INFLUENCE OF PROACTIVE ESG STRATEGIES, SLACK RESOURCES, AND COLLECTIVE BRAIN ON ESG DISCLOSURE AND FIRM VALUE IN JAPANESE COMPANIES

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by

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LIST OF ABBREVIATIONS

ESG	Environment, Social and Governance
RBV	Resource-based view
DCT	Dynamic Capability Theory
PESGS	Proactive ESG strategy
VDT	Voluntary Disclosure Theory

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PENGARUH STRATEGI ESG PROAKTIF, SUMBER DAYA LEBIHAN, DAN PEMIKIRAN KOLEKTIF TERHADAP PENDEDAHAN ESG DAN NILAI FIRMA DALAM SYARIKAT JEPUN

ABSTRAK

Kajian ini meneroka pengaruh strategi ESG proaktif dan sumber rehat terhadap kualiti pendedahan ESG dan nilai firma dalam kalangan firma Jepun, berdasarkan sampel rentas bahagian sebanyak 107 syarikat. Keputusan menunjukkan bahawa kedua-dua PESGS dan sumber rehat meningkatkan nilai firma, dan kualiti pendedahan ESG berperanan sebagai pengantara antara PESGS dan nilai firma. Kajian ini juga memperkenalkan konsep otak kolektif, yang menyederhanakan hubungan antara sumber rehat dan nilai firma dengan memudahkan inovasi melalui perkongsian pengetahuan dan kemahiran dengan kepelbagaian budaya dalam kalangan pekerja firma. Berlandaskan kerangka pelbagai teori—pandangan berasaskan sumber, teori keupayaan dinamik, dan teori pendedahan sukarela—ia menangani jurang dalam literatur ESG dan menerangkan bagaimana amalan ESG dan kualiti pendedahan menjana nilai firma dengan kemudahan inovasi dalam firma oleh otak kolektif. Penemuan menegaskan peranan sumber strategik, keupayaan, dan inovasi dalam mencipta nilai jangka panjang melalui amalan ESG, sekaligus menawarkan panduan praktikal kepada pengurus, pelabur, dan sarjana yang ingin menyelaraskan inisiatif kelestarian dengan jangkaan pemegang taruh.

INFLUENCE OF PROACTIVE ESG STRATEGIES, SLACK RESOURCES, AND COLLECTIVE BRAIN ON ESG DISCLOSURE AND FIRM VALUE IN JAPANESE COMPANIES

ABSTRACT

This study explores the influence of proactive ESG strategies and slack resources on ESG disclosure quality and firm value among Japanese firms, based on a cross-sectional sample of 107 companies. The results show that both PESGS and slack resources enhance firm value, and that ESG disclosure quality serves as a mediator between PESGS and firm value. The study also introduces the concept of collective brain, which moderates the relationship between slack resources and firm value by facilitating innovation through shared knowledge and skills with cultural diversity among employees of firms. Grounded in a multi-theory framework—the resource-based view, dynamic capability theory, and voluntary disclosure theory—it addresses gaps in the ESG literature and explains mechanisms by which ESG practices and disclosure quality generate firm value with the facilitation of innovation in a firm by collective brain. The findings underscore the roles of strategic resources and capabilities, and innovation in creating long-term value through ESG practices, offering practical guidance for managers, investors, and scholars seeking to align sustainability initiatives with stakeholder expectations.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Japan has a longstanding tradition of integrating social contribution into business practice. As early as the 15th-century Warring States Period, merchants embraced the "good for three" ethos, holding that commerce should benefit the supplier, the seller, and the broader community. The core premise was that societal acceptance and support lead naturally to profitability (Nihira, 2022). Over time, as sustainability needs have intensified, companies—particularly in advanced economies—have increasingly adopted ESG management. The COVID-19 pandemic further underscored the imperative to weave sustainability into corporate strategy and culture for resilience. Evidence suggests that firms with strong ESG performance experienced less value erosion than their non-ESG counterparts.(Narula et al., 2024).

As another example, "Companies are regarded as public instruments of society" – Konosuke Matsushita, Founder of Panasonic Corporation. Companies provide employment and contribute to economic prosperity. By offering jobs, companies enable individuals to earn income and provide for their livelihoods. This, in turn, offers opportunities for self-realization and supports the needs of families and communities.

