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BIBLIOMETRIC ANALYSIS OF BUSINESS MANAGEMENT RESEARCH TRENDS ON SOCIAL MEDIA ADOPTION USING SCOPUS DATABASE

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ABSTRACT

The industrial revolution 4.0 is changing many sectors everyday operations. IR 4.0 has impacted the business landscape and how business operations are managed. Businesses are now having expanded their business operation from brick-and-mortar to digital platforms. During the COVID-19 pandemic, many businesses could sustain their business due to the functionality of digital platforms like social media. Social media no longer functions as a social site solely but also facilitates business needs, especially to engage with the audience and promote their products and services. Therefore, to understand the trend of business management research interest in social media adoption, a bibliometric analysis is conducted to evaluate the research trends in social media adoption based on publication, co-occurrences, and co-authorship of the authors and affiliated countries and author keywords. Using the Scopus database, 558 publications were retrieved from 2017 to 2021 in business management. The result shows a steady increase in research trends in 2019, 2020 and 2021. Researchers from the USA, UK and China contribute active publications. The result of this paper will be beneficial to scholars for enhancing research in social media adoption in the field of business management as well as shifting the business landscape to the acceptance of digital platforms.

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1 Introduction

In recent years, social media has function more than just as a platform for socializing, and many sectors have widely used social media to achieve the desired objectives. Business is one of the sectors that actively utilise social media to assist business operations, especially in engaging with customers and increasing sales (Bocconcelli et al., 2017). The recent COVID-19 pandemic has become the forcing factor for businesses to seek alternatives for their business sustainability. During a pandemic, many businesses, especially micro-enterprises, have adopted social media as their alternative to keep their business running as social media does promote sales growth (Ahmad et al., 2019). Small, and medium enterprises (SMEs) are the most vulnerable sector during the pandemic, and entrepreneurs struggle to find ways for business sustainability (Winarsih et al., 2021). Social media adoption functions as an important tool for businesses during a pandemic. Many businesses are struggling during a pandemic, and social media helps these businesses to do advertising at a reasonable cost (Ainin et al., 2015; Parveen et al., 2016; AlSharji et al., 2018) and act as a medium for communication with their existing customers and prospect customers. Using a digital platform like social media, e-commerce, video conferencing, and other IT applications is the best solution for many industries to keep their operations relevant to the market during the infectious disease outbreak (Kodama, 2020).

Although the rising interest in social media adoption study is quite significant, most of the studies are focusing on social media adoption in the area of information technology, communication and education as compared to the business management field study, and the exploration in this area is still unexploited (Paniagua and Sapena, 2014). Furthermore, most studies focus on e-commerce applications rather than social media in the business management field. Hence, government-linked agencies like Malaysia Digital Economy Corporation (MDEC), Majlis Amanah Rakyat (MARA), Multimedia Super Corridor (MSC) and Institut Keusahawanan Negara (INSKEN) are responsible for facilitating these entrepreneurs with adequate training, infrastructure and financial aids. This study addresses issues related to online business owners, especially micro-entrepreneurs. The findings from this study can deliver an important message to the policy maker and the related agencies to enhance the initiatives towards becoming the digital hub.

Therefore, in this bibliometric analysis paper, the researcher aims: (i) to analyze the research pattern of social media adoption journal articles from the business management perspective; (ii) to show the most prolific authors and leading countries; (iii) to highlight the most used search keywords related to the social media adoption; and (iv) to provide the potential research direction. The outcome of this paper will be useful for understanding the research trends in social media adoption and suggestion for future research.

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2 Methods

A bibliometric analysis study attempts to quantitatively assess the academic quality of journals or authors by statistical methods such as citation rates. Citation analysis is a commonly used bibliometric method based on constructing the citation graph, a network or graph representation of the citations between documents (Khudzari et al., 2018). Many research fields use bibliometric methods to explore the impact of their field, the impact of a set of researchers, the impact of a particular paper, or to identify particularly impactful papers within a specific field of research (Eck and Waltman, 2014; Wang et al., 2015).

