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## **Governance Dynamics and the Human Capital Disclosure-Engagement Paradox: A Japanese Perspective**

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**Keywords:** Corporate governance, human capital disclosure, employee engagement, sustainability, Japan.

# **Governance Dynamics and the Human Capital Disclosure-Engagement Paradox: A Japanese Perspective**

## **Abstract**

**Purpose:** This paper delves into the nuanced relationship between corporate governance dynamics, human capital disclosure, and their impact on the competitive positioning of Japanese listed companies. The study primarily examines how these factors influence employee engagement, a critical determinant of overall business competitiveness.

**Design/Methodology/Approach:** Panel data for Japanese listed companies for FY 2019 to FY 2021 were analyzed using multiple regression analyses with two models.

**Findings:** The results indicate that the presence of independent and female board members has a positive impact on human capital disclosure. Surprisingly, employee engagement was found to be negatively related with human capital disclosure, signifying a potential trade-off between transparency and engagement.

**Originality/Value:** Amidst the escalating emphasis on non-financial information and corporate social responsibility, this paper unveils a previously underexplored aspect of Japanese corporate competitiveness. Specifically, this study offers a fresh empirical perspective on the relationship between corporate governance, human capital disclosure, and employee engagement in Japanese listed companies, a topic with limited academic research and no legal regulations in Japan. The findings have significant implications for companies seeking to enhance their human capital disclosure and employee engagement practices, especially in light of the growing focus on non-financial information and social responsibility.

**Keywords:** Corporate governance, human capital disclosure, employee engagement, sustainability, Japan

## 1. Introduction

In the rapidly evolving business landscape, understanding the determinants of competitiveness is paramount. Notably, corporate governance, human capital disclosure, and employee engagement have emerged as cornerstones that influence the competitive standing of firms (Abdelkader et al., 2024; Al Frijat et al., 2024; Amin et al., 2023; Bilal et al., 2023). Effective corporate governance mechanisms are pivotal in ensuring that firms are steered in directions that not only satisfy shareholders but also elevate a firm's competitive position (Alshbili et al., 2021; Boulhaga et al., 2023; Bufarwa et al., 2020; Shleifer & Vishny, 1997). Concurrently, human capital has been positioned as a prime catalyst for competitive differentiation in modern businesses, underlining the value of intangible assets in driving competitive advantage (Barney, 1991; Becker, 1964). Engaged employees further intensify this competitive advantage by amplifying productivity, curbing attrition rates, and bolstering profitability (Kahn, 1990; Harter et al., 2002).

Despite the increasing recognition of the importance of these factors, the relationship between corporate governance mechanisms, human capital disclosure, and employee engagement remains largely unexplored, particularly in the context of Japanese firms. While many previous studies have examined the impact of corporate governance mechanisms on non-financial information disclosure (Elmagrhi et al., 2019; Hassan et al., 2021; Khatib et al., 2021), few studies have investigated the relationship between corporate governance mechanisms and human capital information disclosure (Kolk et al., 2010). Furthermore, existing studies on human capital disclosure have primarily focused on its impact on shareholder value, with little attention given to its potential impact on employee engagement (Bushman et al., 2004). Therefore, the primary aim of this study is to investigate the relationship between corporate governance mechanisms, human capital disclosure, and employee engagement in the top 100 listed companies in Japan. Specifically, this study seeks to examine whether independence on the board of directors, the proportion of female board members, the number of board members, and the number of board meetings held per financial year are positively associated with the disclosure of human capital information. Additionally, this study aims to investigate whether human capital disclosure influence employee engagement.

The motivation for this study comes from the need to understand how corporate governance mechanisms and human capital disclosure can impact employee engagement, which is a critical determinant of business competitiveness. Furthermore, this study addresses a gap in the literature by exploring the relationship between governance mechanisms and

human capital information disclosure for Japanese firms, which has not been previously studied. The development of IT technology also has transformed the way businesses create value, shifting the emphasis from tangible assets to intangible assets, particularly human capital. Rajan and Zingales (2000) argued that as a result of this shift, corporate governance should prioritize stakeholder interests over shareholder interests. This trend has led to a growing debate on the need for and effectiveness of human capital disclosure in developed countries. In response, the SEC has mandated the disclosure of information on employees in the US, and the EU also requires disclosure through the Non-Financial Information Disclosure Directive (U.S. Securities and Exchange Commission, 2020; European Union, 2014). However, in Japan, there are currently no regulations or definite guidelines on human capital disclosure, and while some firms make voluntary disclosures because they view information on human capital as essential to stakeholders, there is a wide range among firms in terms of the content of disclosures.

Japan offers a unique and compelling context for this study for several reasons. Firstly, its distinct corporate governance model, marked by long-term stability and consensus decision-making, contrasts sharply with Western approaches, providing a rich ground for comparative analysis (Ahmadjian, 2007). Secondly, Japanese cultural values, like group harmony and lifetime employment, significantly influence human capital management, offering a unique perspective on employee engagement and disclosure practices (Lin et al., 2012). Japanese corporate culture plays a significant role in shaping governance and disclosure practices. The cultural emphasis on harmony, respect for authority, and group cohesion influences how Japanese companies approach decision-making, stakeholder engagement, and information sharing. These cultural norms can both facilitate and hinder transparency and accountability, depending on how they are navigated within the corporate governance framework. Thirdly, as the world's third-largest economy, Japan's corporate practices have substantial global implications, making it an important focus for understanding broader economic and business trends (Sciarelli et al., 2021). Finally, the evolving landscape of employee engagement in Japan, amidst traditional work ethics and modernization pressures, presents a fertile area for research, offering insights into the dynamics of employee motivation and productivity (Abeysekera, 2008). These aspects collectively underscore Japan as an intriguing and significant study setting. The theoretical foundation of this study is based on stakeholder theory (Freeman, 2010), which suggests that firms have an obligation to disclose information not only to shareholders but also to other stakeholders, such as employees. The study also draws on agency theory

(Jensen & Meckling, 1976), which suggests that corporate governance mechanisms can reduce agency costs by aligning the interests of management and shareholders.

The findings of this study suggest that independence on the board of directors and the proportion of female board members are positively associated with the disclosure of human capital information, while no significant relationship is found for the total number of board members or the number of board meetings. Moreover, the study finds that human capital disclosure mediates the relationship between corporate governance mechanisms and employee engagement, indicating that firms with effective governance mechanisms and higher levels of human capital disclosure are likely to have higher levels of employee engagement.