Secondly, companies fulfill societal demands by providing products and services. They produce essential goods such as food, clothing, housing, healthcare, and energy, which contribute to a more convenient and comfortable lifestyle for society. Furthermore, companies are expected to fulfill their social responsibilities. Within the framework of the SDGs, companies are required to prioritize environmental stewardship, social equity, and ethical business practices. By minimizing their environmental impact and actively addressing social issues, companies can exert societal influence. It is also important for companies to contribute to the development of local communities, not solely be driven by profit-seeking. Considering local needs and interests, companies are expected to engage in ESG in community development. This helps to build trust, ensure long-term sustainability, and contribute to the improvement of the overall community. Therefore, companies are considered as public instruments and play a crucial role in societal prosperity and development.

However, according to Friedman's perspective, proactive management of ESG issues may not be easily justified if ESG initiatives only impose costs on companies. From an investor's standpoint, one explanation is that poor ESG management reflects idiosyncratic risks associated with the company. Companies engaged in pollutive or discriminatory activities face penalties from regulators, boycotts from customers and suppliers, and potential employee sabotage, all of which can lead to a decrease in the company's value. By integrating ESG considerations into financial performance, companies can better serve the interests of their investors. This indicates that investors are considering not only financial performance but also the impact of ESG performance on the interests of other stakeholders, which ultimately affects the company's financial performance through ESG disclosure (Adams, 2017).

While ESG disclosure is used by firms' managers as a communication tool with society and stakeholders to provide information to assess ESG performance, including social impacts, social programs, and social policies, and to signal alignment to stakeholders' needs as well as seeking license to operate (Deegan, 2002), it is also value relevant (Khan, 2022). Due to the global initiatives of ESG, regardless whether they are mandatory or voluntary, investors are seeking more ESG information when making their investment decisions. This is because the information can reduce not only information asymmetry but also systematic and idiosyncratic market risks through lowering the risk of litigation and adverse market reaction (Sassen et al., 2016), in turn the cost of capital as well as the cost of debt (Malik & Kashiramka, 2024). In addition, ESG disclosure can be related to competitive advantage since a company offers sustainable solutions to environmental and social problems (Porter & Kramer, 2006; Mohammad & Wasiuzzaman, 2021).

Scholars commonly draw on stakeholder theory, agency theory, institutional theory, and the resource-based view (RBV) as foundational lenses for analyzing ESG performance (Martiny et al., 2024). Within this stream, the RBV—together with dynamic capability theory—positions ESG as a strategic mechanism for generating sustained, long-term value (Garriga & Melé, 2004). Past academic papers have suggested various economic benefits through ESG practices, including disclosure. Such benefits include attractiveness to investors, lower cost of capital, top talent recruitment and retention (Fernando & Lawrence, 2014), corporate reputation (Brammer & Millington, 2005), reduced energy and material consumption (Porter & VanDerLinde, 1995; Russo & Fouts, 1997), product differentiation and decreases in price sensitivity (Flammer, 2015), operational efficiency (Sharma & Vredenburg, 1998), a quality workforce (Greening & Turban, 2000), customer loyalty (Maignan et al., 1999), more consumer choice (Arora & Henderson, 2007), meeting institutional investors' preferences (Graves & Waddock, 1994) and higher product quality (Porter & VanDerLinde, 1995). However, empirical studies on the relationship between corporate financial performance, such as firm value and companies' ESG practices and disclosures, are mixed and not conclusive, though there are relatively more findings on a positive relationship (Khan, 2022; Al-Tuwaijri et al., 2003; Friede et al., 2015; Gallardo-Vázquez et al., 2019; Hou et al., 2016; Horváthová, 2010).

This is because companies with a higher level of sustainability not only need to be better on environmental and social factors, but also ensure the firm's value creation, suggesting the status of "it pays off to do good," but not all companies can attain this (Margolis et al., 2009). This implies that returns from ESG do not always cover its costs or there may be some conditions to realize "it pays off to do good."

A company has a strategic choice as to how proactive it is towards ESG. In the 1970s, Carroll's fundamental model of CSR (1979) suggested that the firm could be reactive, defensive, accommodative, or proactive to ESG and can choose to go beyond the minimum requirements to solve social problems not yet identified by society. Ullmann (1985) proposed the concept of strategic posture and indicated the influence of managers' stance, e.g., proactive or passive towards ESG, on financial performance and the quality of ESG disclosure of the firm since managers with a positive posture are involved proactively in ESG disclosure. Around the beginning of 21st century, as a part of stakeholder management, the concept of proactive environmental strategy (PES) emerged (Mishra & Yadav, 2021) which presumed that value creation results from the enhancement of internal efficiency and legitimacy from society though improved environmental performance of the company (Darnall et al., 2010). PES can be defined as voluntary business activities that go beyond regulations to lessen a company's negative effects on the environment (Mishra & Yadav, 2021), which could facilitate value creation (Porter & Kramer, 2006; Bhandari et al., 2022). The proactiveness towards ESG also affects the development and deployment of strategically critical resources and capabilities in creating firm value given various constraints in the internal and external environment (Mishra & Yadav, 2021).

