HOW CAN BOARD DIVERSITY PROMOTE CORPORATE INNOVATION? : A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT

Corporate innovation plays a crucial role in companies to remain sustainable in the future. Companies can also encourage the economic strength of a country. Innovative companies can be competitive in the market by improving marketing strategies and product innovation. Therefore, they can improve company performance. The board of directors has the authority to make strategic decisions to determine company performance. Based on the results of collecting 59 pieces of literature and then analyzing them, the researchers can conclude that various board characteristics such as board gender, foreign board, and board age can influence companies to innovate. Female directors can provide valuable insight, knowledge, and skills for companies to innovate to survive in the future. Foreign boards with cross-border knowledge and international relations can implement it into companies to innovate. Young directors have a much more risk appetite and are creative in trying new things.

Keywords : Corporate Innovation; Board Diversity; Board Gender Foreign Director; Board Age

ABSTRAK

Corporate innovation berperan penting bagi perusahaan agar tetap sustain di masa yang akan datang. Terutama perusahaan juga dapat mendorong kekuatan ekonomi suatu negara. Perusahaan yang inovatif mampu kompetitif di pasar dalam meningkatkan strategi pemasaran, inovasi produk sehingga dapat meningkatkan kinerja perusahaan. Dewan direksi yang berwenang dalam keputusan strategis menentukan kinerja perusahaan Berdasarkan hasil pengumpulan sebanyak 59 literature lalu dianalisis. Peneliti dapat menyimpulkan bahwa karakterstik dewan beragam seperti board gender, foreign board dan board age dapat berpengaruh dalam perusahaan untuk berinovasi. Direksi wanita diharapkan mampu memberikan wawasan, pengetahuan dan skill untuk perusahaan berinovasi agar bertahan dimasa mendatang. Foreign board yang memiliki pengetahuan cross border dan hubungan internasional mampu mengimplementasikan ke perusahaan untuk berinovasi. Direksi berusia muda jauh lebih risk appetite dan kreatif dalam mencoba hal-hal baru.

Kata kunci : Inovasi perusahaan; keragaman dewan; gender dewan; direksi asing; umur dewan

INTRODUCTION

Innovation stands as a crucial tool for companies seeking to establish and sustain a competitive edge in market expansion (Gonzalez-Bustos et al., 2017), serving as a key factor in their success and longevity (Torchia et al., 2011). Furthermore, innovation plays a pivotal role in a country's development, particularly in developing nations, where it has the potential to drive transformation and progress (Brown et al., 2009; Solow, 1957). It mirrors company policies, encompassing financial decisions, corporate values, and asset growth, giving rise to new markets and the capacity to compete with novel ideas. Consequently, innovation assumes a central role in fostering economic growth (Schumpeter, 1942). The significance of innovation in business has been extensively explored in economic literature, with researchers presenting evidence of its critical importance for companies. As outlined by Cassiman and Veugelers (2006), both internal and external factors can influence a company's innovation process and strategy.

In the realm of economic development, innovation stands as a pivotal factor that underpins sustained long-term growth (Wong et al., 2005). On a national scale, it plays a crucial role in determining the competitiveness of companies (Cuong and Hau, 2021). However, the attainment of innovation necessitates steadfast commitment and investment over an extended period (Ongsakul et al., 2021). Corporate risk-taking assumes a critical role in economic success, with the board being entrusted with the responsibility of taking calculated risks to achieve strategic objectives and maximize shareholder wealth, as investment decisions significantly impact a company's competitiveness within its industry (Sila et al., 2016).

The field of corporate governance literature provides a range of structures and mechanisms that explain international innovative behavior (Barker and Mueller, 2002), offering valuable insights into the innovation tendencies of companies (Belloc, 2012). When adopting innovative behavior, companies tend to demonstrate diverse structures and corporate governance mechanisms (Barker and Mueller, 2002). According to Manso (2011), directors with an innovative mindset can play a pivotal role in securing the long-term success of a company. Effective strategic decision-making is critical for any company to thrive, and the responsibility for this task lies with the board of directors. (Duran, 2014; Chintrakarn et al., 2015). To improve the decision-making process, having a diverse board with members who can contribute various perspectives and interests to the company is crucial. This approach has been linked to better company performance (Li and Rainville, 2021). Innovation-related agency problems can arise from two main sources. Firstly, risk-averse directors may prioritize job security over investment in risky innovation projects, instead, they may choose to support non risky projects (O'Connor and Rafferty, 2012). Secondly, directors often prefer to avoid costly innovation projects to maintain a sense of stability (Bertrand and Mullainathan 2003). Therefore, it is crucial to effectively monitor and govern innovation processes to ensure success.