The contributions of this study are twofold. First, it provides new evidence on the relationship between corporate governance mechanisms, human capital disclosure, and employee engagement in the context of Japanese firms – a nexus that holds profound implications for business competitiveness. Second, this study provides insights into how human capital disclosure can influence employee engagement, highlighting the importance of human capital disclosure as a key factor in enhancing employee engagement. Although numerous studies have been conducted on corporate governance and human capital disclosure, with mixed results across countries, there has been little research on the relationship between the two in Japanese firms. This study fills this gap by examining the relationship between corporate governance mechanisms and human capital disclosure.

The paper is structured as follows. Section 2 is a literature review which explains the theoretical background of each of corporate governance, human capital disclosure, and employee engagement, and formulates hypotheses based on previous empirical studies. Section 3 describes the research methodology used to test the hypotheses. Section 4 analyzes the results derived from the methodology. Finally, Section 5 concludes the paper and discusses the implications of the study.

## **2. Literature review and hypotheses development**

### ***2.1 Literature review***

The importance of human capital disclosure from a corporate governance perspective has been widely recognized in recent years (Abdi et al., 2022; Elamer & Boulhaga, 2024; Ezeani et al., 2022, 2023a, 2023b; Diwan & Amarayil Sreeraman, 2023; Hasan et al., 2021; Hoang, 2023). The demand for such disclosure is not only due to the need to protect shareholder interests but also to enhance corporate reputation and meet growing CSR expectations (Liu et al., 2022;

Prasad et al., 2017; Singh et al., 2021; Wang & Shao, 2023). Human capital emerges as a paramount intangible asset, with its pivotal role in spawning competitive advantages underlined by numerous scholars. As Dalwai et al. (2022) and Kamukama (2013) have highlighted, intellectual capital significantly influences firm stability, risk-taking, and overall competitiveness. Furthermore, the composition of human capital is intricately linked with firm performance, especially in sectors like manufacturing (Seclen-Luna et al., 2020). This perspective is expanded by Uslu (2022), who argues that intellectual capital plays a cardinal role in the financial development of sectors such as banking. Concurrently, the vitality of employee engagement cannot be overemphasized. It stands as a critical pillar for firms aiming to magnify productivity, curtail employee attrition, and bolster profitability (Kahn, 1990; Harter et al., 2002). The intricate dynamics between national intellectual capital and various economic facets further reiterate its centrality, as reflected in studies by Tran Pham (2023) and Vo & Tran (2023). Corporate governance mechanisms are believed to have a significant impact on human capital disclosure, and several studies have examined this relationship empirically. Li et al. (2008) found a significant association between corporate governance and the disclosure of intellectual capital, including human resources, in UK firms. Similarly, Cerbioni and Parbonetti (2007) found a correlation between corporate governance systems and intellectual capital disclosure in biotechnology firms in Europe. However, while the impact of corporate governance on human capital disclosure has been established, the specific mechanisms that promote disclosure are less well understood. It is therefore necessary to investigate what type of governance system influences disclosure and the actual conditions behind such systems.

Studies on the impact of corporate governance on human capital disclosure have yielded mixed results. For instance, Tejedo-Romero and Araujo (2020) found that board diversity, as indicated by the high number of female directors, was positively associated with increased disclosure in Spanish-listed companies. However, the presence of independent directors was found to be less relevant for voluntary human capital disclosure. Furthermore, a high number of board meetings, especially additional extraordinary ones, were significant for lower levels of disclosure, as it may represent inefficiency in board meetings. In contrast, Li et al. (2008) found that the composition of the board of directors was significantly related to intellectual capital disclosure in UK firms. In particular, the presence of independent directors was found to function as part of the monitoring system, and CEO duality and board shareholding were also identified as variables linked to intellectual capital disclosure indicators. Similarly, Cerbioni and Parbonetti (2007) found a positive correlation between the rate of

independent directors and the disclosure of internal structure in European biotech firms in the pre-regulatory period. However, other studies have shown that the presence of independent directors may not play a significant role in promoting human capital disclosure. Buallay and Hamdan (2019) found that the number of board meetings and firm size were the most important factors affecting human capital disclosure for listed firms in Saudi Arabia, where disclosure is not mandatory. Similarly, Soriya and Kumar (2021) found that firm size and the number of board meetings were significant predictors of human capital disclosure in Indian listed firms.

Overall, the existing literature suggests that corporate governance mechanisms, such as board diversity, the presence of independent directors, and the number of board meetings, play an important role in promoting human capital disclosure. However, the specific mechanisms that promote disclosure may vary depending on the regulatory environment and cultural context. Further research is needed to understand the conditions under which specific governance mechanisms are most effective in promoting human capital disclosure, especially in countries where disclosure is not yet mandatory.

Japan's corporate governance and disclosure landscape is a complex interplay of traditional cultural values, evolving institutional frameworks, and global business trends (Nakajima & Inaba, 2022; Suto & Takehara, 2020). Understanding this landscape requires a nuanced appreciation of the unique Japanese context, where historical norms and modern corporate practices coexist and influence each other. Japanese corporate governance is characterized by a blend of traditional practices and modern reforms. While the country's governance structures have historically been influenced by unique cultural norms, recent years have seen a shift towards more Westernized practices (Nakajima & Inaba, 2022; Suto & Takehara, 2020). This transition, however, is not without its challenges, as traditional Japanese business culture, which emphasizes consensus and long-term relationships, often conflicts with the more individualistic and short-term focus of Western corporate governance models. The approach to corporate disclosure in Japan has been evolving, particularly in light of global trends towards greater transparency and accountability. Japanese firms are increasingly adopting practices such as integrated reporting, which reflects a broader awareness of the importance of non-financial information in corporate valuation (Nakajima & Inaba, 2022; Suto & Takehara, 2020). However, the extent and depth of these disclosures vary significantly among companies, influenced by factors such as the size of the firm, industry, and external pressures from stakeholders and regulators. Japan's institutional context also significantly impacts its corporate governance and disclosure practices. The legal and regulatory

environment in Japan, which includes specific guidelines and codes such as the Corporate Governance Code, shapes how companies approach governance and disclosure. Additionally, the influence of governmental policies and initiatives, particularly those aimed at promoting sustainable business practices, drives changes in how Japanese firms report and disclose information.

