

A Systematic Review on Urban Farming Food Business in Indonesia

SYARIFUDDIN SYARIFUDDIN¹, MAHIR PRADANA¹, PABLO FARÍAS²,
HANIFAH PUTRI ELISA¹, ADRIANZA PUTRA³

¹Department of Business Administration,
Telkom University,
Jalan Terusan Buah Batu, Bandung 40257,
INDONESIA

²Department of Business Administration
Universidad de Chile,
Av. Libertador Bernardo O'Higgins,
Santiago, 8330111,
CHILE

³Department of Management,
Universitas Andi Djemma,
Palopo,
INDONESIA

Abstract: - The purpose of this study is to chart the evolution of research papers over 24 years, as well as the trajectory of Indonesia's urban agricultural research trends and the links between scientific concepts. Data for this study were collected between 2008 and 2022 using the quantitative approach known as bibliometric analysis. The Scopus database and the word "urban farming" were used to gather data. Publish or Perish was used to collect data as metadata. The data was bibliometrically analyzed using the Vosviewer program. The findings of this research reveal that the number of urban farming-related articles indexed by Scopus has fluctuated over the previous 10 years. The Scopus database has 169 publications about Indonesia. The expansion of keyword-based urban agriculture research establishes a connection between agribusiness and social entrepreneurship as scientific notions.

Key-Words: - urban farming; bibliometric analysis; meta-analysis; research mapping; agribusiness; Indonesia.

Received: June 18, 2023. Revised: November 29, 2023. Accepted: January 5, 2024. Published: February 22, 2024.

1 Introduction

According to the International Finance Corporation (2009), [1], entrepreneurs play a critical role in the world's economy, accounting for 95% of all firms and employing 60% of the workforce. Entrepreneurs have an even greater influence in developing countries such as Indonesia, where they are responsible for producing 99% of job possibilities, [2]. Entrepreneurs are viewed as possible answers to the nation's and state's economic problems, but there are several hurdles and difficulties to overcome, particularly with inadequate education and information resources, [3].

According to the Global Entrepreneurship Monitor (GEM), [4], entrepreneurship has become a prominent focus of public policy in many nations. With mankind confronting increasing social,

environmental, and economic issues, many individuals feel that corporations may play an important role in molding society's future, [5]. Entrepreneurs are seen to have a unique role in generating innovation and supporting societal change, mostly from a macroeconomic perspective. Entrepreneurship is described as the act of gathering resources and identifying chances for issue solutions and life enhancement through the use of creativity and invention, [3]. It entails taking the initiative to add value by integrating resources in creative and distinctive ways to grow enterprises and new concepts. The entrepreneurial process includes all functions, activities, and actions related to finding opportunities, forming a company organization, and effectively competing, [6]. Entrepreneurship and enterprise are at the heart of economic progress. While entrepreneurship may be detrimental to

economic progress in a controlled economy, it is the major driver of growth in an entrepreneurial economy, [7].

Entrepreneurship has the potential to motivate society to solve its problems. Jakarta, for example, lacks adequate land to meet its vegetable demands and must rely on imports from neighboring regions like as West Java, Banten, Lampung, and, on occasion, Central Java and East Java. Urban farming has the potential to improve people's lives, particularly among the younger generation, by meeting the need for vegetable food and offering chances for farmer entrepreneurship, [8].

Urban farming is becoming increasingly popular in Indonesia as a means of promoting sustainable living, improving food security, and reducing agriculture's environmental effects, [9]. Indonesia is quickly urbanizing, with more than half of the population residing in cities, resulting in a strong demand for fresh vegetables. Community gardens, rooftop gardens, and vertical farms are just a few examples. These forms of urban agriculture allow homeowners to cultivate their fruits and vegetables, generally organically, and sell or share their excess product with others in their neighborhood, [8].

The Indonesian city, of Jakarta, is the site of several urban agricultural projects. One such initiative is Kampung Segartiga, which grows vegetables in the city's poorer sections using vertical gardening. The Jakarta government also launched the Jakarta Gardening program, known as Jakarta Berkebun, which encourages residents to repurpose unused land into gardens and provides support and training to urban farmers, [10]. Indonesian urban farming offers advantages beyond advancing food security and ecological agriculture. These advantages include improving the quality of the air, lessening the influence of the urban heat island effect, and creating green spaces within cities, [11].