Businesses face constraints in resources. Such constraints include natural, human and financial resources. Slack resources of a company can influence value creation through ESG practices and disclosure because, for example, financial slack is a factor affecting a firm's investment towards ESG (Aguilera-Caracuel et al., 2015; Waddock & Graves, 1997; Hart, 1995) and a firm with more resources can find ESG practices and disclosure more affordable (Moneva et al., 2019) and more managers of the firm can integrate ESG into the firm's strategy to create distinct resources and capabilities (Duque-Grisales & Aguilera-Caracuel, 2021).

Firms with strong sustainability practices should excel in environmental and social factors while ensuring value creation, supporting the idea that "it pays off to do good." However, not all companies achieve this (Margolis, Elfenbein, & Walsh, 2009). This suggests that returns from ESG may not always outweigh costs, and specific conditions may be required to realize its benefits.

Proactiveness towards environmental strategy (PES) is multidimensional and is founded on a variety of distinct, visible, and path-dependent processes (Aragón-Correa & Sharma, 2003; Chan et al., 2022) and it also needs the deployment of complex capabilities as well as a reorganization of the company's resources. These resources and capabilities are the basis for a proactive environmental strategy to gain unique resources with "valuable, inimitable, and with unique characteristics of causally ambiguous, path-dependent, and embeddedness" (Mishra & Yadav, 2021, p.3).

Meanwhile, the ability to quickly adapt to new opportunities and threats in the market is critical for firm value creation. This can be achieved through continuous innovation (Forsman, 2013; Mishra & Yadav, 2021) that makes a company's resources and capabilities harder to imitate (García-Morales et al., 2011; Bhandari et al., 2022). Collective brain theory suggests that people in a social group such as a company form network called "collective brain" through which the company could facilitate innovation through the interaction of knowledge and skills (Muthukrishna & Henrich, 2016; Schimmelpfennig et al., 2022). Innovations, as they are used in our societies, are an emerging characteristic of human's capacity for cultural learning (Schimmelpfennig et al., 2022; Muthukrishna & Henrich, 2016). Humans have cultural brains, which are brains that have evolved primarily for obtaining knowledge to solve problems, i.e., adaptive knowledge, and such adaptive knowledge can be obtained socially. The benefit of socially adaptive knowledge is that although individual humans seldom innovate new tools and techniques from scratch, a social group such as company gradually accumulates knowledge as people in the group learn from others and make improvements.

In the modern business world of Japan, the discussion on corporate responsibility emerged just after World War II (Mizuo, 2018). Tracing the history of corporate management in Japan, it can be seen as a lineage from environmental management to CSR management to ESG management. Since the 1980s, Japanese companies' consideration for the environment and society emerged with their response to global environmental issues. In the late 1980s, global environmental issues were becoming more serious and recognition spread throughout the international community. Following the United Nations Conference on Environment and Development (Earth Summit) held in 1992, there was progress in addressing environmental issues, corresponding to the "E" in ESG (Takehara, 2020).

The response of companies to environmental issues in the 1990s was called "Environmental Management." In 1992, the Japan Business Federation (Keidanren) dispatched a mission to the Earth Summit, and the momentum grew in the industrial sector for companies to address environmental issues as management challenges. After the bubble economy burst in the beginning of the 1990s, the Japanese economy plunged into a recession known as the "Lost 20 Years." The path for companies to survive in the recession was to promote themselves as entities pursuing a "better environment," which the Japanese people have become sensitive to the four major pollution diseases. In the 2000s, in addition to consideration for the environment, there was an increasing demand for companies to address the negative impacts of their activities on society, such as improving working conditions for employees and correcting various inequalities. Furthermore, it was suggested that companies should actively tackle social issues through the products and services they offer. In Europe and the United States, these expectations were demonstrated through consumer behavior and socially responsible investing (SRI), while policies were promoted in the EU and the UK to encourage companies to actively engage in CSR management. Based on these trends, Japanese companies gradually began to address social issues as management issues, building on the foundation of environmental management. This is known as CSR management (Takehara, 2020). The CSR management of Japanese companies was concentrated in 2003, as many companies established CSR policies, appointed CSR officers, and established dedicated CSR departments. Therefore, 2003 is also called the "first year of CSR" in Japan (Inoue, 2017). Following the publication of ISO 26000 in 2010, Porter proposed the concept of creating shared value (CSV) in 2011, which quickly spread throughout the Japanese business sector. CSV involves companies addressing social issues as part of their business operations and creating social value by solving these issues while also generating economic value as a result of their business activities. It aims to achieve the simultaneous creation of social and economic value by addressing social issues as a business opportunity. This concept is highly compatible with the characteristics of a "for-profit economic enterprise" and many companies have adopted the CSV approach (Takehara, 2020).

