The Determinants of Startup Business Growth in Indonesia: A Bibliometrical Analysis

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Abstract.

Startups are companies that have had a major influence on the Indonesian economy, especially in the past COVID-19, when with the presence of startups, the circulation of money in the country is still awake. However, in its growth, the start-up company is currently experiencing constraints that have to dismiss many of its employees. Given how important startups are for the Indonesian economy, it is important to look for any determinants that could potentially influence the growth of startups in Indonesia. The researchers used quantitative methods using bibliometric analysis. The data used in the study were journals collected using Harzing's Publish or Perish, which were then curated by the researchers and analyzed using the VOSviewer application. The researchers found that out of the 29 journals obtained, only 20 corresponded to the study. The journal used was from 2018-2023 to keep the information on the study up to date. Based on the results of the analysis, the researchers found that the most powerful determinants that influence the growth of startup businesses in Indonesia are employees, Indonesia, startup growth, technology, and the economy.

Keywords: *bibliometrics, determinants, startup, Indonesia.*

1. Introduction

In the contemporary era characterized by digital transformation, startups have emerged as prominent entities that have garnered significant attention from business professionals. A broad spectrum of individuals within the community frequently utilizes the products or

services offered by these startups. The current era is characterized by swift technological progress, which facilitates the establishment and investment of funds in companies, particularly those in their early stages, by individuals across various societal strata, including investors and business professionals. Startup companies are often perceived as promising due to their potential for rapid growth, particularly in share value. This allure is further amplified by the accessibility of startup financial reports through the Internet, which has piqued the interest of numerous individuals in engaging with the startup industry (Wibowo, 2021).

Indonesia stands out as a nation with a significant presence of startups, particularly within the Southeast Asian region, with the highest concentration of such enterprises (Yanuarti & Dewi, 2018). According to Nurcahyo et al. (2018), the majority of startup companies in Indonesia focus on the e-commerce sector and cater to the consumer base of teenagers and young adults. However, it is worth noting that even adults eventually become engaged with the services offered by these startups. The proliferation of startups and their substantial user base have significantly influenced Indonesian society. The phenomenon above was observed in the preceding COVID-19 pandemic, wherein startups successfully sustained domestic consumption, resulting in a comparatively stable economic state for Indonesia compared to other nations (Karina et al., 2022).

The consideration of factors that facilitate the growth of startups in Indonesia is imperative due to their significant impact on the Indonesian economy. Okrah and Nepp (2017) conducted a study to identify the key factors influencing the growth of startups. Their findings indicate that several factors significantly impact startup growth. These factors include (1) government support and regulatory frameworks, (2) the skill level of employees, (3) the educational background of leadership, (4) the availability of financial resources, including access to a large pool of investors, (5) the return on investment, (6) the organizational culture within which the startup operates, and (7) the ability to innovate. Nevertheless, according to the findings of a study conducted by Aras et al. (2021), various factors, such as financial resources, do not comprehensively impact the growth of startups in Indonesia. In addition, it has been discovered that the degree of expertise possessed by the founder and management team in effectively overseeing the business is a significant factor in the growth of startups, to the extent that other variables may be disregarded (KP, 2018). In a study conducted by Suri (2020), it was determined that demographic factors hold significant importance in the growth of startups within the Indonesian context.

Based on the findings of prior studies, it has been observed that identifying factors that impact the growth of startups remains a complex endeavor, with the precise determinants of startup growth yet to be fully elucidated. Hence, scholars endeavor to examine the factors contributing to establishing and expanding startups in Indonesia to obtain more conclusive insights into the determinants of startup growth in the country.

2. Research Methods

The present study employs bibliometric analysis as a research methodology. Bibliometric analysis is a methodological approach used to ascertain the distribution of publication and citation counts and examine data patterns within a given study (Utami & Karlina, 2022). Researchers utilize Harzing's Publish or Perish software to filter the necessary data and process data through the VOSviewer software. The researchers deemed the inclusion of

determinants of startup development in Indonesia necessary. The research procedures were conducted sequentially, as depicted in Figure 1.

Figure 1. Research flow

3. Results and Discussion

3.1. Results

Network Visualization

The visualization of clusters offers a visual representation of the strengths and limitations of the associations among keywords utilized in the scholarly articles selected by the researcher (Nawangsari et al., 2020). The analysis conducted using VOSviewer revealed the presence of seven distinct clusters within the selected journals as determined by the researcher. The frequency of keywords appearing in the selected research journal is directly proportional to the size of nodes and labels in the analysis results. In the context of the analyzed journals, the distance between nodes indicates the magnitude of the relationship between them. Additionally, the nodes' connecting lines symbolize intra-cluster and inter-cluster connections.