Although there has been a study on the issue of urban agricultural enterprises in Indonesia, to our knowledge, no studies have specifically evaluated and assessed the subject area of business in Indonesia using bibliometric and systematic analysis approaches, [12]. This study aims to close this gap by reviewing the body of literature on business in Indonesia, bibliometrically analyzing the literature to identify key contributors, journals, and keywords, and making recommendations for future research directions on different business in Indonesia research sub-fields. By mining/audit trails of extensive literature databases, bibliometric analysis aims to minimize research bias while conducting a systematic, repeatable, and transparent analysis of

research to inform present and future researchers about the trends and evolution of the field of study, [13]. The study's following section looks into pertinent literature to have a better grasp of many aspects of business in Indonesia as well as the research methods used.

2 Method

This study aims to perform a bibliometric analysis of Indonesia's contemporary business literature. The procedure looks for patterns and trends in published content using statistical analysis and quantitative analysis. This method can also be used to gain a broad understanding of a subject, spot knowledge gaps, and guide further research, [14]. SCOPUS databases are used in this study, together with Microsoft Excel for statistical analysis and bibliometric analysis with the network map-generating software VOSviewer.

Step 1

The initial stage in bibliometric analysis is to choose which approaches will be employed. In bibliometric investigations, two primary methodologies are frequently used, [14]: performance analysis and science mapping. Performance analysis is used to assess the contributions of multiple researchers to a certain subject, whereas science mapping is used to investigate the relationships between these publications.

Step 2

The keywords and criteria used to pick the papers are identified in this stage. Because SCOPUS is the largest bibliographical database, this study employs the terms 'business' and 'Indonesia' in its search. We did not limit the year of publication in this study. However, because we exclusively examine scientific papers and articles, the findings were modified by omitting conferences, book chapters, brief surveys, and magazine pieces. After deleting duplicate data, the findings lead to 169 relevant articles.

Step 3

Data were analyzed using Microsoft Excel for performance analysis and VOSviewer for scientific mapping.

Step 4

The results are analyzed by reviewing the pattern of growth in business in Indonesia research and an overview of business in Indonesia research topics seen since 1998, as shown in Figure 1. Gaps in business in Indonesian research are identified and presented.

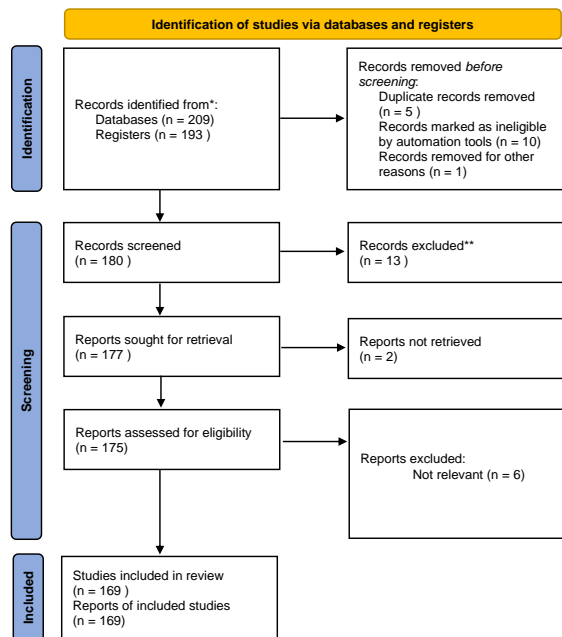


Fig. 1: PRISMA Phases of Literature Review

Figure 1: PRISMA Phases of Literature Review (Page et al., 2021)

3 Results and Discussion

This study looks at 169 articles about business in Indonesia. With 31 publications, 2020 saw the most business research in Indonesia. There was just one business publication in Indonesia in 1998, and the number of publications increased significantly between 2015 and 2020. However, by 2022, the number of publications had severely fallen, with only four periodicals linked to business in Indonesia.