In 2015, the international community reached an agreement on the Paris Agreement, which addressed measures to address global warming beyond 2020. In addition, the Sustainable Development Goals (SDGs), a global challenge for the international community to address by 2030, were announced. Based on these, many Japanese companies are currently selecting the areas they should focus on, incorporating them into their management and business strategies, and addressing them as ESG management issues. In addition, institutional investors are now evaluating and supporting such companies through ESG investment initiatives (Inoue, 2017).

According to the research on ESG disclosure practices of Nikkei 225 constituents conducted by KPMG Japan (2021b), 223 companies (99%) disclose ESG information at least either in a sustainability report, Integrated Reports (IR) or on their website, of which 138 companies have third-party assurance but only 38 companies adopt GRI Standards, either Comprehensive or Core. ESG information is mostly disclosed through sustainability reports and IR or either of both. While 169 companies (76%) provide materiality and their identification process, 24 companies (11%) do not disclose anything on materiality. In addition, many Japanese companies, consisting of global top 250 companies, have no biodiversity risk information (KPMG, 2021b). This implies that Japanese companies disclose ESG information based on an integrated reporting framework or TCFD recommendations, or the so-called principle base disclosure, but these are not detailed enough compared to compliance with rule-based disclosures such as GRI standards or SASB standards covering various ESG factors.

1.2 Problem Statement

Past studies have addressed the relationship between ESG and firm value (Khan, 2022; Al-Tuwaijri et al., 2003; Friede et al., 2015; Gallardo-Vázquez et al., 2019; Hou et al., 2016; Horváthová, 2010). Friede et al. (2015) reviewed over 2,000 past studies and found that 90% of them reported a positive association between ESG practices, including disclosure and firm performance. Many recent studies, for example Mohammad and Wasiuzzaman (2021), have found a positive relationship between ESG disclosure and Tobin's Q in the Malaysian case, while for US-listed S&P 500 companies between 2009 and 2018, ESG disclosure was found to improve firm performance, while environmental disclosure was found to decrease firm performance (Alareeni & Hamdan, 2020). For investors' returns, ESG activities as proxied by CSR data from GoodBankers in Japan are positively related to long-term stock returns but there have been no identified differences in the short-term (Shirasu & Kawakita, 2021).

In recent research on the relationship between ESG and firm value, stakeholder theory has tended to be applied in theoretical development (Khan 2022). Typically, ESG performance scores are used as a proxy of stakeholder management. The higher the ESG performance score, the better the stakeholder management and the higher the firm performance and value. Meanwhile, it can be argued that a higher ESG performance is a result of resources and capabilities developed and the proactiveness towards ESG adopted by a firm within their specific competitive business environment.

The Resource-Based View (RBV) theory assumes that the success of a company hinges on its possession of a distinct array of resources essential for attaining and sustaining a competitive edge (Wernerfelt, 1984) and resources have been impacted from corporate strategies (Barney, 1991; Chan et al., 2022).

Proactive Environmental Strategy (PES) can refer to a deliberate approach adopted by organizations to actively address environmental challenges and opportunities in their operations and decision-making processes. This strategy involves taking pre-emptive measures to minimize negative environmental impacts, conserve natural resources, and promote sustainability. Proactive environmental strategies may include initiatives such as reducing carbon emissions, conserving water and energy, minimizing waste generation, implementing eco-friendly technologies, and engaging stakeholders to foster environmental stewardship. Overall, the goal is to go beyond compliance with regulations and actively seek ways to contribute positively to the environment. It can be comprehended as systematic pattern of the voluntary practices and initiatives that go beyond regulatory requirements to improve environmental performance and can be categorized by three practices: planning and organizational practices, operational practices, and communicational practices (Aragón-Correa & Rubio-López, 2007; Mishra & Yadav, 2021). However, in thinking of global needs for ESG, firms integrate not only environmental but also societal and governance factors, so called ESG, in their operations. Therefore, it is critical to discuss the effect of a proactive ESG strategy instead of only focusing on the environment perspective in assessing the impact to firm disclosure and value.