2.1 Data Source and Search Strategy

Data mining was conducted from 14th November to 1st December 2021 using the Scopus database. The focus topic of this study was research articles containing "social media" or "social network" and adoption in the title and abstract. From the result, the oldest publications were in 1980, and the most recent publications were in 2022. The search string used in this study was: TITLE-ABS (("social media" OR "social network") AND (adoption)). From this search string, there are 4805 documents found. To ensure the publication related to the search string was among the publications in recent 5 years, the additional limitation was included and resulted in 2604 documents found for publication from 2017 to 2021. This result includes publications from all study fields, and the most published publications are in computer science, with 1078 publications and social science, with 849 publications. This study aims to study the research patterns of social media adoption from the business management perspective. Therefore, another limitation was included to only consider the publications in the area of business management, which resulted in 558 documents. The flowchart of data gathering process is shown below:

2.2 Bibliometric Maps

Citation, bibliographical and author keywords information of 4805 documents were exported to VOS viewer. VOS viewer is a software tool for constructing and visualizing bibliometric networks and maps. In this study, the subjects of interest are author keywords and countries. The data then analyze based on the occurrences and the link strength, where the higher the link shows, the higher the link strength.

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In this study, co-authorship and co-occurrence were run to see the strength of each. In the co-authorship analysis, the link strength is the total link strength for each country based on the publications and the affiliated countries. Meanwhile,

2.2.1 Analysis of co-authorship

The co-authorship analysis involved 90 countries that are reported to contribute to social media adoption from a business management perspective with 159 affiliated authors. The countries were clustered into the continent respectively; (i) America, (ii) Africa, (iii) Asia, (iv) Europe and (v) Oceania.

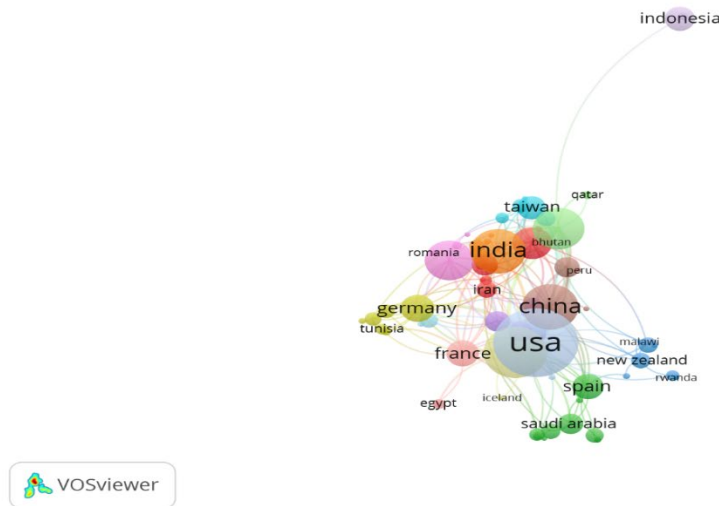


Figure 1 : Leading countries (2017-2021)

2.2.2 Analysis of co-occurrence

In this analysis, there are 1000 keywords from 558 articles identified. The keywords contain synonymic single words, and congeneric phrases were analyzed. For example, small and medium enterprises and SMEs were labelled as SMEs. In the VOS viewer, the minimum occurrences of keywords to be analyzed was set to 5.

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3 Result and discussion

3.1 Publication Output and Growth of Research Interest

In 42 years, 4805 documents were published related to the trends in social media adoption. The oldest publication was published in 1980, and the average publications were relatively low before 1990. However, there is an active publication and high growth rate (54.19%) in social media adoption research topic interest between 2017 and 2021. There are 2604 publications recorded about social media adoption. The research trend on social media adoption started to spike in 2015 (399 articles,) and the publications show a drastic increase in 2020 (569 articles) and 2021 (651 articles). Among the publications from 1980 to 2022, social media adoption has become the most discussed topic in computer science (2252 articles). Indeed, social media adoption is a multidisciplinary area of research. The research interest also increased in the social sciences (1538 articles), business management and accounting (961 articles) and the remaining are from various areas like engineering, medicine, arts and humanities, mathematics and others.