Figure 2. Network Visualization

The findings of the analysis are visually represented in Figure 2. The network visualization reveals that "startup" is the most frequently occurring keyword in this research compared to other keywords in the analysis. In addition, there exist other nodes that possess smaller dimensions but exhibit a relatively substantial magnitude, indicating that they are not the most diminutive nodes. These nodes encompass employees, Indonesia, startup growth, technology, models, and the economy. These particular keywords exhibit a higher occurrence frequency than other keywords, albeit not as frequently as startup keywords. The keyword "startup" exhibits a relationship with the keywords "startup growth," "economic growth,"

"entrepreneur," and "country" along the connecting line. The subsequent keyword, specifically, startup growth, correlates with the nation, economy, e-commerce, and sector. Moreover, a correlation exists between Indonesian keywords and those about the study, research, economic growth, country, company, and startup growth. A significant correlation was observed between the keyword "Technology" and economic growth, startup growth, and national development indicators. The final keyword, technology, exhibits a prominent correlation with startups, the growth of startups, technological advancements, academic research, and various countries. The analysis revealed that the selected journals for analysis contained a total of 24 clusters. The cluster comprises the keywords and is visually represented by color, as illustrated in Table 1.

Table 1. Cluster division

Cluster	Amount	Keywords
1	24	*analysis, business, company, development, economy, employee, entrepreneur, Indonesia, model, country, growth, economic growth, startup growth, startup companies, research, space, startup, study, Surabaya, technology, high, UMKM Surabaya and Yogyakarta*
2	2	*financial technology, and sectors*
3	2	*digital in Indonesia, market*
4	2	*impact, and role*
5	2	*strategy, technology*
6	2	*e-commerce, and unicorns*
7	1	*Determinant*
8	1	*digital startups*
9	1	*Influence*
10	1	*Phenomenon*
11	1	*Jakarta*
12	1	*World*
13	1	*Organization*
14	1	*technological development*
15	1	*case studies*
16	1	*growth in the number of startups*
17	1	*number of startups*
18	1	*process*
19	1	*move*
20	1	*government*
21	1	*case study*
22	1	*trend*
23	1	*SMEs*
24	1	*digital economy*

Overlay Visualization

The overlay visualization employed in this study illustrates the distribution of the years in which keywords were observed in journal publications utilized by the researchers (Pahrijal & Mawarni, 2023). The frequency of occurrence of a keyword in the upcoming year of 2018 is directly proportional to the darkness of the color that is displayed and, conversely, inversely proportional to the lightness of the color. The visualization analysis revealed a higher frequency of startup-related keywords in academic journals published from 2020 to 2021. To

facilitate the understanding of the subject matter, please refer to Figure 3 for visual representation.

Figure 3. Overlay Visualization
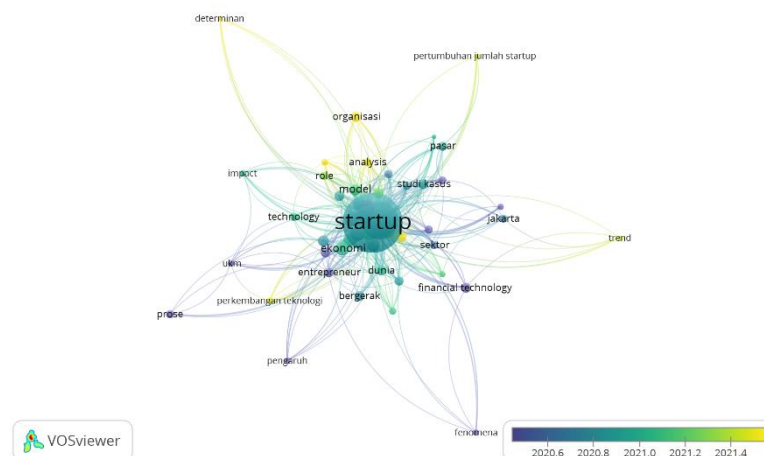
Density Visualization

The density visualization is a graphical representation of the analysis outcomes, effectively demonstrating the prevalence of specific keywords employed within the researcher's chosen journals (Ahmad et al., 2023). The prominence of keywords in a researcher's chosen journal is directly proportional to their brightness. The graph depicted in Figure 3 illustrates the prominence of the startup keyword, which is observed to be the most prevalent. Other keywords such as economy, case study, model, world, role, analysis, and others are also observed to have notable representations. In contrast, the journals examined exhibit a relatively lower prominence of keywords about phenomena, determinants, trends, and growth in the number of startups.