Several research studies suggest that the presence of female directors in a company can encourage the effectiveness of internal governance, attributed to their heightened dedication to monitoring (Adams and Ferreira, 2009). This increased monitoring can lead to greater public disclosure and informative stock prices (Gul et al., 2011), thereby mitigating agency problems and encouraging corporate innovation. However, according to Faleye et al., (2011), female directors may sometimes weaken innovation if they encourage managerial myopia and cause a reduction in long-term investment in innovation. Another argument by Aghion et al. (2013) stated that risky innovation can also be detrimental to directors' jobs if innovation failure is caused by poor managerial skills, causing resistance to innovation. When market competition is low, directors are not encouraged to work harder and require greater monitoring. Hence, the presence of female directors carrying out major monitoring is very important for the company, and it has been observed that it has a positive effect on innovation when product market competition is lower.

Corporate innovation is a complex matter and requires long-term investment. As a result, agency problems and asymmetric information arise since directors are typically more informed about innovation projects, such as their value and success rate (Alhares et al., 2018), while older directors tend to be risk-averse and place more value on their careers and financial security over shareholder preferences (Fama and Jensen, 1983). However, research by Dress and Heugens (2013) stated that older directors bring valuable experience to the company and can offer advantages such as capabilities, market knowledge, effective problem-solving. In addition to board gender and age diversity, research indicates that national diversity or the inclusion of foreign workers can bring different perspectives, contributing to a variety of ideas and innovations within companies (Solheim and Fitjar, 2016). Companies with foreign boards are reported to be more effective than those without such diversity (Cook and Glas, 2015).

Research by Lu et al., (2022) showed that a systematic literature review (SLR) can help identify factors that encourage board diversity and their effect on the structure, characteristics, and diversity of boards (SCDBs). This research aims to provide evidence of the factors that encourage board diversity and their impact on corporate innovation based on the latest literature studies.

LITERATURE REVIEW AND FOCUS OF STUDY

The concept that innovation leads to "creative destruction" is not a novel idea in economic thinking. The notion of "creative destruction" in innovation has long been recognized in economic discourse. The impacts, both "creative" and "destructive," stemming from financial innovation can be mitigated through innovations in banking and economic activities (Levine, 2005). Research, such as that conducted by Beck et al. (2016), reveals that financial innovation yields both positive and negative economic consequences.

From the standpoint of the 'innovation growth' perspective, financial innovation has the potential to reduce agency costs, share risks, enhance the functioning of the financial system (Allen & Gale, 1994), complement markets (Grinblatt & Longstaff, 2000), and improve efficiency (Houston et al., 2010). However, an alternative perspective underscores the 'fragility of innovation,' highlighting the potential downsides of financial innovation. In this view, financial innovation may increase the risk within the financial system by promoting credit expansion, which could contribute to a financial crisis (Brunnermeier, 2009). A form of innovation in the financial industry that has a big impact is the development of fintech (Barberis & Chishti, 2016). According to the Financial Stability Board (FSB), financial technology (fintech) and intelligent banking architecture systems have the potential to expand the scale and reach of banking businesses, ultimately enhancing the efficiency of the entire financial system (FSB, 2017). In particular, the financial technology industry's main role in technological innovation is to provide demonstrations to banks. Banks can make technological advances and increase productivity by implementing these technologies and increasing related research investments (Berger, 2003). Transaction processes can be reduced with bank credit systems based on big data and other technology (Dynan et al., 2006), increasing the efficiency of internal management in banks through cloud computing-based applications, communication between departments and assisting banks in developing their organizational scale (IMF, 2017).