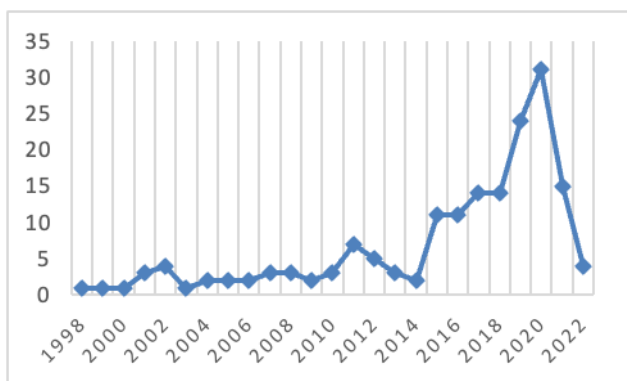


Fig. 2: Evolution of the number of articles

Source: Processed by Researchers, 2023

Figure 2 depicts the varying amounts of articles. The year 2020 had the highest number of published articles, with 31 pieces regarding business in Indonesia. Because 2023 will not be completed until December 2023, our data is still temporary, and it is

still possible to add to the collection of articles in this study.

Table 1 demonstrates that the first publication in this field emerged in 1998, with a variable growth in the number of publications since then. The year 2001 received the most citations, with 990. The table also includes information on research that garnered 500, 100, 50, 10, 1, and 0 citations.

Table 1. Annual citation structure of publications

Year	>500	>100	>50	>10	>1	0	Paper	Citations
1998				1			1	19
1999				1			1	19
2000			1				1	56
2001	1			2			3	990
2002				2	2		4	58
2003				1			1	14
2004				1	1		2	22
2005			1		1		2	60
2006				2			2	43
2007				3			3	83
2008				3			3	123
2009					2		2	18
2010			1	2			3	126
2011			2	4	1		7	197
2012				3	2		5	74
2013		2			1		3	325
2014			2				2	120
2015		1	1	7	2		11	422
2016				10	1		11	209
2017				9	5		14	225
2018				13	1		14	231
2019				20	4		24	354
2020		1		21	9		31	538
2021			1	11	3		15	260
2022				3		1	4	34
Total	1	4	9	119	35	1	169	4620

Abbreviations: >500, >100, >50, >10, >1, 0= Number of papers with more than 500, 100, 50, 10, 1 and 0 citations.

Source: Processed by Researchers, 2023

Table 2 shows the 10 journals with the most papers on the gathering of consumer personal data from social networks. The Journal of Asian Finance, Economics, and Business publishes the most articles on this topic. Sustainability Journal, on the other hand, has the second-highest number of articles published in this area. The Strategic Management Journal has the greatest proportion of citations per article each year in this category, with 42 citations per year.

Table 2. Top 10 journals

	Journal	>2017	2018	2019	2020	2021	2022	TP
1	Journal of Asian Finance, Economics and Business			1	3	1		5
2	Sustainability (Switzerland)			1		4		5
3	International Journal of Technology	2		1	1			4
4	Journal of Open Innovation: Technology, Market, and Complexity				2	1	1	4
5	Journal of Asia Business Studies	3						3
6	Heliyon				2	1		3
7	Quality - Access to Success		2	1				3
8	Journal of Business Ethics	2						2
9	International Journal of Emerging Markets			1	1			2
10	Journal of Distribution Science			2				2

This research is intended to discover which articles have the most influence on Indonesian business. Table 3 contains further information on the top ten citations on the topic of business in Indonesia.

Table 3 displays the top ten most referenced papers from the time they were published to the time this paper was written. Table 3 shows the paper with the most citations, "Estimating the performance effects of business groups in emerging markets", [15] and had a total of 929 citations. The goal of this study is to look at how business group affiliation impacts company profitability in 14 emerging nations and how it influences the general patterns of economic performance in these markets. The study investigates theories concerning the impact of group affiliation on business profitability and aims to ascertain if membership in a group enhances the average group member's profitability in these emerging economies. The analysis also contradicts the popular understanding that unrelated diversity reduces profitability and provides fresh insights into the causes of long-term disparities in profitability across institutional contexts. It was published in the Strategic Management Journal Volume 22.