3.2 Leading Countries

From the 4805 documents published from 1980 to 2022, the highest number of published articles is United States of America (USA), with 1456 articles recorded. Followed by the United Kingdom (UK) with 471 articles and China with 355 articles. Throughout 42 years, Malaysia is still the leading country in Southern East Asia on social media adoption in business, management and accounting fields with 132 publications. After screening the data with year and field limitation, among the 558 publications on the business, management and accounting field from 2017 to 2021, the USA recorded the most active publication with 104 publications, followed by the United Kingdom with 65 publications and China with 51 publications. In South East Asia, Malaysia recorded the highest number of publications with 29 publications, followed by Indonesia's 18 and Thailand's 10 publications. Figure X below shows the top 15 countries with the highest publications in business management trends on social media adoption using the Scopus database from 2017 to 2021.

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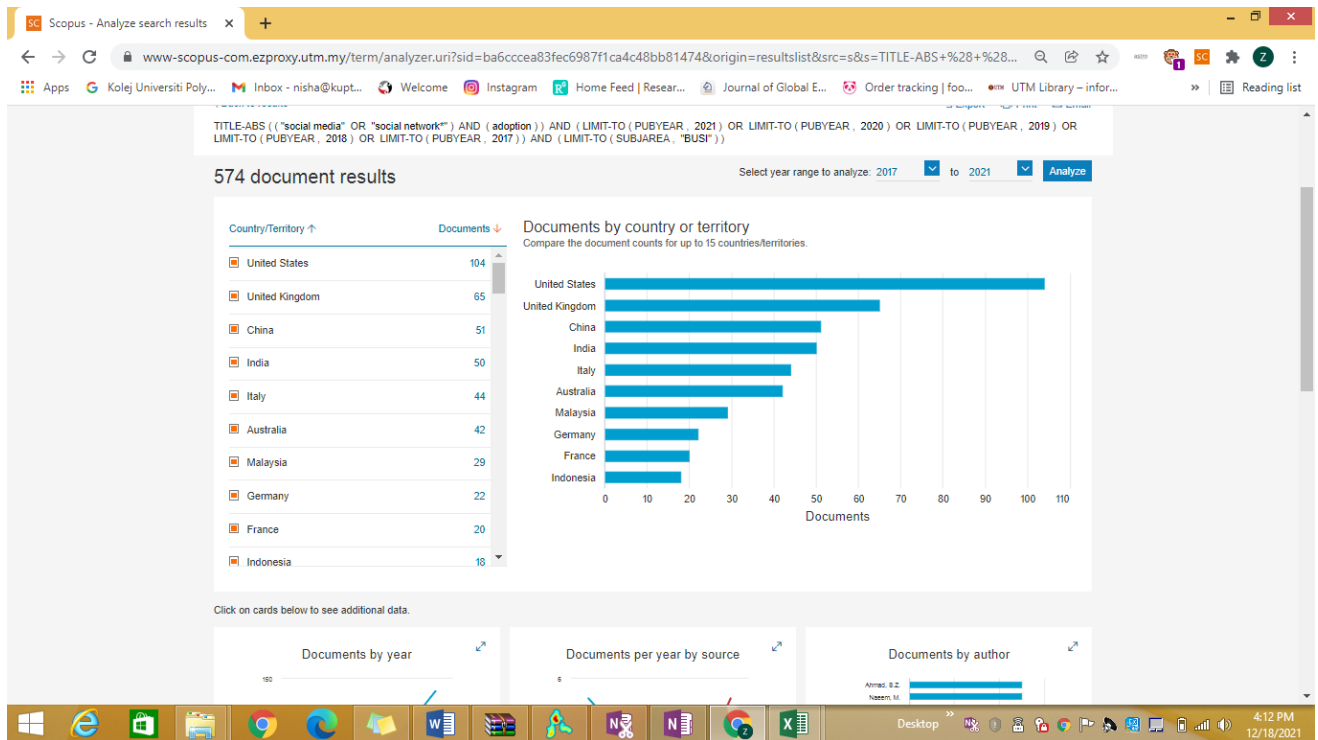