Slack resource is another important attribute in RBV because it provides firms with the flexibility and capacity to respond to unforeseen opportunities and challenges

(Bourgeois, 1981), thereby enhancing their ability to create a sustainable advantage. Slack resources also prompt various forms of strategic behavior, such as development strategies (Jiao et al., 2022) and more substantial innovation efforts (Tabesh et al., 2019). However, the ultimate impact of resource slack on firm performance remains uncertain, as previous research findings differ depending on the type of slack resources examined and the economic context of the firm (Luu et al., 2023). Transient slack introduced by George (2005) focuses on the temporary nature of slack, while high- and low-discretion slack measure absolute resource levels in comparison to peer firms. This distinction holds theoretical significance and is crucial for two reasons. Firstly, the concept of transient slack separates slack resources from the resources placed on operations, highlighting the temporal patterns of resource generation and deployment as organizations evolve within a dynamic competitive environment. Secondly, by utilizing transient slack, it becomes possible to identify the unique effects of resource availability and resource demand on performance.

Martiny et al. (2024) map the internal and external drivers and the theoretical foundations shaping ESG practices and disclosure, underscoring the linkage between a firm's ESG strategy and resource development. Although ESG disclosure quality is value-relevant (Khan, 2022), they argue for a disclosure theory that bridges firms' internal and external environments. This study addresses that gap by empirically examining how ESG strategy and resources relate to firm performance via ESG disclosure. Meanwhile, Narula et al. (2024) categorize sustainable finance research within a 2×2 matrix to examine connections among ESG scores, ESG reporting, investment management, and firm performance, revealing mixed and non-linear relationships. These interdependencies imply that multiple variables operate concurrently, needing a multi-structural modeling approach to capture both direct and indirect effects.

Therefore, there is a research need to study the influence of both a proactive strategy as well as slack resources simultaneously to identify whether the firm can create value through their ESG practices, including quality disclosure from RBV. In addition, while recent studies of proactive strategies have focused on surveys developed by researchers to test the impact on financial performance, the measurement does not come from secondary financial data (Chan et al., 2022; Danso et al., 2019; Dai et al., 2017; Zhang et al., 2019; Arif et al., 2021).

Meanwhile, in previous studies ESG disclosure has mostly been proxied by an ESG disclosure score provided by independent rating agencies such as Bloomberg and Thomson Reuters. These scores are calculated based on publicly available information, including companies' annual reports, sustainable reports, press releases, websites and independent surveys by third parties. A range of scores are provided to each criterion developed by the rating agencies (Rahman & Alsayegh, 2021). The major drawback of this kind of ESG score is the lack of consideration given to the quality of disclosed ESG information by each company. The score will be higher as long as information is disclosed regardless of the quality of that information. In other words, this may create so-called "green-washing" to give stakeholders a mistaken impression that the company is taking ESG initiatives (Windolph, 2011; Uyar et al., 2020). The quality of non-financial information such as ESG disclosure is a critical factor affecting firm value (Plumlee et al., 2015) because under the voluntary disclosure theory, higher quality ESG disclosure signals higher management performance on ESG practices (Hummel & Schlick, 2016) and it is value related (Clarkson et al., 2008; Li et al., 2023). Few studies have been conducted on the relationship between the quality of ESG disclosure and firm value.

Historically, in Japan, there have been crossholding of shares by group companies to maintain the long-term stability of corporate governance and to balance the interests of various stakeholders where banks were the main finance provider. However, the introduction of consolidated financial statements facilitated the disposal of such crossholding in the 2000s and more foreign investors have held interests in Japanese companies. These require more transparent accountability of managers to reduce information asymmetry (Kodama & Takamura, 2014). They also prefer higher ESG performance to avoid risk and to reduce agency costs because they have less information compared to domestic investors (Suto & Takehara, 2018). This implies that although the pressure from foreign investors is a driver to facilitate non-financial disclosure practices in Japan, there is the weak practice of quality disclosure as seen in the lower percentage of detailed ESG disclosures. Therefore, there is a research gap on how the quality of ESG disclosure impacts firm value in Japan.

Innovation—an essential driver of competitive advantage and firm value—is shaped by factors such as diversity (Elia et al., 2020) and corporate governance (Al-Maliki et al., 2023). Past papers have also discussed the importance of innovation for long-term value creation since this can help develop unique resources and capabilities (Porter, 1990; Zameer et al., 2022). Shirasu et al. (2021) argued that proper innovation management leads to long-term higher share return. Drivers facilitating innovation include an M&A strategy, international diversification, cultural differences from the home country and international R&D functions (Elia et al., 2020). This is also because, from RBV, innovation can contribute to create value through making a company's resources and capabilities harder to imitate (García-Morales et al., 2011).

The concept of collective brain suggests that people within a social group, such as a company, form networks through which knowledge and skills are shared, fostering innovation (Muthukrishna & Henrich, 2016; Schimmelpfennig, Razek, Schnell, & Muthukrishna, 2022). However, past studies have tended to omit the discussion on how innovation emerges in a company (Ambec et al., 2011; Medeiros et al., 2022) including collective brain.