Gender diversity stands out as a focal point in corporate governance research (Terjesen et al., 2009). Despite debates on whether the presence of female board members is merely symbolic, arguments emphasize the significance of their inclusion (Hernandez and Gonzales, 2020). Østergaard et al. (2011) posit a positive correlation between gender diversity and innovation, particularly in realms such as marketing innovation or opportunity innovation. In the context of Resource Dependence Theory, the diverse backgrounds that directors bring to a more extensive board contribute to a wider range of perspectives. Consequently, this diversity facilitates information gathering and supports managerial decision-making (Reeb and Zhao, 2009). Gender diversity, according to this theory, leads to more profound and productive discussions (Post and Byron, 2015).

Drawing from Galia and Zenou (2012), the inclusion of women is suggested to bring about new insights, diverse experiences, improved knowledge, and skills in the context of innovation. This is often attributed to women's proficiency in understanding consumer behavior and discerning customer needs, enabling them to effectively represent the company's means and opportunities to fulfill those needs. Nevertheless, gender diversity can also lead to intra-group conflicts in top management (Treichler, 1995), as women are often perceived to be more risk-averse in decision-making (Barsky et al., 1997). This risk aversion may influence the allocation of organizational resources to ventures perceived as risky, including investments in research and development (R&D) and innovation. Gender diversity in top management has the potential to increase intra-group conflict (Treichler, 1995). Arguments against the positive impact of board gender diversity on innovation find support in the studies conducted by Galia and Zenou (2012).

Some studies only describe gender, ethnic and age diversity with conflicting results in different countries. Companies in Italy do not experience an impact of gender diversity on R&D expenditure (Martini et al., 2012). In high-tech countries such as China, it is proven that the educational background of the board has a positive effect on the company's R&D expenditure (Li and Zhou, 2012). However, companies in France have been demonstrated that gender diversity has a positive impact on the marketing of innovative products while simultaneously having a negative effect on product innovation. (Galia and Zenou, 2012). According to research conducted by Midavaine et al., (2016) explains that tenure diversity has a negative effect on R&D investment, but gender and educational diversity results in large investments in Fortune 500 companies.

According to Cumming & Leung (2018) explains that diversity gender and age can enhance a company's innovation but skill diversity can harm innovation.

Makkonen et al. (2018) conducted research indicating that foreign board members negatively affect companies in 28 European Union countries (EU-28) because individuals from these countries tend to originate from less innovative environments compared to the company's home country. On the other hand, female directors were found to have a positive influence on Research and Development (R&D) expenditure in 500 companies listed on the Australian Securities Exchange market (Vafaei et al., 2020). Griffin et al. (2021) discovered that gender diversity positively affected company patenting activities across 45 countries. Countries with less masculine cultures and narrower gender gaps are more inclined to have women on boards. The diversity of boards, encompassing different perspectives, was linked to positive effects on innovation, contributing to more original, exploratory, and technological advancements (An et al., 2021).

Foreign boards play a pivotal role in driving innovation within parent companies. The process of innovation involves the integration of integrating existing knowledge to create new insights (Kogut and Zander, 2007). Drawing from resource dependency theory, diverse directors are considered essential for offering distinct perspectives, ideas, expertise, and skills that foster creativity and innovation (Veen et al., 2014). Directors with diverse nationalities contribute valuable skills and expertise to companies due to their international network relationships and varied knowledge sources (Eulerich et al., 2013; Arnegger et al., 2014).

Companies with foreign boards are expected to enhance international relations and elevate innovation (Solheim and Fitjar, 2016). Directors with different nationalities bring a diverse array of ideas and knowledge sources, proving to be valuable assets to a company (Rice et al., 2012). To harness cross-border knowledge transfer and stimulate innovation, companies must possess sufficient absorptive capacity – the capability to acquire, assimilate, and utilize external knowledge (Zahra and Gerard, 2002). Foreign boards significantly contribute to enhancing a company's absorptive capacity, making it more adept at assimilating external knowledge and expertise (Zahra et al., 2009). Companies with a wealth of knowledge are generally more adept at assimilating new information (Makkonen et al., 2018).

For successful knowledge transfer, the technological background of the foreign board and the company should have some degree of similarity for effective comprehension and utilization, yet possess sufficient differences to create opportunities for learning (Makkonen et al., 2018). Diverse boards provide increased opportunities for merging knowledge and fostering innovation.