Table 3. The 10 most cited documents

	TC	Title	First Author	Journal	Year	C/Y
1	929	Estimating the performance effects of business groups in emerging markets	T. Khanna	Strategic Management Journal	2001	42.23
2	199	Asian business systems: Institutional comparison, clusters and implications for varieties of capitalism and business systems theory	M. Witt	Socio-Economic Review	2013	19.90
3	183	Business resilience in times of growth and crisis	H. Dahles	Annals of Tourism Research	2015	22.88
4	144	Identifying digital transformation paths in the business model of smes during the COVID-19 pandemic	A. Priyono	Journal of Open Innovation: Technology, Market, and Complexity	2020	48.00
5	118	Impact of lean practices on operations performance and business performance: Some evidence from Indonesian manufacturing companies	G. Nawwir	Journal of Manufacturing Technology Management	2013	11.80
6	86	Innovation, cooperation, and business performance: Some evidence from Indonesian small food processing cluster	M. Najib	Journal of Agribusiness in Developing and Emerging Economies	2011	7.17
7	80	Development for whom? Social justice and the business of ecotourism	M. Schellhorn	Journal of Sustainable Tourism	2010	6.15
8	70	A qualitative study of business-to-business electronic commerce adoption within the Indonesian grocery industry: A multi-theory perspective	S. Kurnia	Information and Management	2015	8.75
9	67	Tourism and water: from stakeholders to Rights holders, and what Tourism businesses need to do	S. Cole	Journal of Sustainable Tourism	2014	7.44
10	56	Organizing the Indonesian clothing industry in the global economy: The role of business networks	P. Dicken	Environment and Planning A	2000	2.43

Citations are significant for a journal's reputation since they allow one to evaluate the journal's impact on scientific development, [16]. Because the number of citations is also used to assess the quality of an article, journal management must pay attention to the aspects that impact citations in the text, [17]. This is inextricably linked to the journal's primary focus and breadth.

Future citation trends have been analyzed or predicted in several prior research, [18], [19]. The assumption that publications with a longer publication history tend to earn more citations has been demonstrated using generative models in several citation prediction studies, [20]. Additionally, as Table 4 shows, the evaluated papers are categorized according to the authors who helped

their articles on the subject of business in Indonesia to be published.

Table 4. Top 10 leading authors

R	Name	TP	TC	TC/TP
1	M. Najib	4	131	32,75
2	J. Joni	2	33	16,5
3	M. Sakai	2	32	16
4	A.A.R. Fernandes	2	46	23
5	Y. Yuliansyah	2	63	31,5
6	G. Nawani	2	157	78,5
7	H. Maheswari	2	22	11
8	L. Gozali	2	22	11
9	S. Saide	1	8	8
10	M.C. Basri	1	13	13

Source: Processed by Researchers, 2023

According to the table above, one writer has four paper titles that have been published on the subject of business in Indonesia. Najib, M., the top writer, authored four papers with titles, “Business Survival of small and medium-sized Restaurants through a Crisis: The Role of government support and Innovation,” “Competitive Strategy and business performance of small and medium enterprises in the Indonesian food processing industry,” “Fintech in the small food business and its relation with open innovation,” and “Innovation, cooperation and business performance: Some evidence from Indonesian small food processing cluster”.

We retrieved 49 keywords with a minimum of one co-occurrence. Keyword co-occurrence analysis is used to show the frequency of terms used in publications, [21]. Figure 3 shows a visualization of keyword co-occurrence data.

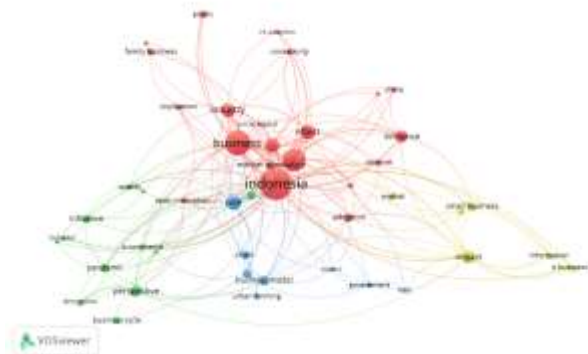


Fig. 3: Co-Occurrence (Keywords)
 Source: Processed by Researchers Using VoSviewer, 2023

Figure 3 shows which phrases are frequently used depending on the size of the circles. Figure 3 shows a combined mapping and grouping of the subject structure of business research in Indonesia. Each group is represented by a distinct hue to highlight the differences in prominence, affinity,

and relatedness. This means that the density of the elements increases as the number of nearby elements increases and reduces as the distance between them and the point of interest diminishes, [22]. According to the keywords based on co-occurrence analysis presented in Figure 3, the phrases that appear the most frequently are 'business,' 'Indonesia,' and 'market orientation'.