## ***2.2 Hypotheses development***

### ***2.2.1 Board independence***

Drawing on agency theory, this study posits that independent directors are crucial in mitigating conflicts within firms, thereby enhancing corporate disclosure practices (Fama & Jensen, 1983; Hermalin & Weisbach, 1991). This theoretical foundation suggests that independent directors can enhance transparency and accountability in corporate governance (Hermalin & Weisbach, 1991; Hui et al., 2024; Mahran & Elamer, 2024; Noureldeen et al., 2024), influencing practices like human capital disclosure. Two schools of thought exist regarding the impact of independent directors on disclosure as a corporate governance mechanism: complementary and alternative (Cerbioni & Parbonetti, 2007). Some studies indicate that higher independence, such as a majority of members being independent directors, has a positive impact on voluntary disclosure (Cerbioni & Parbonetti, 2007; Wang, 2017). However, other studies suggest that the proportion of independent directors is negatively correlated with information disclosure (Rodrigues et al., 2017). This contradictory evidence underscores the need for further exploration, especially in distinct settings like Japan. The unique corporate environment in Japan, characterized by specific governance structures and cultural influences (Ahmadjian, 2007; Iwasaki et al., 2020), provides a rich context for examining how board independence impacts human capital disclosure practices. In Japan, where this study takes place, there are as yet no rules on specific human capital disclosure (Iwasaki et al., 2020), which may render the presence of independent directors significantly relevant (Cerbioni & Parbonetti, 2007; Wang, 2017). Therefore, the first hypothesis regarding board independence is below.

***H<sub>1</sub>: Companies with highly independent boards tend to disclose human capital information.***

### ***2.2.2 Gender diversity***

The role of gender diversity in corporate governance, particularly regarding board composition, has garnered significant attention in contemporary research (Salem et al., 2021; Ullah et al., 2022, 2023, 2024). Theoretical frameworks, such as resource dependency theory and stakeholder theory, posit that diverse boards contribute varied perspectives and resources,



enhancing decision-making and stakeholder communication. Empirical literature offers mixed insights: studies by Srinidhi et al. (2011) and Gul et al. (2011) suggest a positive correlation between female board representation and corporate disclosure quality, whereas Cucari et al. (2018) provide contrasting findings. In the specific context of Japanese corporate governance, where the inclusion of female directors has been gradually increasing (Kikuchi & Sakai, 2020), this study examines the impact of such gender diversity on the extent and quality of human capital disclosure. It is hypothesized that in Japanese companies, a higher percentage of female directors is positively related to the quality of human capital disclosure. This hypothesis builds on the assumption that gender-diverse boards in Japan, with their varied skills and perspectives, can influence corporate practices, including transparency and ethical governance, contributing to enhanced human capital disclosure. This exploration is particularly relevant in the evolving Japanese corporate context, providing new insights into the dynamics of board diversity and corporate disclosure practices. Based on the theoretical and empirical insights, and considering the Japanese corporate context, we hypothesise:

***H<sub>2</sub>:** A higher percentage of female directors is positively related to human capital disclosure scores.*

### *2.2.3 Board size*

In the context of corporate governance, the size of the board of directors holds significant implications for decision-making, communication, and overall firm performance. Agency theory, as articulated by Jensen (1993), posits that board size reflects the versatility and efficacy of organizational decision-making and communication channels. Empirical studies provide a nuanced view of this relationship. For instance, Kalsie and Shrivastav (2016) found a positive correlation between board size and firm performance metrics like ROA and ROCE, suggesting that a larger board contributes positively to a firm's operational success.

Conversely, literature also highlights the advantages of smaller boards, such as enhanced communication and more effective monitoring of management, as outlined by Dey (2008). A smaller board size is argued to foster greater accountability through more efficient communication and decision execution. However, this benefit is counterbalanced by the potential drawbacks of limited diversity and reduced stakeholder representation, as noted by Guest (2009). The balance between board size and effectiveness is thus a complex one, involving trade-offs between operational efficiency, diversity of expertise, and stakeholder representation.

In the realm of corporate social responsibility (CSR) and disclosure practices, the size of the board again emerges as a critical factor. Pucheta-Martínez and Gallego-Álvarez (2019) demonstrate that larger boards positively influence CSR reporting, reducing information asymmetry among stakeholders. This suggests that a larger board, with its diverse perspectives and expertise, may be more inclined to disclose comprehensive information on human capital. Such disclosure is increasingly vital in today's business environment, where stakeholders demand greater transparency and accountability regarding corporate practices, including those related to human capital. Considering these theoretical perspectives and empirical findings, and in light of the growing emphasis on human capital as a key component of corporate value, this study proposes the hypothesis:

*H<sub>3</sub>: Board size is positively associated with human capital disclosure.*

#### *2.2.4 Board activity*

Board meetings are not only a decision-making process in corporate management but also an essential activity that provides oversight on conflicts of interest between shareholders and management (Schwartz-Ziv & Weisbach, 2013). Increasing the frequency of board meetings is a significant means of enhancing the effectiveness of board meetings (Conger, Finegold, & Lawler, 1998). Additionally, companies with more frequent board meetings tend to fulfill their responsibilities in line with the wishes of their shareholders (Rodrigues, Craig, & Doherty, 2017).

However, an increase in the number of meetings does not necessarily encourage further disclosure. Instead, it may result in less management oversight and subsequently less disclosed information (Vafeas, 1999). Nevertheless, Raimo, Busco, and Curto (2020) suggest that a low annual number of meetings may result in information being reported without sufficient discussion on disclosure. As human capital disclosure is a relatively new item, its disclosure might be improved with increased meeting frequency (Raimo et al., 2020). Historically, Japanese boards have been criticized for infrequent and formalistic meetings, potentially impacting effective oversight and decision-making (Ahmadjian, 2007). However, with recent governance reforms aiming to enhance transparency and accountability, the role of board meetings in Japan has become more pivotal.

Therefore, it is hypothesized that board activity has a positive correlation with human capital disclosure score. Specifically, companies with more frequent board meetings will have a higher human capital disclosure score due to the increased discussion and oversight on human

capital information during these meetings. Therefore, this research hypothesises the following about directors' meeting activities.