Figure 4. Dentisy Visualization
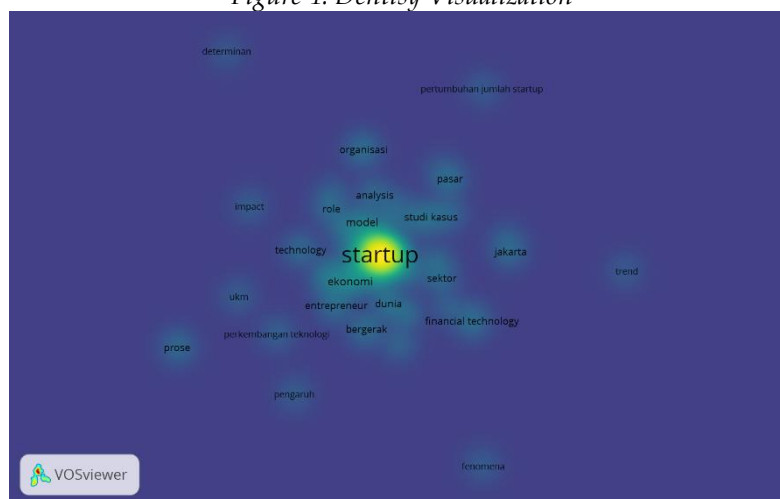
3.2. Discussion

According to the utilization of Harzing's Publish or Perish software, a group of researchers identified 29 journals listed within the application. Subsequently, from this pool of journals, the researchers determined that 20 were suitable for inclusion in their study. These selected journals collectively yielded a cumulative count of 81 citations. According to the available scholarly literature, the study conducted by Perdani et al. (2018) has garnered the highest number of citations among the surveyed journals. This particular study has been cited

45 times, as reported by Google Scholar. The present study has discovered that the remuneration of employees and investors significantly influences the expansion of startup enterprises in Yogyakarta.

The analysis was conducted by researchers utilizing the VOSviewer application. To mitigate detection errors within the application, the researchers made necessary modifications to the application's script. The VOSviewer analysis yielded several key findings about the determinants of startup business growth. The identified keywords encompassed employee conditions, Indonesia, startup growth, technology, business models, and the economy. Widodo (2020) states that a crucial determinant of startup expansion is the prevailing economic circumstances, encompassing regional and national contexts. Startups in regions with favorable economic conditions are inherently better positioned to secure investment and generate income from the local community. In unfavorable economic conditions, startups may encounter challenges securing investment due to investor skepticism regarding the prevailing market conditions within which the startup operates.

According to a study conducted by Rahmadiane et al. (2020), employee factors significantly contribute to the growth and progress of startups in Indonesia. The factors pertaining to employees encompass their quality and salary. This observation aligns with the current trend wherein numerous companies face financial difficulties due to excessive employee salaries and the consequential strain on startup companies' financial stability. According to recent research, prominent startups like PT GoTo Gojek Indonesia Tbk. and PT. Bukalapak.com Tbk. has encountered the issue of excessive employee salaries, leading them to implement layoffs until the year 2023 (PT. Bukalapak.com Tbk, 2022; PT. GoTo Gojek Tokopedia TBK, 2022).

Moreover, with regard to technological determinants, empirical evidence suggests that technology plays a pivotal role in fostering the development and expansion of startup enterprises within the Indonesian context. According to a study by Ratih Palgunadi (2023), organizations that effectively leverage technology for conducting business demonstrate superior growth potential compared to their counterparts that struggle to capitalize on available technological resources. The application of this technology encompasses various functions such as advertisement creation, customer service, and workload optimization, thereby enhancing the operational efficiency of startup companies.

The findings mentioned above indicate that the business model plays a significant role in the growth of startups. The business model is a conceptual framework designed to establish a strategic connection between a company's overall strategy and its approach to delivering suitable services to its customer base (Afia et al., 2022). According to Deu (2022), incorporating an innovative business model can garner increased public interest in the consumption of products or services offered by startups in Indonesia.

4. Conclusion

Based on the results of data collection using Harzing's Publish or Perish and analyzed using VOSviewer, it was found that the determinants of startup business growth in Indonesia were employee, Indonesia, startup growth, technology, and economics. Meanwhile, the cluster division found in the first cluster contains 24 keywords, namely, analysis, business, company, development, economy, employee, entrepreneur, Indonesia, model, country,

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growth, economic growth, startup growth, startup companies, research, space, startup, study, Surabaya, technology, high, UMKM Surabaya and Yogyakarta.

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