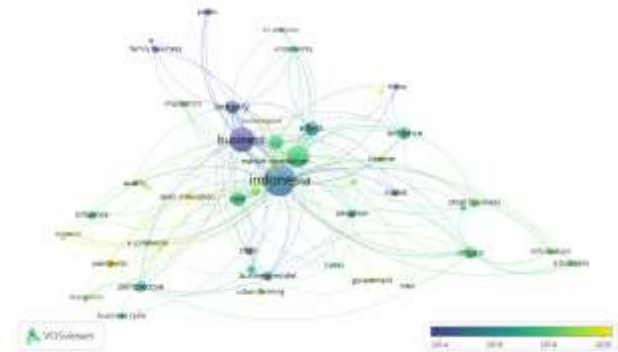


Fig. 4: Overlay Visualization Co-Assurance (Keywords)
 Source: Processed by Researchers Using VoSviewer, 2023

Figure 4's visualization overlay may show how keywords evolve from year to year. The more recent the study, the brighter the yellow color of the cluster. Figure 4 shows that the development of keywords in recent years has grown significantly, as seen by the bulk of keywords shown in yellow, suggesting that keywords have evolved significantly since 2020. These data can be utilized as input for future studies to establish critical agriculture business keywords in Indonesia.

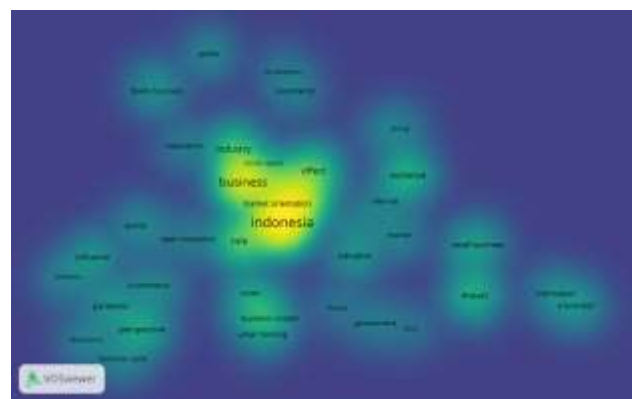


Fig. 5: Density Visualization Co-Assurance (Keywords)
 Source: Processed by Researchers Using VoSviewer, 2023

Figure 5 depicts the density of keywords that appear together as well as the number of nodes that are adjacent to each other, [23]. A yellow node

indicates the level of saturation and the number of phrases that appear frequently. The keywords 'business' and 'Indonesia' that appear most often are in the yellow node, indicating that this issue has been researched most. The keywords in the green colors, such as 'barrier', 'trust', and 'urban farming' are different. Green areas indicate topics that have not been studied extensively.

The editor will evaluate this topic to see if it still pertains to the discipline that the reviewer specified, based on the size of the yellow nodes, which indicate a problem that occurs often. The reviewers' work will be of poor quality, particularly in terms of substance, if their scholarly interests do not coincide. The assessment data provided in this subject introduction will aid editors in their efforts to narrow and specialize the journal's scope. Additionally, the editors select editors and reviewers whose scientific specialties align with the challenges depicted in Figure 5 by using this density visualization.

The urban farming business in Indonesia has the potential to play a significant role in the country's economic growth and employment creation. The Indonesian government recognizes the significance of small and medium-sized firms (SMEs) and entrepreneurship in driving economic growth and has adopted several programmes to assist SMEs, including those in the urban farming sector. However, despite these endeavors, Indonesian urban agriculture enterprises have significant challenges that must be surmounted to achieve success. Lack of market trust is one of the biggest problems facing Indonesia's urban agriculture enterprises. Gaining support and ensuring long-term viability requires developing trust with customers, suppliers, and other stakeholders. This is particularly true in Indonesia, where a major barrier to progress and development might be a lack of trust. Indonesian urban agriculture entrepreneurs need to adopt a market-oriented approach that emphasizes the need to understand customer needs and make necessary adjustments to their businesses to address this challenge, [24].