Two distinct perspectives emerge. In line with Pfeffer and Salancik (1978), resource dependency theory underscores the importance of controlling essential resources for a company's performance and survival. Contrastingly, group effectiveness propose that having diverse directors, who bring varied perspectives, ideas, expertise, and skills, fosters greater creativity and innovation (Veen et al., 2014). However, diverse boards may also face elevated transaction costs, encompassing an increased risk of conflict, communication challenges, and a lengthier process to build consensus (Goodstein et al., 1994)

In conclusion, a diverse board of directors with differences in nationality can be a valuable asset for a company, bringing a wealth of knowledge and expertise from various backgrounds. Additionally, international boards are known to foster greater global connections, contributing to higher levels of innovation.

The first theory is the agency perspective, which highlights the issue of information asymmetry in innovation. Innovation is a complex and long-term investment, which often leads to conflicts of choice. This is because directors have more information about the project, such as its value and level of success (Alhares et al., 2018). Given that older directors typically lean towards risk aversion (Barker and Mueller, 2002) and prioritize career and financial security over shareholder preferences, this inclination can lead to heightened conflicts of interest (Fama and Jensen, 1983).

Resource dependency theory proposes that having an expert board can be advantageous for companies in acquiring valuable resources (Goodstein et al., 1994). An experienced board, especially one comprising older members, can bring various advantages to the company. These may include improved market knowledge, effective problem solving abilities and increased overall capabilities (Drees and Heugens, 2013). The broader perspective and experience of such a board enable companies to meet diverse stakeholder expectations, thereby facilitating the implementation of various types of innovation (Bear et al., 2010). Age diversity on the board, as elucidated by

Talavera et al. (2018), can contribute to increased experience, resources, and networks, leading to a subsequent rise in bank profitability. Furthermore, research indicates that age diversity on the board can have a positive impact on a company's financial performance (Kim & Lim, 2010).

According to research conducted by Galia and Zenou (2012), younger directors tend to be more inclined to adopt new innovations. Consequently, as the number of directors increases, conflicts between them on crucial issues may arise, potentially impeding the willingness to take risks (Cheng, 2008). Larger companies are generally more inclined to invest in innovation (Shefer and Frenkel, 2005), while companies with high leverage tend to invest less in innovation, likely due to a reluctance to introduce additional risk through innovative endeavors (Hitt et al., 1996).

Young managers often display a proclivity for risky decision-making (Cheng et al., 2010) and signal to the market that they possess superior capabilities (Prendergast & Stole, 1996). In contrast, older directors exhibit lower risk tolerance due to concerns about financial security, reduced financial leverage, lower capital expenditure, and higher cash holdings (Bertrand & Scholar, 2003). Directors in the early stages of their careers are more likely to demonstrate higher levels of creativity, a greater willingness to take risks, and an increased likelihood of achieving higher profitability as they navigate the regulatory landscape of the company (Mishra & Jhunjunwala, 2013). Conversely, more seasoned directors tend to adopt a more cautious and conservative approach (Bantel & Jackson, 1989), showcasing greater proficiency in managing relationships with external entities, such as regulators and authorities (Victoravich & Xu, 2011).

RESEARCH METHOD

Method is a method of work that can be used to obtain something. While the research method can be interpreted as a work procedure in the research process, both in searching for data or disclosing existing phenomena (Zulkarnaen, W., et al., 2020:229). The method used in this research was a systematic literature review (SLR). Management research using SLR was increasing because this research carried out a transparent and reproducible review process using an analytical framework. This comprehensive analysis framework contained a combination of journals and researchers, research databases, and criteria. So that SLR can produce theoretically sound research and provide credible results for practitioners and academics. (Denyer, & Smart, 2003).

This research focused on the Corporate Innovation variable to analyze board diversity factors that encourage corporate innovation. This research used a Systematic Literature Review (SLR) based on the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) guidelines as in Figure 1.

The first step was done by reading the latest articles related to Board Diversity and Corporate Innovation on Google Scholar. The articles were collected from two databases, Scopus Database, which included Science Direct and Emerald Insight. The database selection ensured a large selection of articles (Nguyen et al., 2020).