***H<sub>4</sub>: Board activity has a positive association with human capital disclosure score.***

#### *2.2.5 The relationship between corporate governance, human capital disclosure and employee engagement*

Employee engagement is essential for employee productivity and firm performance, and that highly engaged employees tend to stay with the company longer and bring value to the firm (Kamalanabhan et al., 2009; Catteeuw et al., 2007). Moreover, creating a work environment and organizational structure that aligns employee goals with organizational goals is an essential element in increasing engagement (Rasool et al., 2021). According to Mohd et al. (2016), the work environment, work-life balance, and rewards influence employee engagement, with the environment for the employee being the most influential factor. Therefore, companies need to create a work environment that is inclusive and welcoming to diverse employees, and that provides opportunities for employees to contribute to the company's vision and mission (Rasool et al., 2021).

Corporate governance mechanisms may also relate to employee engagement. The board of directors has responsibility for the management of stakeholders and the construction of the institutional system (Nicholson and Newton, 2010). The board's structure can have an impact on the work environment, and the diversity of the board members is one of the factors that can enhance employee satisfaction (Creek et al., 2019). Corporate governance mechanisms influence not only human capital disclosure (Li et al., 2008) but also employee engagement. However, little research has been conducted on the relationship between human capital disclosure and employee engagement.

Human capital disclosure provides information that stakeholders need for their profits (Beattie and Smith, 2010). Human capital is considered a factor that magnifies corporate value and needs to be managed (Stewart, 1997). Companies that disclose information about their employees, who comprise their human capital, are likely to communicate more with their employees, and there are similarities between the communication required for human capital information disclosure and the factors that increase employee engagement. Therefore, higher human capital disclosure scores may be positively correlated with employee engagement. Furthermore, creating a work environment and organizational structure that aligns employee goals with organizational goals is an essential element in increasing engagement. Corporate

governance mechanisms may also relate to employee engagement, and human capital disclosure may be a factor that increases communication with employees, thereby enhancing engagement. However, further research is needed to investigate the relationship between human capital disclosure and employee engagement.

In the context of Japan, where corporate governance structures and employee relations differ significantly from Western models, the relationship between corporate governance, human capital disclosure, and employee engagement becomes even more intriguing. Japanese firms, traditionally less transparent in their governance practices, have been moving towards greater openness and stakeholder engagement (Ahmadjian, 2007). This shift could potentially enhance the role of human capital disclosure in fostering employee engagement. In a culture that values harmony and collective effort, transparent human capital practices might significantly impact employee morale and productivity. Therefore, this study hypothesizes that in the Japanese corporate context, higher human capital disclosure scores are positively associated with employee engagement, reflecting the unique interplay of governance structures, disclosure practices, and employee dynamics in Japan. Therefore, this research hypothesizes the following.

*H<sub>5</sub>: Higher human capital disclosure scores are positively associated with employee engagement.*

### **3. Methodology**

#### *3.1 Sample selection and data sources*

The study's panel data analysis sample was selected from the population of companies within the TOPIX 100 on the Tokyo Stock Exchange, encompassing the three financial years 2019 to 2021. The TOPIX 100 companies represent 100 large-cap stocks with high market capitalisation and liquidity among stocks listed on the TSE First Section, comprising the Core 30 and Large 70. The rationale for selecting these companies is their established organisational structure, as well as the requirement by the JPX to submit both corporate governance and integrated reports (Japan Exchange Group, 2022).

For reasons of organisational homogeneity, the sample excluded companies with missing data and financial institutions such as banks, following the approach taken by Lopatta et al. (2020) and Cabeza-García et al. (2018) in their research on the relationship between corporate governance and intellectual capital disclosure. The final sample consisted of data

from 93 firms from 22 industry sectors, comprising a total of 279 observations as shown in Table 1.

Data pertaining to the research variables were sourced from information and corporate governance reports published by the Japan Exchange Group (JPX), integrated reports published on the companies' websites, and Datastream via Eikon. The JPX data included information on the constitution of TOPIX 100 companies, company codes, relevant industry sectors, number of independent directors, number of female directors, and number of directors in corporate governance reports (JPX, 2022). The Workforce score was obtained from Datastream via Eikon. The integrated reports of each company were referenced to collect information on the number of board meetings, Employee Engagement Score, company size, Profitability, and Supplemental information, which were then calculated.

**Insert Table 1 about here**

### *3.2 Research model*

This study employs empirical analyses to investigate the association between corporate governance, human capital disclosure, and employee engagement. Descriptive statistics are utilized to capture the characteristics and trends of the sample data, followed by multiple regression analyses. Previous studies examining the relationship between corporate governance and human capital disclosure using panel data have utilized different regression models. For instance, while Abeysekera (2012) and Buallay and Hamdan (2019) used the fixed effect model, Raimo et al. (2020) and Cormier et al. (2009) utilized pooled Ordinary Least Squares (OLS). However, the fixed effect models are not suitable for this study since corporate governance mechanisms tend to differ more across firms than over time (Coles et al., 2008). Therefore, this study adopts pooled OLS.

To examine the link between human capital disclosure and corporate governance, and based on the findings of a prior study by Lajili et al. (2020) that demonstrated the impact of human capital disclosure on corporate finance, this study includes employee engagement as a proxy for financial performance in the regression model for hypothesis 5. Thus, multiple regression analyses are conducted separately for human capital disclosure and employee engagement, with the following regression equations:

*WORKFORCE*

$$= \beta_0 + B_1 INDEPENDENT + B_2 GENDER + B_3 BSIZE + B_4 ACTIVITY + B_5 AGE + B_6 CSIZE + B_7 PROFITABILITY + B_8 FY + B_9 SECTOR + \varepsilon \quad (1)$$

### *EENGAGEMENT*

$$\begin{aligned} &= \beta_0 + \beta_1 HCD + B_2 AGE + B_3 CSIZE + B_4 PROFITABILITY + B_5 FY \\ &+ B_6 SECTOR + \varepsilon \end{aligned} \quad (2)$$

All variables definition are explained in the next section and presented in Table 2.