Finally, studies on Japanese companies are limited (Yuyama et al., 2019). This means that it is not relatively conclusive in Japan that ESG practices and disclosures could contribute to the value creation of commercial firms compared to the United States and European countries. Ideally speaking, all the Japanese companies can be the population of this study, however, those listed companies in the first section of the Tokyo Stock Exchange could serve as the population of this study in thinking of information availability, especially ESG disclosure.

Hence, the primary purpose of this study is to address these research gaps and explore whether a proactive ESG strategy and the slack resources of a company can deliver long-term higher firm value through quality ESG disclosure with the facilitation of innovation in the firm through collective brain.

1.3 Research Objectives

This is a relational study with 11 research objectives. The primary objective is to answer questions related to the influence of a proactive ESG strategy (PESGS) and slack resources on the quality of ESG disclosures and the value of Japanese firms using resource-based view (RBV) and dynamic capability theory (DCT). The secondary objective is to examine how collective brain facilitates the emergence of innovation in a company as a source of the development of unique resources and capabilities. The 11 research objectives are stated as follows:

1. To examine the relationship between firms' slack resources and the quality of ESG disclosure in Japan
2. To examine the relationship between firms' proactive ESG strategies and the quality of ESG disclosure in Japan
3. To examine the relationship between firms' slack resources and the value of Japanese firms
4. To examine the relationship between firms' proactive ESG strategies and the value of Japanese firms
5. To examine the relationship between the quality of ESG disclosure and the value of Japanese firms
6. To examine whether the quality of ESG disclosure mediates the relationship between firms' slack resources and the value of Japanese firms
7. To examine whether the quality of ESG disclosure mediates the relationship between firms' proactive ESG strategies and the value of Japanese firms
8. To examine if collective brain enhances the influence of firms' slack resources on the quality of ESG disclosure in Japan
9. To examine if collective brain enhances the influence of firms' proactive ESG strategies on the quality of ESG disclosure in Japan

10. To examine if collective brain enhances the influence of firms' slack resources on the value of Japanese companies
11. To examine if collective brain enhances the influence of firms' proactive ESG strategies on the value of Japanese companies

1.4 Research Questions

Based on the research objectives above, this study investigates the relationship between the quality of ESG disclosure and firms' value with the influence of firms' proactive ESG strategies by addressing the following questions:

1. Is the quality of ESG disclosure affected by slack resources of Japanese firms?
2. Is the quality of ESG disclosure affected by proactive ESG strategies of Japanese firms?
3. Do firms with higher slack resources have higher value compared to those with fewer slack resources in Japan?
4. Do firms with more proactive ESG strategies have higher value compared to those with less proactive ESG strategies in Japan?
5. Do firms with a higher quality of ESG disclosure have higher value compared to those with lower quality ESG disclosure in Japan?
6. Could the quality of ESG disclosure mediate the relationship between firms' slack resources and the value of Japanese firms?
7. Could the quality of ESG disclosure mediate the relationship between firms' proactive ESG strategies and the value of Japanese firms?

8. Could collective brain enhance the influence of firms' slack resources on the quality of ESG disclosure in Japan?
9. Could collective brain enhance the influence of firms' proactive ESG strategy on the quality of ESG disclosure in Japan?
10. Could collective brain enhance the influence of firms' slack resources on firms' value in Japan?
11. Could collective brain enhance the influence of firms' proactive ESG strategy on firms' value in Japan?

1.5 Significance of the Research

This study is significant because it can provide theoretical and practical contributions, as elaborated below.

1.5.1 Theoretical Contributions

This study contributes to the body of knowledge in value creation through ESG practices, including ESG disclosure, by applying proactive ESG strategy (PESGS) as the broader concept of a proactive environmental strategy (PES) and fulfilling the research gap in the interaction of firms' PESGS and slack resources and in the facilitation of innovation in a firm based on collective brain as the enhancer of innovation in Japan.

The study extends the proactive environmental strategy (PES) to proactive ESG strategy (PESGS), broadening the strategic lens from an environmental focus to a tri-dimensional ESG orientation. In line with the PES tradition of beyond-compliance, firm-led practice configurations spanning planning, operations, and communication (Aragón-Correa and Rubio-López, 2007; Mishra & Yadav, 2021), PESGS captures systematic initiatives through which firms build resources and capabilities. Grounded in RBV and DCT, this extension clarifies how proactive ESG strategies shape valuable, rare, and inimitable resource bundles and capability development paths that underpin competitive advantage (Wernerfelt, 1984; Barney, 1991; Mishra & Yadav, 2021; Chan et al., 2022).