The second step was using keywords to collect the data, specifically the dependent variable of the research, which was Corporate Innovation. The keywords used included board diversity, board gender, female directors, board age, director age, board foreign, foreign directors, and corporate innovation.

In the third step, researchers filtered or selected articles relevant to the research. The selection was limited to the period from 2015-2023, and the subject areas of "Economics, Econometrics and Finance" and "Business, Management and Accounting". The document types selected were "review articles" and "research articles". The filtering process resulted in 59 articles for the analysis process.

RESULT AND DISCUSSION

Antecedents of Corporate Innovation

Innovation is one of the driving forces for a country's development, especially in developing countries where it can promote transformation and growth (Brown et al., 2009; Solow, 1957). Research conducted by Belloc (2012) stated that the literature on corporate governance provides valuable concept into the innovative behavior of companies (Belloc, 2012). When companies adopt innovative behavior, their structure and corporate governance mechanisms differ from those of traditional companies (Barker and Mueller, 2002). According to Manso (2011), innovative directors can create long-term success for their companies. As researchers have observed, company directors are responsible for managing the company and making strategic decisions that can have a significant impact on company sustainability. Therefore, the board's characteristics can encourage companies to innovate. Researchers have identified several factors that influence corporate innovation, including:

Board Gender and Corporate Innovation

Gender diversity on boards is recognized for providing a broader range of resources (Kim and Lin, 2010). Additionally, gender diversity is linked to more profound and productive discussions (Post and Byron, 2015). Supporting this, Adams & Ferreira (2009) asserted that female directors, in particular, play a more active role in monitoring the company and promoting the effectiveness of internal governance (Adams and Ferreira, 2009). This involvement can lead to increased public disclosure and more informative stock prices (Gul et al., 2011). The presence of female directors is identified as a factor that can mitigate agency problems and facilitate effective monitoring, thereby fostering corporate innovation.

Foreign Board and Corporate Innovation

Foreign boards play a crucial role in fostering innovation within the parent company. Innovation is perceived as a social process, encompassing the amalgamation of existing knowledge to generate novel insights (Kogut and Zander, 2007). In accordance with resource dependency theory, a diverse board contributes various perspectives, ideas, expertise, and skills that significantly enhance creativity and innovation (Veen et al., 2014). Consequently, directors with diverse nationalities and backgrounds bring a wealth of knowledge and expertise to the company (Ruigrok et al., 2006), derived from their international networks and diverse knowledge sources (Arnegger et al., 2014).

Board Age and Corporate Innovation

A diverse age range on the board of directors can positively impact a company's innovation. Older directors bring valuable experience, effective problem-solving skills, and a vast pool of knowledge (Drees and Heugens, 2013). According to Talavera et al., (2018), age diversity on the board can lead to an increase in experience, resources, and networks, which ultimately results in increased bank profitability. Furthermore, studies have shown that having age diversity on the board can also improve financial performance (Mahadeo et al., 2012).

Consequences of Corporate Innovation

In this section, the researchers explain the impact of corporate innovation. Companies that are innovative to survive in the long term certainly have advantages and disadvantages if they have board diversity on their boards.

Innovation holds significant importance for companies, with its long-term impact contributing to the achievement of economic growth (Wong et al., 2005). As well as achieving the ability to compete competitively at the national level (Yang and He, 2019). The board of directors is tasked with making strategic decisions aimed at maximizing shareholder wealth and steering the company in the right direction (Chintrakarn et al., 2015). One way to improve decision-making within the board is by arranging board members to represent diverse perspectives and interests, thus improving the characteristics of the company's board of directors, which ultimately determines the company's performance (Li and Rainville, 2021). Board diversity is a significant factor that can influence corporate innovation. Therefore, this research analyzes the diversity of directors through three board characteristics: board gender, foreign board, and board age. Each of these three board characteristics has its advantages and disadvantages.