### *3.3 Variables*

#### *3.3.1 Human Capital Disclosure Variables*

In this paper, the human capital disclosure score is treated as a dependent variable for hypotheses 1 to 4 and as an explanatory variable for hypothesis 5. Lajili et al. (2020) and He and Wang (2009) state that executive compensation is measured as a proxy variable for human capital. However, this does not include any information on employees, which would be insufficient as an overall figure to represent human capital disclosure. Other studies have used content analysis to derive scores based on the number of words and sentences related to human capital in annual reports (Abeysekera, 2012; Cerbioni and Parbonetti, 2007; Li et al., 2008; Tejedo-Romero and Araujo, 2020). Annual reports and integrated reports are the main instruments for disclosing information to shareholders, but the information is also disclosed through company websites and CSR reports. The ESG score published by REFENITIV is calculated from a composite of information disclosed by companies, including annual reports, company websites and CSR reports (REFENITIV, 2021). Therefore, the ESG score is proper to use as secondary data in this research. This research substitutes the WORKFORCE score which is one of the ESG scores for the human capital disclosure index to adapt the regression models. The WORKFORCE score is the sum of the "Diversity and inclusion", "Career development and training", and "Working conditions". The reason for the selection of the WORKFORCE score is that they refer to the regulations on non-financial disclosure requirements that have been in force for listed companies in Europe since 2014 and the rules on disclosure of human capital information announced by the SEC in the US in 2020. The disclosure content required by the content of these two rules and the WORKFORCE score overlaps significantly (Europe Union, 2014; U.S. Securities and Exchange Commission, 2020). Therefore, a higher total value treated as a human capital disclosure score can be interpreted as the company providing more information on human capital.

#### *3.3.2 Employee Engagement Variables*

The dependent variable investigated in the second regression model in this research is employee engagement score (EENGAGEMENT). Although there are many studies about the measurement of employee engagement, no consistent definition exists (Christian et al., 2011). As with the disclosure of human capital information, the status of employee engagement in Japan is voluntary. Therefore, the number of observations in this study is small. Even though some companies see employee engagement as a significant factor, some companies do not even conduct surveys on the status of engagement. However, many of the 100 companies in the sample stated in their annual reports that they survey employee engagement. In addition, the fact that the number of disclosure results has increased with each passing year suggests that it is expected to develop and become increasingly disclosed in the future. In this study, the engagement score that companies voluntarily disclose in their annual reports is used as a variable.

### 3.3.3 Corporate Governance Variables

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### 3.3.4 Control Variable

Control variables are used to find and control for confounding variables that cause selection bias and need to be held constant. Five control variables are employed in this paper to examine the relative relationship between the corporate governance mechanism, the human capital disclosure score, and the employee engagement score. The five are firm age (AGE), ROA (PROFITABILITY), company size (CSIZE), financial year (FY) and industry classification (SECTOR). These choices were based on previous studies that examined voluntary disclosure.

Data on the control variables were mainly obtained from the annual reports and integrated reports of the sample companies, company data from the Tokyo Stock Exchange or the Eikon DataStream. These control variables are mainly company characteristics related to finance and ongoing operations.

The first control variable is company age (AGE): Michelon and Parbonetti (2012) tested the possibility that the number of years a company has been in operation affects social disclosure but found no significant results for disclosure. On the other hand, Hossain and Hammami (2009) found that older companies have a tendency to disclose more voluntarily. Referring to these previous studies, the control variables are selected considering the impact of human capital and employee engagement on disclosure. The second choice is PROBABILITY, which can be used to measure profitability; ROA is a manifestation of the results of capital investment and can influence intellectual capital disclosure considered to influence the disclosure of intellectual capital (Li et al., 2008). Additionally, Macey et al. (2012) explain that ROA and employee engagement are correlated and necessary for organisational success. Third, company size (CSIZE) can be measured in terms of total company assets and influences both corporate governance and intellectual capital disclosure (Chen and Chen, 2011; Buallay and Hamdan, 2019). For engagement, it is suggested that firm size is associated with satisfaction, which is strongly linked to engagement (Creek et al., 2019). The last two control variables are FY (financial year) and SECTOR (industry sector): the financial year accounts for year-to-year differences and the industry sector were chosen because companies are more likely to be influenced within the same industry (Christensen et al., 2010).

**Insert Table 2 about here**

## **4. Results**

### *4.1 Descriptive statistics*

Table 3 presents the descriptive statistics of various variables related to human capital disclosure, employee engagement and controls. Corporate governance variables, such as the number of independent directors and female directors, are expressed as percentages of the total number of directors in each company. There is significant variability among the large companies included in the TOPIX 100 list with respect to the independence of their board members, as reflected in the minimum and maximum values of 10.53% and 83.33%, respectively. Notably, the minimum percentage of independent directors increased between the fiscal years 2019 and 2021, indicating a growing need for board member independence in Japan.



In terms of female directors, no company has more than half of its directors, and the average percentage is only 11.81%, indicating a low representation of women on boards in Japan. The average size of the board of directors among the top 100 companies in Japan is 11.07, with a minimum of 5 and a maximum of 21, reflecting substantial differences in board size across firms. On average, companies hold 13.01 meetings per year, with a range of 15 meetings between the minimum and maximum values.

Human capital disclosure, as proxied by the workforce score, has a high mean value of 73.99, but the standard deviation of 19.75 indicates a wide range of variability across companies. The minimum value is 5.45, indicating that some firms provide little or no information on human capital, while the maximum value of 99.03 suggests that some companies disclose a considerable amount of information on human capital. The increase in the mean and minimum values between the fiscal years 2019 and 2021 suggests a growing trend towards greater disclosure of human capital information in Japan.

Employee engagement rate data is limited, but the number of observations has increased from 12 to 22 between the fiscal years 2019 and 2021. The average value of employee engagement rate is 73.34%, with a decreasing trend as the number of observations increases, indicating that companies with higher figures are beginning to disclose information on employee engagement. Overall, these descriptive statistics provide insight into the corporate governance, control, human capital disclosure, and employee engagement practices of large companies in Japan.

Finally and regarding control variables, the mean company age is 80.24 years, and the standard deviation of 39.65 suggests that large Japanese companies have been in business for a long time. The maximum company age is 240 years, indicating a long history of business activity in some cases. The average company size, expressed in billions, is 10.21 billion, with a significant difference between the minimum (0.05) and maximum (298.74) values. Profitability, as measured by ROA, has an average value of 6.02%, with a maximum of 30.2% and a minimum of -7.62%, indicating that some companies are highly attractive to stakeholders while others are not profitable.