Figure 2: Leading countries (2017-2021)

3.3 Leading Authors

The leading author for the period from 1980 to 2022 is Dwivedi, Y.K from the UK, with 13 publications, 72 hi-index and 17077 times citations. Dwivedi, Y.K. is affiliated with Swansea University, Swansea, United Kingdom. The second author for the same duration is Valente, Thomas William from the USA with 10 publications, 51 h-index and 10964 times citations. Valente, T.W. is affiliated with the University of Southern California, Los Angeles, United States. The third leading author is Kar, Arpan Kumar from India, with nine publications, 28 h-index and 2730 citations. Kar, Arpan Kumar is affiliated with the Indian Institute of Technology Delhi, New Delhi, India.

After considering the limitation of the year from 2017 to 2021 and the field area of business, management and accounting, the leading author for the period is Ahmad, Syed Zamberi, with five publications, 17 h-index and 1024 times citations. Ahmad, S.Z is currently affiliated to Abu Dhabi University, Abu Dhabi, United Arab Emirates. Followed by Naeem, Muhammad from UK with five publications, eight h-index and 190 times citations. Naeem, M is currently affiliated to University of Gloucestershire, Cheltenham, United Kingdom. The third leading author is Abu Bakar, Abdul Rahim

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from Saudi Arabia, with three publications, eight h-index and 309 times citations. Abu Bakar, A. R is affiliated with Prince Sultan University, Riyadh, Saudi Arabia.

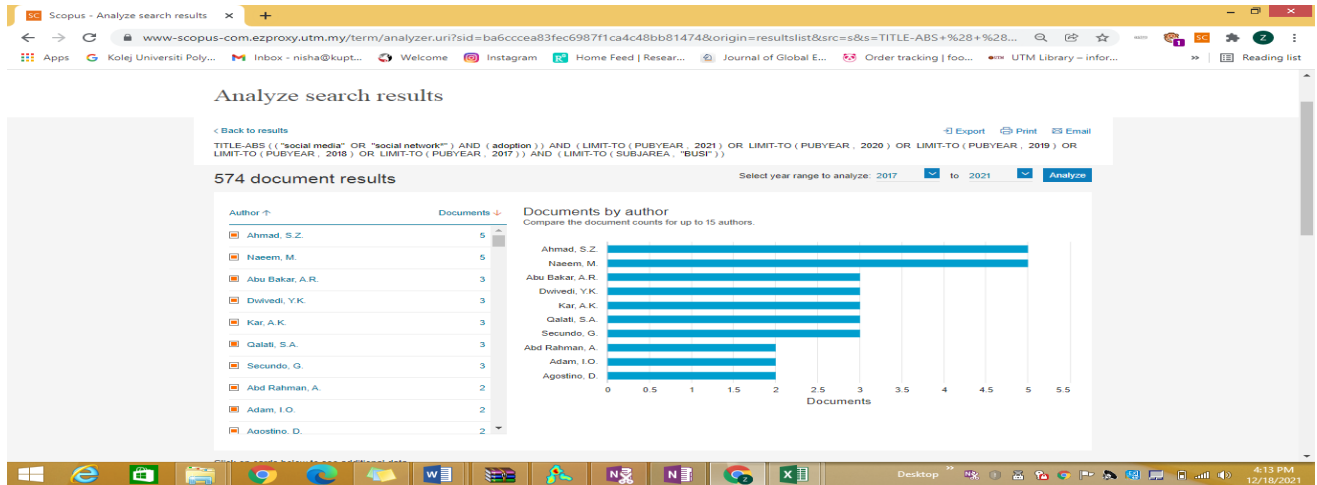


Figure 3: Leading authors (2017-2021)

3.4 Author Keywords

This study, 1000 author keywords were recorded with a total of 4664 link strengths. 70% of the total keywords were used once, and the remaining were used more than once.