Board gender composition pertains to the representation of genders within the board of directors. Viewed through the lens of Resource Dependence Theory, board diversity highlights the array of resources directors bring to the board, resulting in a broader range of perspectives for information acquisition and managerial decision-making (Reeb and Zhao, 2009). Consequently, gender diversity encourages more profound and productive discussions (Post and Byron, 2015). The inclusion of female directors can contribute fresh insights, diverse experiences, and valuable knowledge and skills that foster innovation (Galia and Zenou, 2012). Women, in general, tend to possess a deeper understanding of customer needs and consumer behavior (Galia and Zenou, 2012).

Despite its positive impact on innovation, the presence of women on the board can also have negative effects. Due to a potential aversion to risks in decision-making among women (Barsky et al., 1997), they may influence the allocation of organizational resources, particularly in risky areas such as Research and Development (R&D) innovation. As observed in research by Galia and Zenou (2012), gender diversity exhibits a positive effect on the marketing of innovative products but a negative effect on overall product innovation.

A foreign board refers to board members with international backgrounds or origins from abroad. According to Resource Dependency Theory, the presence of diverse directors can introduce a variety of perspectives, ideas, expertise, and skills, thereby fostering increased creativity and innovation (Veen et al., 2014). Directors with diverse nationalities are seen as advantageous for companies, introducing fresh skills and expertise through their international network connections and diverse knowledge (Arnegger et al., 2014). Having a foreign board is expected to enhance a company's international relations and innovation levels (Solheim and Fitjar, 2016). The capacity to absorb cross-border knowledge for innovation is a crucial factor for companies, often referred to as "absorptive capacity" (Zahra and Gerard, 2002). Foreign boards play a vital role in facilitating external access to knowledge, a key element of "absorptive capacity" (Giannetti et al., 2015). Companies with substantial existing knowledge find it easier to absorb new knowledge (Makkonen et al., 2018).

However, foreign boards from less innovative countries may have a negative impact on a company's innovation. Research by Makkonen et al. (2018) suggests that when foreign boards come from less innovative countries, it can adversely affect the innovation of the company's home country. Diverse boards, encompassing foreign members, may encounter higher transaction costs, such as an elevated risk of conflict, communication issues and an extended time to build consensus (Piekkari et al., 2015).

Board age accounts for the diversity in age within the board structure. According to agency theory, this introduces information asymmetry. Innovation is intricate and requires long-term investment, leading to conflicts of choice because directors typically possess more insights into project-specific details, such as its value and potential success (Alhares et al., 2018). Older directors often exhibit a tendency toward risk aversion (Barker and Mueller, 2002) and prioritize career and financial security over shareholder preferences, thereby heightening conflicts of interest (Fama and Jensen, 1983). Despite this, older boards bring valuable work experience to the company effective problem-solving skills, encompassing market knowledge and enhanced capabilities (Drees & Heugens, 2013). On the other hand, younger directors demonstrate a greater inclination towards risky decisions (Cheng, Chan, & Leung, 2010) and communicate to the market that they have exceptional skills (Prendergast & Stole, 1996). Younger directors tend to be more creative, exhibit a higher risk appetite, and can contribute to increased profitability while navigating the company's regulatory landscape (Mishra & Jhunjunwala, 2013).

CONCLUSION

Systematic literature reviews produce literature that develops from collecting several empirical test articles. Researchers collected articles that focused on corporate innovation. Corporate innovation plays a crucial role in companies to remain sustainable in the future. Companies can also encourage the economic strength of a country. Innovative companies can be competitive in the market by improving marketing strategies and product innovation. Therefore, they can improve company performance. The board of directors has authority in strategic decisions to determine company performance. A company needs to have a diverse board of directors that can support the company to innovate.

Board diversity can be characterized by board gender, foreign board, and board age. Board gender emphasizes that the inclusion of female directors on the board typically has a positive impact as women bring new insights, diverse experiences, knowledge, and skills that prove beneficial for the company's innovation. The foreign board explains that boards that come from abroad or vary in nationalities will provide international relations or cross-border knowledge. Thus, they can implement their capabilities in innovating companies. Board age explains that older boards tend to be risk-averse even though they have sufficient experience and skills compared to younger boards who are more likely to adopt innovations.

ACKNOWLEDGE

The researchers extend sincere appreciation to the supportive friends and reviewers who provided insightful ideas and suggestions for the creation of this article. Additionally, the researchers express sincere gratitude to the publisher for their assistance in publishing this article. The researchers ardently hope that this article is a source of knowledge for readers and a stepping stone or inspiration for further research.

