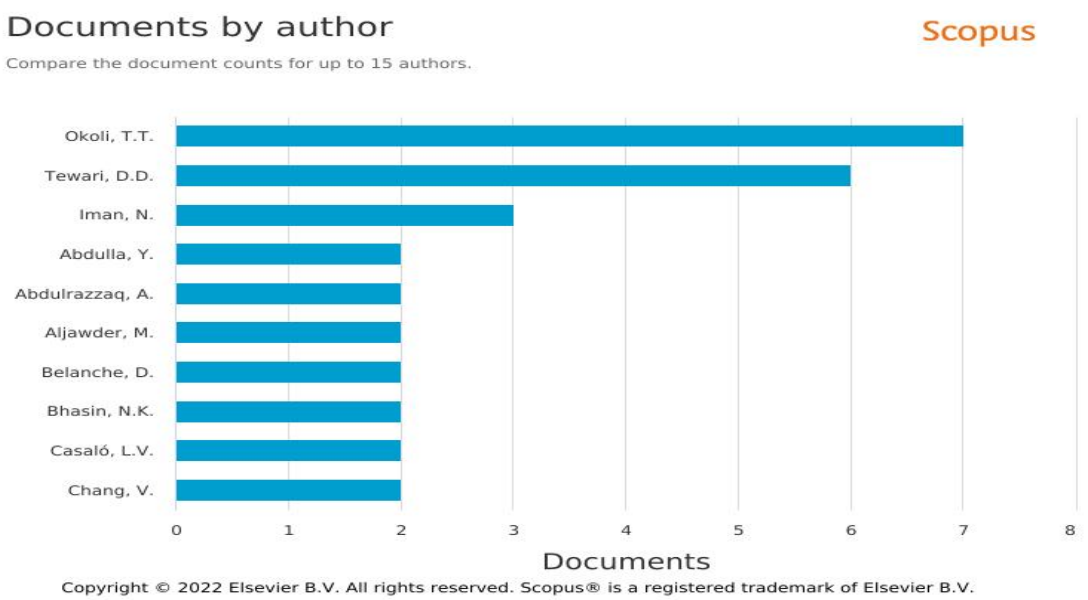

Fig.7 *Documents by author*
Source: Scopus (https://www.scopus.com).

Analysis and Findings

A rationalization of the research-related content produced in the domain of fintech and digital transaction adoption is attempted in this study. The limitations of the study were primarily due to the methodology used. It starts off with a review of the literature based on a citation network analysis, which may not accurately reflect a paper's qualitative contribution to the body of knowledge, especially given that VOSviewer only shows a piece of the full subset. Citations may also be biased since academics usually pick the most relevant literary works to mention owing to their reputation and popularity. The current study's objective is to demonstrate the topic's evolutionary course rather than delve thoroughly into any specific publications, thus these limitations can be solved. Thanks to the expanding number of empirical studies on digital transaction and fintech that we have investigated for the analysis's aims, we have been able to identify specific consolidated research streams and portions of the literature that demand further study. First of all, there is proof that digital transactions and fintech can encourage favorable outcomes through a range of mediating and moderating mechanisms with a range of antecedents.

For indigenous people, tourism is an important source of income. People leave their comfort zones and adopt fintech because of the necessity of this platform, which causes them to adapt to digital transactions. According to the analysis, India has produced a significant amount of literature in the fields of digital transactions and fintech adoption. The cluster of keywords we can see includes demonetization, which suggests that demonetization may have had a significant impact on the growth in publications. The government of India has also launched numerous digital India campaigns, which may have contributed to the availability of literature in these fields.

Conclusion

The State Bank of India introduced this mobile wallet programme. Thirteen languages are offered for this wallet. You just need one, as shown by the phrase YONO. Users may access numerous financial services and other services with the use of this app. It serves as a digital

banking platform and provides a range of services, including the ability to pay for purchases made online and reserve tickets (trains, buses, taxis, flights). But the limitation which was observed by the authors about the linguistic challenge is that there are very non indigenous languages which have been neither offered by SBI YONO nor by any private payment bank. There needs to be an inclusion of language to increase fintech footprints and for this first and foremost infrastructure relating to network, smartphones and electricity is a must without them digital payment is a castle in the air.

Tourism is a major source of income for indigenous people. They adapt to digital transactions because of the need for this platform so money here is a motivation, individuals displace themselves from their comfort zone and adapt to fintech. From the analysis it is found that India has substantial publications in the field of digital transactions and fintech adoption, from the cluster of keywords we can observe there is demonetization which indicates that demonetization could be a major factor for the increasing number of publications, as Govt. of India introduces many digital India campaigns which also could be another factor for the availability of literature in these areas.

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