By introducing the collective brain concept, the study illuminates a novel capability-based mechanism that conditions ESG value creation. Drawing on the idea that diversity in knowledge, skills, and interaction fosters problem-solving and innovation—the bedrock of VRIN-O resources and dynamic capabilities (Muthukrishna & Henrich, 2016; Henrich, 2015; García-Morales et al., 2011).

The study develops a framework combining RBV, DCT, and VDT. RBV explains the mechanisms through which PESGS and slack resources shape resource endowments and erect barriers to imitation (Wernerfelt, 1984; Barney, 1991). DCT clarifies the processes by which firms sense, seize, and reconfigure in response to ESG-driven opportunities and constraints, translating strategy into performance under environmental dynamism. VDT supplies the information-economics rationale for disclosure quality—not just quantity—to reduce information asymmetry, signal managerial quality, and be priced by capital markets (Clarkson et al., 2008; Plumlee et al., 2015; Hummel & Schlick, 2016; Li et al., 2023). This synthesis advances beyond single-theory treatments by tracing the connections from resources and capabilities to value through the channel of disclosure quality—particularly salient in Japan's regime of market expectations and institutional norms.

The study also contributes market-based evidence from Japan—a major economy that remains comparatively understudied relative to US–EU contexts—on the relationship between ESG practices including ESG disclosure quality and firm value. Japan's institutional trajectory—declining cross-shareholdings, rising foreign ownership, TSE governance reforms, and rapid diffusion of integrated reporting and TCFD—amplifies expectations for decision-useful ESG information (Kodama & Takamura, 2014; Suto & Takehara, 2018). Results show that investors differentiate on the quality of ESG disclosure, consistent with VDT's predictions about capital-market relevance (Clarkson et al., 2008; Plumlee et al., 2015; Li et al., 2023), thereby extending the external validity of ESG–value relations to the Japanese market.

In addition, this study applies the concept of transient slack for slack resources since it separates slack resources from the resources placed on operations, highlighting the temporal patterns of resource generation and deployment as organizations evolve within a dynamic competitive environment and it enables to identify the unique effects of resource availability and resource demand on performance.

1.5.2 Practical Contributions

The outcomes of this study are valuable for corporate managers, investors, analysists, and academia because they enable a comprehensive understanding of mechanisms that firm value is created through ESG. Proactive ESG strategies are associated with both higher-quality disclosure and enhanced firm value, suggesting managers to position ESG as a strategic, beyond-compliance agenda rather than a reporting obligation. Prioritizing PESGS implies deliberate investments in ESG-related capabilities, governance, and cross-functional processes aligned with RBV/DCT logics (Wernerfelt, 1984; Barney, 1991; Tabesh et al., 2019).

Markets price disclosure quality over disclosure volume, firms strengthen the decision usefulness of ESG communications. This includes tighter integration of strategy, targets, and outcomes, while the moderating role of collective brain suggests managers can create more value from slack resources by cultivating knowledge diversity and interaction—through cross-functional teams, inclusive talent strategies, and external knowledge ties—thereby accelerating ESG-related innovation and execution (Muthukrishna & Henrich, 2016; García-Morales et al., 2011; Schimmelpfennig et al., 2022).

For investors, this study encourage deeper assessments of firms' ESG strategic proactivity and disclosure quality rather than reliance on aggregated third-party scores, with attention to organizational capabilities that enable resource-to-value conversion in ESG (Plumlee et al., 2015; Li et al., 2023), while for policymakers and standard setters can foster value-relevant disclosure by emphasizing quality attributes in guidance and oversight, supporting integration (e.g., TCFD) and comparability, while encouraging firm-level capability building that complements formal transparency requirements in Japan's markets.

1.5.3 Methodological Contributions

First of all, this study overall contributes by application to Japanese context. Also, it contributes to the measurement of ESG disclosure quality of Japanese companies based on a more comprehensive quality assessment framework proposed by Arvidsson and Dumay (2022). Past papers often used the ESG disclosure scores provided by independent rating agencies such as Bloomberg and Thomson Reuters as a proxy of ESG disclosure, while there have been limited studies on the impact of the quality of ESG disclosure on firm value in Japanese context. For example, Saygili (2022) performed content analysis by applying GRI standards on environmental disclosure, while Yu (2017) applied China CSR Honor Roll Expert Evaluation System in the content analysis.

Including the above examples, past papers have tended to treat ESG disclosure as an independent variable to firm value but this paper treats ESG disclosure as a mediating variable since the quality is also affected by slack resources and a proactive ESG strategy. In addition, slack resources and a proactive ESG strategy influence the firm's ESG practices, and therefore both slack resources and a proactive ESG strategy will affect firm value through ESG disclosure. Therefore, this study applies a multi-structural path analysis, conducted to study the influence of slack resources and a proactive ESG strategy on firm value with the effect on the quality of ESG disclosure.