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FIGURE

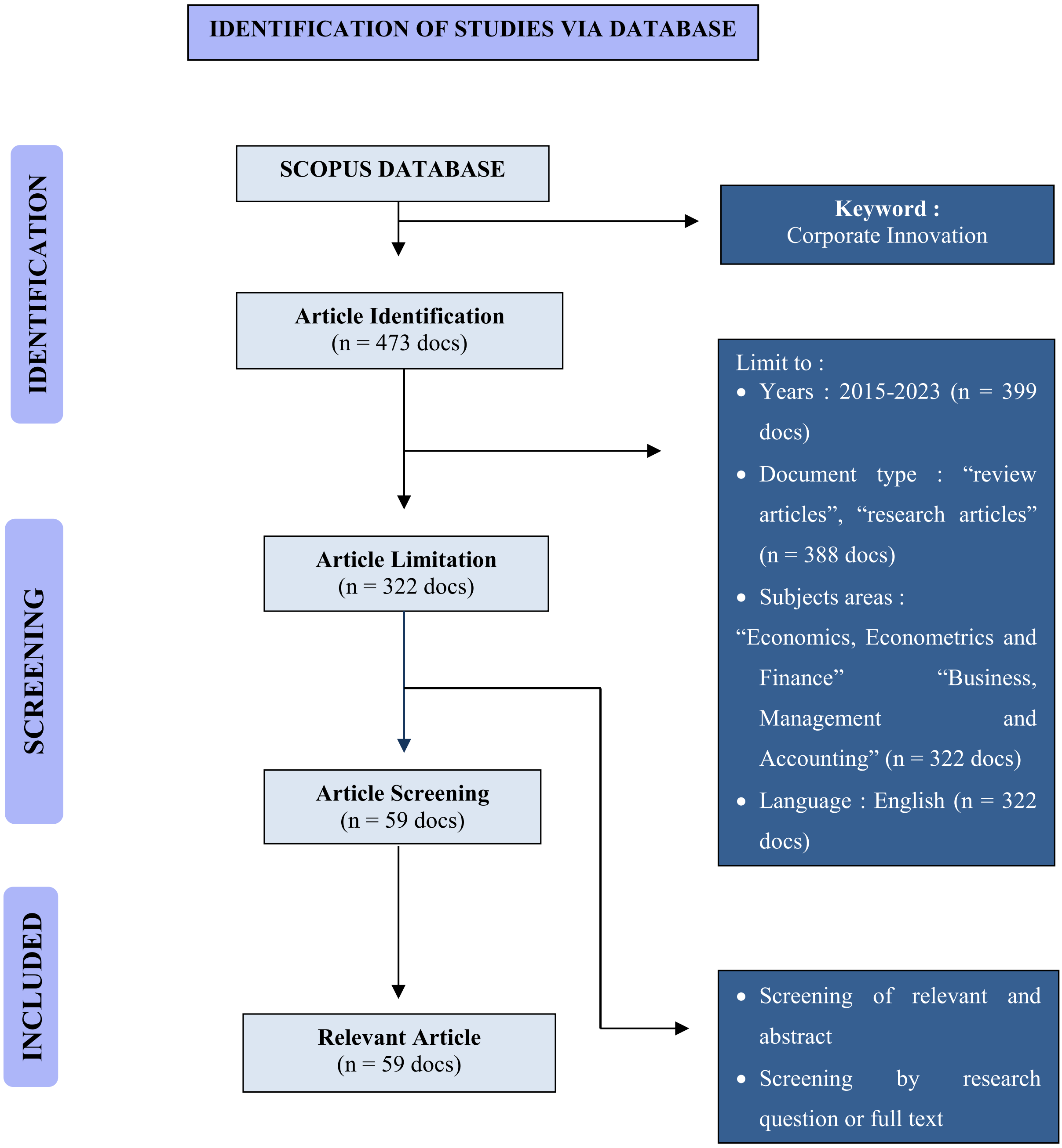

Figure 1. Flowchart PRISMA of Data Search Process
Source : Author Analysis (2023)