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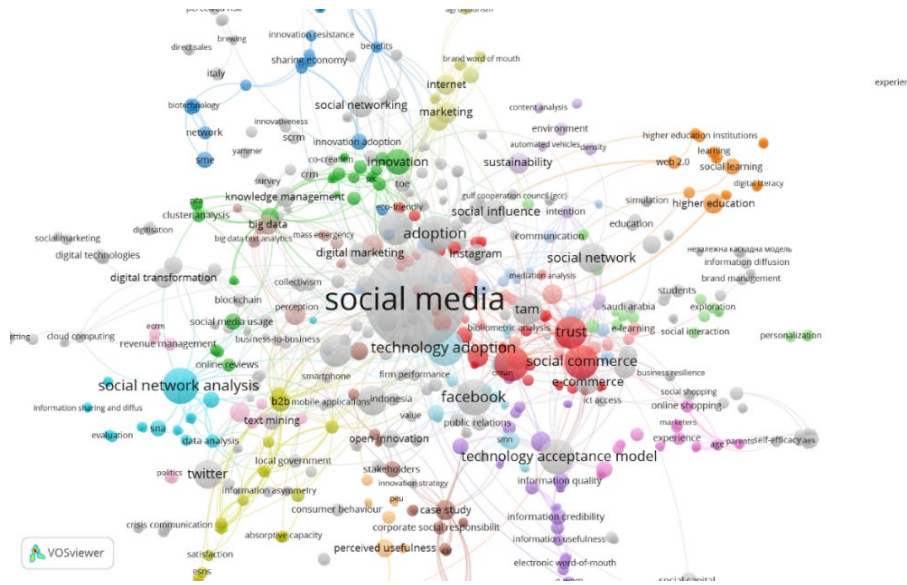


Figure 4: Author keywords

3.4.1 Terminology and concept

The result showed that (i) ‘social media was the most frequent keyword used, with 148 occurrences and 394 links to the keywords. Other terms commonly used in the topic were (ii) ‘social network analysis’ with 19 occurrences and 54 links to the keywords, (iii) ‘social commerce’ with 17 occurrences and 50 links and (iv) ‘social networks’ with 18 occurrences and 58 links. Social media also seen co-occurred with (i) ‘technology acceptance model’ (18 occurrences, 54 links), (ii) ‘technology adoption’ (20 occurrences, 58 links), (iii) ‘Facebook’ (19 occurrences, 69 links) and (iv) ‘social networking’ (17 occurrences, 50 links).

Furthermore, there are also a few keywords that associate with social media. For example, SMEs (17 occurrences, 54 links), social media marketing (16 occurrences, 34 links), innovation (10 occurrences, 44 links), digital marketing (8 occurrences, 22 links), B2B (6 occurrences, 32 links), and purchase intention (6 occurrences, 18 links). It is interesting to notice that ‘trust’ appears with the high links, 69 links and 16 occurrences. This shows that trust plays an important role in the social media adoption study. Trust was associated to social networks and linked directly to social media keywords.

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3.4.2 Topics of interest

The trend of technology adoption is rising. Research interest in technology adoption is consistent with 20 times repeated and total link strength of 72. This includes the study of social media adoption in any discipline, namely computer science, social sciences, education, business management, engineering and others. In this study, social media keywords were solely dominant with 148 times repeated and adoption repeated 19 times. A few areas of study have been linked to social media and adoption. SMEs repeated 17 times with total link strength of 71, TAM repeated 14 times with a 66-link strength, and social networks repeated 18 times with a 65-link strength. These keywords have been associated with business performance with five occurrences and 28 link strengths. Research interest in technology adoption and social media on business performance is relatively still low even though there is a huge opportunity to explore the influence of technology on business performance. From the analysis, big data also shows great potential for research interest in the future. Big data holds 6 occurrences with 21 link strengths. The big data research interest is associated with social media analytics, big data text analytics and business analytics.