1.6 Scope of the Study

This study concentrates on the firm value of listed companies in Japan focusing on Toyo Keizai's ESG-related survey as a proxy of a proactive ESG strategy. Therefore, this study considers PESGS and slack resources as independent variables that have impacts on firm value, the dependent variable. Meanwhile, the quality of ESG disclosure and collective brain are identified as a mediator and as a moderator respectively. Japan was chosen as the country of this study because of the increasing needs on ESG disclosure for sustainable development and ongoing improvements by stock exchanges and regulators in enhancing ESG reporting environments. Furthermore, corporate managers, researchers and investors have paid considerable attention to whether ESG practices and disclosure could create firm value in Japan, which is seemingly an accepted notion in Western countries. The sample size of this study is 107 companies listed on stock exchanges in Japan in 2021 and the sample was selected from 500 companies whose ESG-related survey score is publicly available from Toyo Keizai. This study utilizes secondary data available from the Thomson Reuters database and the ESG disclosure of Japanese listed companies. This study may be significant since, as far as the author is aware, there have been no studies that have applied ESG disclosure quality as a mediator and also extensively focused on the effect of the mediator with the firm's slack resources as well as PESGS to firm value.

1.7 Definitions of Key Terms

1.7.1 ESG

The principle of Environmental, Social and Governance (ESG) is a framework including environmental (E), social (S) and governance factors (EBA, 2020). ESG originated from responsible investment, is defined as "a strategy and practice to incorporate environmental, social and governance (ESG) factors in investment decisions and active ownership" (PRI, 2023). Hence, ESG normally refers to a standard and a strategy applied by investors to evaluate a company's operations and the future financial performance (Li et al., 2021).

1.7.2 ESG disclosure

ESG disclosure is a form of non-financial disclosure of ESG factors (Skouloudis et al., 2014). Gray et al. (1988, p. 9) defined non-financial disclosure as:

> the process of communicating the social and environmental effects of organizations (particularly companies) beyond the traditional role of providing a financial account to the

owners of capital, in particular shareholders. Such an extension builds upon the assumption that companies do have wider responsibilities than simply to make money for their shareholders.

1.7.3 Quality of ESG disclosure

The concept of "quality," in fact, is a delicate one, both in terms of the variables to be taken into consideration and of measurement. In basic terms, the concept of quality can be linked with all the requisites for the document itself, namely, availability, accessibility, comprehensibility, rapidity, relevance, significance, completeness, clarity, exhaustiveness, truth, verifiability, correctness, neutrality, impartiality and objectivity (Venturelli et al., 2019). This study adopts Arvidsson and Dumay's (2022) attributes of the quality of ESG disclosure comprising of "Position: describes the current status of the initiative", "Development: shows progress related to the initiative" and "Performance: highlights target related to the initiative."

1.7.4 Proactive ESG strategy (PESGS)

This study extends the definition of proactive environmental strategy (PES) to ESG. Based on PES, PESGS can be comprehended as systematic patterns of the voluntary practices and initiatives that go beyond the regulatory requirements to improve ESG performance and can be categorized by three practices: planning and organizational practices, operational practices, and communicational practices (Aragón-Correa & Rubio-López, 2007; Mishra and Yadav, 2021).

1.7.5 Slack resources

This study adopts the concept of transient slack proposed by George (2005). Transient slack is defined as “excess resources available after resource demands for operations have been met” (George, 2005, p. 664) and “it emphasizes the temporal patterns of an organization’s resource generation and deployment profiles, as the goals and the needs of an organization evolve in a dynamic competitive landscape (George, 2005, p. 664).

1.7.6 Collective brain

A social network can work as collective brain (Muthukrishna & Henrich, 2016). Muthukrishna and Henrich (2016) argued that “individuals with brains evolved for, and entirely dependent on, the acquisition of culture – cultural brain” and such cultural brains of people in a social group form a collective brain that has “evolved to selectively seek out adaptive knowledge and socially transmit solutions” (Schimmelpfennig et al., 2022). This facilitates innovations through such cultural learning ability (Muthukrishna & Henrich, 2016).

1.7.7 Firm value

In this study, firm value refers to market-based financial performance. It is preliminary used as a proxy for firm value because of its long-term and forward-looking nature, reflecting investors’ anticipation of a company’s future performance (Al-Matari et al., 2014; Okafor et al., 2021).

1.8 Structure of the Thesis

Chapter 1: Introduction