4 Conclusion

The three important elements identified using a bibliometric analytical technique in this work are co-authorship, co-occurrence, and citation. With no publication deadline, this work was obtained from the SCOPUS database. We rejected any studies that were irrelevant or repetitious; whose keywords were not in the abstract, keywords, or title; and whether or not the document format was correct (for

example, a book chapter). 169 items were collected from the provisions that were restricted by keywords and other limits.

Finally, the role of agricultural entrepreneurs in Indonesia is critical for the country's economic growth and employment creation. Entrepreneurship has been a prominent emphasis in public policy in many nations, and it is viewed as a potential solution to the nation's and state's economic problems. Entrepreneurs are seen to have a unique role in generating innovation and supporting societal change, mostly from a macroeconomic perspective. The Indonesian government has created several initiatives to support SMEs, particularly those in the urban farming industry since it understands the role that SMEs and entrepreneurship play in fostering economic growth. Lack of market trust is one of the biggest challenges these companies confront. Gaining support and ensuring long-term viability requires developing trust with customers, suppliers, and other stakeholders. Urban agriculture entrepreneurs in Indonesia need to adopt a market-oriented approach that emphasizes the need to understand customer needs and adjust their businesses accordingly to overcome this problem. The Global Entrepreneurship Monitor (GEM) asserts that as entrepreneurship is essential to economic expansion, the Indonesian government must keep encouraging and supporting it there. In addition, further study is required to examine the patterns and developments in Indonesia's urban agricultural industry and to educate future scholars about the potential and difficulties encountered by local company owners.

References:

- [1] IFC, *Annual Report 2009, International Finance Corporation*. In Annual Report 2009. Washington D.C, 2009, [Online]. <https://www.ifc.org/en/insights-reports/2011/annual-report-2009> (Accessed Date: February 15, 2024).
- [2] U. Zaman, L. Florez-Perez, P. Fariás, S. Abbasi, M. G. Khwaja, and T. I. Wijaksana, "Shadow of your former self: exploring project leaders' post-failure behaviors (resilience, self-esteem, and self-efficacy). In high-tech startup projects," *Sustainability*, vol. 13, no. 22, p. 12868, 2021.
- [3] Kartawinata, B. R., Wardhana, A., Akbar, A., & Dewi, A. R. C. (2021). The Effect of Confidence, Motivation, and Innovation on the Interest in Entrepreneurship of Indonesian Students (Case Study on Students at Telkom