**Insert Table 3 about here**

#### *4.2 Correlation analysis*

Table 4 presents the correlation coefficient matrix. The explained variable, workforce, in the first regression model is significantly related to three corporate governance variables and one

control variable. Firstly, the variable independent is positively related to workforce at the 1% level, indicating that a higher number of independent directors on the board of directors is associated with a higher likelihood of human capital disclosure. This aligns with global trends where independent board members are seen as enhancers of transparency. Secondly, the variable gender is also significantly related to workforce at the 1% level, indicating that a higher proportion of women on the board of directors is associated with higher workforce values. Moreover, independent and gender are also significantly correlated with each other at the 1% level, implying that their relationship with the workforce may be similar. Thirdly, the variable board size is positively significant at the 5% level, suggesting that a larger number of board members is associated with a higher likelihood of human capital disclosure. For board size, both company size and profitability are positively correlated at a high level. Lastly, the only control variable that was significant with the workforce was firm size, which is negatively correlated with the workforce. This finding implies that larger companies may be more reluctant to disclose their human capital. These results broadly support the study's hypotheses about the impact of corporate governance on human capital disclosure, offering empirical backing for the proposed theoretical framework, yet they also indicate areas for further research, particularly in understanding the nuances of these relationships in Japan's distinctive corporate environment.

**Insert Table 4 about here**

### *4.3 Regression analysis*

#### **4.3.1 Disclosure of Human Capital (WORKFORCE)**

The results of our analysis, as shown in Table 5, reveal insightful associations between corporate governance factors and key outcomes like workforce engagement and disclosure. In Table 5's Pooled OLS results, the R-squared values for the models concerning 'WORKFORCE' and 'EENGAGEMENT' are 0.134 and 0.4952, respectively. This indicates that, for the 'WORKFORCE' model, around 13.4% of the variance in human capital disclosure is explained by the independent variables. For the 'EENGAGEMENT' model, about 49.52% of the variance in employee engagement is explained by the model, including 'WORKFORCE' as an independent variable. Significant variables such as the number of independent directors and gender diversity on the board demonstrate notable influence on workforce metrics, aligning with broader trends in corporate governance. These findings provide valuable insights into the

dynamics of corporate governance and its impact on human capital within the unique context of Japan.

Model 1 of Table 5 presents the results of the multiple linear regression analysis for model 1, which examines the relationship between a company's corporate governance structure and the disclosure of human capital information using the workforce score as an indicator. The coefficient level represents the extent to which the explanatory and control variables influence the value of the explained variable. A positive coefficient implies a positive relationship, whereas a negative coefficient indicates a negative relationship. The  $p > |t|$  value is used to determine the significance level of each variable at 1%, 5%, and 10%, similar to the correlation analysis.

The analysis results for the impact of board independence, the proportion of female board members, the size of the board, and the number of board activities on the disclosure of human capital information are presented below. Two variables, board independence and the proportion of female board members, are found to be significantly associated with the workforce. The number of independent board members on the board is positively associated with the workforce at the 5% level, indicating that the greater the number of independent directors among all board members, the more human capital is disclosed, thus supporting hypothesis 1. In other words, the higher the proportion of independent board members, the more human capital information is disclosed. This result is similar to the arguments of Cerbioni and Parbonetti (2007) and Wang (2017), suggesting that the presence of independent board members plays a complementary role in corporate governance. The situation that the objection to this research is Japanese firms, where disclosure requirements are not stipulated, seems to have led to different results from studies conducted in Europe, where human capital information disclosure is mandatory (Rodrigues et al., 2017; Li et al., 2008). In other words, the role played by independent directors with regard to human capital disclosure may vary depending on whether disclosure requirements are in place or not.

Similarly, the proportion of female directors on the board of directors is significantly positively associated with the workforce at the 1% level, indicating that the more female board members there are, the more human capital is disclosed, thus supporting hypothesis 2. Studies have also found a positive relationship between the proportion of female directors on boards and corporate disclosures, including human capital disclosures. For example, Adams and Ferreira (2009) found that companies with more female directors had better environmental and social performance, which can include human capital management. Similarly, Liu et al. (2017)

found that the proportion of female directors was positively related to the level of sustainability reporting, which can include human capital disclosures. However, as the sample data of this study also shows, the proportion of female board members in Japanese companies is still few (Morikawa, 2016). In the future, if the appointment of female board members becomes more active in Japanese firms, the impact on human capital disclosure may increase further. However, the remaining two corporate governance variables, board size and the number of meetings, are not significantly related to the workforce, and therefore hypotheses 3 and 4 are rejected.

The size of the board of directors and the number of meetings per year, as estimated in hypotheses 3 and 4, were not statistically confirmed to have a positive impact on human capital disclosure. The results in this study differ from claims that a larger number of board members has a positive impact on CSR reporting (Guest, 2009; Pucheta-Martínez and Gallego-Álvarez, 2019). However, the study did not consider the extent to which there is a range between the number of board members in Japanese firms and the number or number of board members in other regions and countries. Comparing the extent to which there are differences in the number of people that make up the board of directors may have led to different results. The impact of the number of board meetings on human capital disclosures has also not been statistically confirmed. Even if the number of meetings increases or decreases, it is probably uncertain whether the new disclosure items are discussed. These analyses confirm that several corporate governance mechanisms influence the disclosure of human capital information.

The study also examines the impact of five control variables, namely, company age, company size, profitability, financial year dummy, and industry sector dummy. Among these, only company size is found to be significantly associated with the workforce, and it is negatively associated at the 5% level. This indicates that the larger the size of the company, the less human capital is disclosed, thus rejecting the null hypothesis. The other four control variables do not have a statistically significant impact on human capital disclosure.

In summary, the results suggest that board independence and the proportion of female board members positively impact the disclosure of human capital information, whereas board size, the number of meetings, company age, profitability, financial year dummy, and industry sector dummy do not significantly affect human capital disclosure. The findings in the previous answer are consistent with prior literature that suggests that board independence and the proportion of female directors on boards are positively related to corporate disclosures, including human capital disclosures. The mixed findings regarding board size and the negative

relationship between company size and human capital disclosures also have some support in the literature.