4 Discussion

From the analysis above, most of the published articles are concerned with the Theory of Acceptance Model instead of other relevant technology adoption theories (TAM repeated 14 times with 66 link strength). TAM is the pioneer in technology adoption studies, which makes it a well-known theory among researchers. TAM comprises several dimensions, namely perceived usefulness and perceived ease of use. However, the TAM theory, which was developed in 1984 by Davis, has undergone a series of theory evolution, for example, the Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT model is recommended use because UTAUT constructs were developed through a review and consolidation of eight different models (Viswanth Venkatesh, Michael G. Morris, Gordon B. Davis, 2003; Venkatesh et al., 2016) namely (1) Theory of Reasoned Action (TRA) developed by Ajzen and Fishbein in 1975, (2) Technology Acceptance Model (TAM) was developed by Davis in 1986, (3) Motivational Model (MM) developed by Davis, Bagozzi and Warshaw in 1992, (4) Theory of Planned Behavior (TPB) was developed by Ajzen in 1985, (5) Combined of Technology Acceptance Model and Theory of Planned Behavior (C – TAM – TPB) developed by Taylor and Todd in 1995, (6) Model of PC Utilization was developed by Thompson, Higgins and Howell in 1991, (7) Innovation Diffusion

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Theory (IDT) was developed by Rogers in 1995 and (8) Social Cognitive Theory (SCT) which developed by Bandura in 1986. Therefore, UTAUT theory is perceived to be more dynamic than TAM. The outcome from studies that use UTAUT theory is expected to be more generalised and robust in technology adoption.

Articles related to the SMEs studies have more occurrence than articles about the micro-enterprises' studies (SMEs shows 17 occurrences, 54 links). Most of the researchers show less interest in studying the micro-enterprises area despite active business activity & use of social media in this sector. Attention should be given to micro-enterprises as they are the major contributor to the country's economy (Abdul Halim et al., 2015; Ahmad et al., 2017). For example, in Malaysia, according to National Economy Statistical 2016, there are 920,624 business entities registered, and 693,670 registered entities are micro-enterprises. Furthermore, micro-enterprises should be studied separately from small and medium size enterprises because of the huge gap in annual sales turnover (based on the definition of micro, small and medium-sized enterprises by SSM). Micro-enterprises face more challenges compared to other establishments. Micro-enterprises usually will have common hurdles, especially during a pandemic, like difficulties in securing financial support, lack of knowledge and limited access to the latest technology, especially with digital business platforms (Fabeil et al., 2020; Rafliis et al., 2020).

Despite Malaysia ranking 7th among the top 10 countries, no prominent author from Malaysia universities is listed in the top 10 prominent authors of this topic of interest. This shows that Malaysian researchers are still left behind in studying social media and technology adoption. Malaysian researchers need to pay attention to this area and become experts to support the Malaysian government's aim to be a digital hub in the southeast region.

Therefore, with the above discussion, future research should explore social media adoption among micro-enterprises using the UTAUT theory. Attention should be given to business management as from the 4805 articles, there are only 558 documents found after limiting the publication subject area to "Business, Management and Accounting between years 2017 to 2022". In recent years, we have seen an up-scoring trend among businesses adopting the digital business platform to manage their business. The trend became obvious when the COVID-19 pandemic hit the world and forced everyone to engage through digital platforms, including business sectors. Further study is needed to examine how the adoption of social media has impacted their overall business performance.

5. Limitation of the study

By limiting the search of ((“social media” OR “social network”) and (adoption)) within title and abstracts, the search result shown in Scopus might not fully examine the other social media-related studies available in Scopus. There might be that some researchers are referring the social media with

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other terms like social networking, social site, social commerce, digital media and others. Restricting the search to the latest five years also may limit the result from the older research papers that may be the potential to discover the underlying research interest. Future research should consider including the older year-published articles and comparing the result from different databases like the Web of Sciences and Dimensions for better results and to address what is still lacking in the Scopus database.

6. Conclusion

This study shows an overview of business management research trends on social media adoption based on the 4805 publications in the Scopus database. Publication in the same area has drastically increased in the recent two years. The increasing trend resulted from businesses seeking alternatives to sustain their business during the challenging COVID-19 pandemic. With the current situation where business activities require high involvement of digital business application, the expected findings from this study is significantly beneficial for academics, entrepreneurs and policy maker.

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