- University). In *Proceedings of the International Conference on Industrial Engineering and Operations Management*, pp. 2055-2063.
- [4] GEM, "GEM Global Entrepreneurship Monitor," GEM Global Entrepreneurship Monitor, [Online]. <https://www.gemconsortium.org> (Accessed Date: November 13, 2023).
- [5] Sulastri, S., Mulyadi, H., Disman, D., Hendrayati, H., & Purnomo, H. (2023). Resilience acceleration model of small and medium enterprises through digital transformation. *Journal of Eastern European and Central Asian Research (JEECAR)*, 10(4), 609-619.
- [6] T. Sigfusson and S. Harris, "Domestic market context and international entrepreneurs' relationship portfolios," *Int. Bus. Rev.*, vol. 22, no. 1, pp. 243–258, 2013.
- [7] Z. Acs and C. Armington, "Employment growth and entrepreneurial activity in cities," *Reg. Stud.*, vol. 38, no. 8, pp. 911–927, 2004.
- [8] B. Surya, S. Syafri, H. Hadijah, B. Baharuddin, A. T. Fitriyah, and H. H. Sakti, "Management of slum-based urban farming and economic empowerment of the community of Makassar City, South Sulawesi, Indonesia," *Sustainability*, vol. 12, no. 18, p. 7324, 2020.
- [9] M. Pradana, R. Huertas-García, and F. Marimon, "Spanish Muslims' halal food purchase intention," *Int. Food Agribus. Manag. Rev.*, vol. 23, no. 2, pp. 189–202, 2020.
- [10] J. A. Diehl, K. Oviatt, A. J. Chandra, and H. Kaur, "Household food consumption patterns and food security among low-income migrant urban farmers in Delhi, Jakarta, and Quito," *Sustainability*, vol. 11, no. 5, p. 1378, 2019.
- [11] A. J. Chandra and J. A. Diehl, "Urban agriculture, food security, and development policies in Jakarta: A case study of farming communities at Kalideres–Cengkareng district, West Jakarta," *Land Use Policy*, vol. 89, p. 104211, 2019.
- [12] P. O. H. Putra and H. B. Santoso, "Contextual factors and performance impact of e-business use in Indonesian small and medium enterprises (SMEs)," *Heliyon*, vol. 6, no. 3, 2020.
- [13] P. Aghion and U. Akcigit, "Innovation and growth: The role of trust," *J. Econ. Surv.*, vol. 29, no. 1, pp. 4–24, 2015.
- [14] N. Donthu, S. Kumar, D. Mukherjee, N. Pandey, and W. M. Lim, "How to conduct a bibliometric analysis: An overview and guidelines," *J. Bus. Res.*, vol. 133, pp. 285–296, Sep. 2021, doi: 10.1016/j.jbusres.2021.04.070.
- [15] T. Khanna and J. W. Rivkin, "Estimating the performance effects of business groups in emerging markets," *Strateg. Manag. J.*, vol. 22, no. 1, pp. 45–74, 2001.
- [16] M. S. Di Bitetti and J. A. Ferreras, "Publish (in English) or perish: The effect on citation rate of using languages other than English in scientific publications," *Ambio*, vol. 46, no. 1, pp. 121–127, Feb. 2017, doi: 10.1007/s13280-016-0820-7.
- [17] X. Bai, F. Zhang, and I. Lee, "Predicting the citations of scholarly paper," *J. Informetr.*, vol. 13, no. 1, pp. 407–418, Feb. 2019, doi: 10.1016/j.joi.2019.01.010.
- [18] M. M. Adankon, M. Cheriet, and A. Biem, "Semisupervised Least Squares Support Vector Machine," *IEEE Trans. Neural Netw.*, vol. 20, no. 12, pp. 1858–1870, Dec. 2009, doi: 10.1109/TNN.2009.2031143.
- [19] F. Willayat, N. Saud, M. Ijaz, A. Silvianita, and M. El-Morshedy, "Marshall–Olkin Extended gumbel type-ii distribution: properties and applications," *Complexity*, vol. 2022, pp. 1–23, 2022.
- [20] M. E. J. Newman, "The first-mover advantage in scientific publication," *EPL Europhys. Lett.*, vol. 86, no. 6, p. 68001, Jun. 2009, doi: 10.1209/0295-5075/86/68001.
- [21] M. Gaviria-Marin, J. M. Merigo, and S. Popa, "Twenty years of the Journal of Knowledge Management: A bibliometric analysis," *J. Knowl. Manag.*, vol. 22, no. 8, pp. 1655–1687, 2018.
- [22] N. J. van Eck and L. Waltman, "Software survey: VOSviewer, a computer program for bibliometric mapping," *Scientometrics*, vol. 84, no. 2, pp. 523–538, Aug. 2010, doi: 10.1007/s11192-009-0146-3.
- [23] Kartawinata, B. R., Wijayangka, C., Akbar, A., & Hendiarto, R. S. (2021). The influence of lifestyle and financial behavior on personal financial management for the millennial generation (Study on college students in Bandung city, Indonesia). In *Proceedings of the International Conference on Industrial Engineering and Operations Management*, pp. 2957-2965, Sao Paulo, Brazil, April 5 - 8, 2021

- [24] Hendrayati, H., Suryadi, E., Mulyani, H., Furqon, C., & Sultan, M. A. (2022). Coe TVET Model Development in Economics and Creative Business in Vocational School. *Calitatea*, 23(189), 33-40.

Contribution of individual authors to the creation of a scientific article (ghostwriting policy)

- Syarifuddin and Mahir Pradana carried out the field survey, data analysis, and optimization.
- Pablo Farías was responsible for the conceptualization and review.
- Hanifah Putri Elisa and Adrianza Putra were responsible for the field survey.

Sources of funding for research presented in a scientific article or scientific article itself

The authors report no source of funding.

Conflicts of interest

The authors report no conflicts of interest.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0

https://creativecommons.org/licenses/by/4.0/deed.en_US