**Insert Table 5 about here**

#### 4.3.2 Employee Engagement Score (EENGAGEMENT):

Hypothesis 5 estimates that companies that disclose more human capital information will have higher employee engagement scores in Model 2 of Table 5. However, the analysis obtained from model 2 shows that human capital information disclosure is negatively associated with employee engagement scores. In other words, the more disclosure a company has, the lower its employee engagement score is. One reason why the fuller the disclosure of human capital information, the lower the engagement score tends to be because the information that is inconvenient for employees is also shared at the same time. For example, while the quality of employee benefits affects engagement (Rasool et al., 2021), the benefits of companies that disclose human capital information are not necessarily richer. The disclosing data that has not previously been shared with employees may lower engagement scores. Alternatively, companies that do not disclose inconvenient information may have higher engagement scores as disclosure requirements are not compulsory in Japan. Wright et al. (2014) explain that companies seek to improve employee engagement because of discretionary behaviour and turnover Explanation. So, not disclosing human capital information may be an incentive for companies not to reduce employee engagement.

In Model 2 of Table 5, five control variables were included, namely company age, company size, profitability, financial year dummy and industry sector dummy. Among these variables, company size, profitability and the two industry dummies were positively associated with EENGAGEMENT. Specifically, both company size and profitability were found to be statistically significant at the 1% level. This implies that larger total assets and higher ROA are associated with a higher employee engagement score towards the company. Moreover, the industry dummies for transportation and insurance were also found to be statistically significant at the 5% level, indicating that the impact of these industries on EENGAGEMENT is more pronounced than in other industries. These findings are consistent with prior research, which suggests that larger companies tend to have better employee engagement levels (Gallup, 2016), and higher profitability can lead to better employee satisfaction (Moss & Mishra, 2016). Furthermore, prior studies have found that industry characteristics can significantly influence employee engagement (CIPD, 2016). For instance, the transportation industry is characterized

by a high degree of interaction between employees and customers, which may enhance employee engagement (Gallup, 2018). Similarly, the insurance industry typically offers extensive employee training and development programs, which can contribute to higher engagement levels (CIPD, 2016).

Overall, the results of the two regression models provide insights into the relationship between corporate governance structures and employee engagement. In particular, the findings suggest that board independence and the proportion of female directors are positively associated with human capital disclosure, while company size, profitability and industry sector are positively associated with employee engagement. These results have important implications for companies seeking to improve their employee engagement and human capital disclosure practices.

## 5. Conclusion

This study aims to investigate the relationship between corporate governance structure, human capital disclosure, and employee engagement in the top 100 listed companies in Japan (TOPIX100). Although many previous studies have explored the impact of corporate governance mechanisms on the disclosure of non-financial information, to the best of our knowledge, this is the first study that investigates the relationship between governance mechanisms and human capital information disclosure for Japanese companies. Furthermore, while several studies have investigated the impact of human capital disclosure, which is related to corporate governance systems, on corporate finance, these studies have mainly focused on the impact on shareholders. According to stakeholder theory (Freeman, 2010), companies should disclose information not only to shareholders but also to other stakeholders. This study, therefore, emphasizes the importance of human capital information disclosure to employees, who are key stakeholders.

To investigate the relationship between human capital disclosure and employee engagement, a multiple regression analysis is performed on a sample of 100 Japanese listed companies from FY 2019 to FY 2021. The study seeks to determine whether the status of human capital disclosure, which is linked to governance mechanisms, affects employee engagement. The study's empirical findings demonstrate a positive association between several governance mechanisms and the disclosure of human capital information. The study firstly reveals that the proportion of independent directors on boards was positively related to human capital disclosure, with a coefficient of 21.699 at the 5% significance level. The proportion of

female directors was also positively related to human capital disclosure, with a coefficient of 43.149 at the 1% significance level, while no significant association is found between the total number of board members or the number of board meetings. Secondly, it suggests that governance mechanisms related to board members' nature, such as independent and female board members, facilitate human capital disclosure and complement the governance system. This indicates that the presence of independent and female board members has played a vital role in introducing the relatively new concept of human capital disclosure. Thirdly, our results confirm the link between human capital disclosure, governance mechanisms, and employee engagement. It was expected that increased human capital disclosure would lead to higher employee engagement scores; however, the results show the opposite. Human capital disclosure was negatively associated with employee engagement scores, with a coefficient of -0.004 at the 5% significance level. The higher the human capital disclosure score, the stronger the association with lower employee engagement. This suggests that access to unfavourable information may have lowered employee engagement. Lastly, employee engagement score disclosure has increased over the three years of the study in Japanese companies, and expanding the sample size could provide more robust results in the future.

The study's findings provide important implications for both academics and practitioners. First, the study highlights the importance of governance mechanisms in promoting human capital disclosure, particularly through the presence of independent and female board members. This suggests that companies should consider incorporating such mechanisms into their governance structures to enhance their human capital disclosures and ultimately promote employee engagement. Second, the study also emphasizes the need for companies to carefully consider the content and format of their human capital disclosures to ensure they effectively engage their employees. Third, the study underscores the value of examining the relationship between corporate governance, human capital disclosure, and employee engagement in the context of Japan, which has a unique cultural and institutional background that may affect the efficacy of such disclosures. Overall, the study contributes to the growing body of research on the role of non-financial disclosures in promoting sustainable business practices and enhancing stakeholder engagement.

This paper presents new evidence on the relationship between governance mechanisms, human capital disclosure, and employee engagement. However, some limitations highlight opportunities for further research. Firstly, the panel data employed in this study only spans three financial years, which may not be sufficient to observe the impact of a corporate

governance system and its outcomes. Additionally, given the increasing trend of employee engagement disclosures over time, a more extended study may offer stronger insights. Secondly, this paper examines the relationship between governance systems and human capital and separately between human capital and employee engagement. Future research could explore the more direct relationship between these three variables. Specifically, investigating whether human capital disclosure mediates between governance mechanisms and employee engagement may provide a fresh and informative perspective on this complex relationship. Future studies could explore the impact of organizational culture on the relationship between governance mechanisms, human capital disclosure, and employee engagement. Also, research could be conducted to examine how external pressures such as regulatory requirements, industry standards, and stakeholder expectations influence the relationship between governance mechanisms, human capital disclosure, and employee engagement. Lastly, future studies could examine the impact of specific governance mechanisms such as board diversity, leadership styles, and ethical standards on human capital disclosure and employee engagement.



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## Tables

**Table 1: Sample Selection**

**Sample Selection (H1: H4)**

<b>Sample</b>	<b>N</b>
Initial firms-year from 2019 to 2021	300
Less: firms-year from financial sector (Bank and Securities)	21
Final number of firms-year	279
Sample	N

**Sample Selection (H5)**

Initial firms-year from 2019 to 2021	300
Less: missing continuously information	227
Less: firms-year from financial sector (Bank and Securities)	21
Final number of firms-year	52

**Table 2: Operationalisation of the Variables**

<b>Variables</b>	<b>Acronym</b>	<b>Operationalisation</b>
<b>Human Capital Disclosure Variable</b>		
- Human Capital Disclosure	WORKFORCE	Indicators of human capital disclosure score
<b>Employee Engagement Variable</b>		
- Employee Engagement Score (%)	EENGAGEMENT	Indicators of Employee Engagement score
<b>Independent Variables</b>		
- Board Independent (%)	INDEPENDENT	Percentage of independent directors on the board
- Gender Diversity (%)	GENDER	Proportion of women directors on boards of directors
- Board Size	BSIZE	Total number of board members
- Activity	ACTIVITY	Number of board meetings held per year
<b>Control Variables</b>		
- Company Age	AGE	Continuous operation years since the company's foundation
- Company Size	CSIZE	Net income divided by total assets of the firm
- Profitability	PROFITABILITY	Total company assets
- Financial Year (Dummy Variable)	FY	Each financial year from 2019 to 2021
- Industrial Sector (Dummy Variable)	SECTOR	Construction
		Transportation
		Commerce
		Insurance
		Real estate
		Manufacturing

**Table 3: Descriptive Statistics**

Variables	Observation	Mean	Standard deviation	Min	Max
<b>INDEPENDENT</b>	279	0.4135634	0.1463139	0.1053	0.8333
2019	93	0.3801742	0.1503483	0.1053	0.8333
2020	93	0.4158452	0.1446419	0.1538	0.8333
2021	93	0.444671	0.1380301	0.1875	0.8333
<b>GENDER</b>	279	0.1180882	0.0822297	0	0.4
2019	93	0.098386	0.0793921	0	0.3333
2020	93	0.1197946	0.0815584	0	0.4
2021	93	0.1360839	0.0821863	0	0.4
<b>BSIZE</b>	279	11.0681	2.798835	5	21
2019	93	11.22581	2.952998	6	21
2020	93	11.07527	2.821642	5	21
2021	93	10.90323	2.633664	5	18
<b>ACTIVITY</b>	247	13.01215	2.737101	7	22
2019	80	13.1125	2.676639	7	21
2020	82	13.06098	2.736798	7	20
2021	85	12.87059	2.819103	7	22
<b>AGE</b>	279	80.23656	39.65101	11	240
2019	93	79.23656	39.78595	11	238
2020	93	80.23656	39.78595	12	239
2021	93	81.23656	39.78595	13	240
<b>CSIZE</b>	279	10.21357	31.14102	0.05	298.738
2019	93	9.76057	30.59708	0.05	286.17
2020	93	10.13669	30.89334	0.081	286.098
2021	93	10.74346	32.2381	0.118	298.738
<b>PROFITABILITY</b>	279	0.0602258	0.0541103	-0.0762	0.302
2019	93	0.0681312	0.0482304	0.0015	0.231
2020	93	0.056071	0.0535771	-0.058	0.26
2021	93	0.0564753	0.0596312	-0.0762	0.302
<b>WORKFORCE</b>	279	73.98609	19.75462	5.45	99.03
2019	93	72.06602	20.62511	5.45	98.48
2020	93	74.15409	19.62303	10.15	98.23
2021	93	75.73817	19.02371	18.89	99.03
<b>EENGAGEMENT</b>	52	0.7334192	0.1356126	0.22	0.981
2019	12	0.7856917	0.0999996	0.64	0.981
2020	18	0.7252056	0.1226784	0.55	0.974
2021	22	0.7116273	0.1585094	0.22	0.968



**Table 4 : Correlation Matrix**

<b>Variables</b>	<b>INDEPENDENT</b>	<b>GENDER</b>	<b>BSIZE</b>	<b>ACTIVITY</b>	<b>AGE</b>	<b>CSIZE</b>	<b>PROFITABILITY</b>	<b>WORKFORCE</b>
<b>INDEPENDENT</b>	1							
<b>GENDER</b>	0.4233***	1						
<b>BSIZE</b>	-0.1517**	-0.2329***	1					
<b>ACTIVITY</b>	-0.1605**	0.0718	-0.0392	1				
<b>AGE</b>	0.2385***	0.0305	0.0638	0.064	1			
<b>CSIZE</b>	0.232***	0.1708***	0.1655***	0.0003	-0.1627**	1		
<b>PROFITABILITY</b>	-0.102	-0.1382**	-0.225***	0.0282	-0.0519	-0.2332***	1	
<b>WORKFORCE</b>	0.2086***	0.2674***	-0.1509**	0.0091	0.037	-0.1074*	-0.0257	1

Notes: \*\*\* significant at 1%. \*\* significant at 5%. \* Significant at 10%

**Table 5 Pooled OLS results**

Variables	(1) WORKFORCE			(2) EENGAGEMENT		
	Coefficient	t	P> t	Coefficient	t	P> t
WORKFORCE				-0.004**	-2.56	0.014
INDEPENDENT	21.699**	2.22	0.028			
GENDER	43.149***	2.62	0.009			
BSIZE	-0.395	-0.89	0.374			
ACTIVITY	0.318	0.71	0.48			
AGE	-0.029	-0.88	0.381	0.000	1.09	0.28
CSIZE	-0.109**	-2.53	0.012	0.004***	3.72	0.001
PROFITABILITY	-15.744	-0.61	0.543	1.340***	2.77	0.008
Year	Included			Included		
SECTOR	Included			Included		
Number of observations	247			52		
Prob > F	0.003			0.0007		
R-squared	0.134			0.4952		

Notes: \*\*\* significant at 1%. \*\* significant at 5%. \* Significant at 10%