

## Article

# From Productivity to Sustainability?: Formal Institutional Changes and Perceptual Shifts in Japanese Corporate HRM

Yusuke Hoshino <sup>1,\*</sup>  and Yasuo Ikeda <sup>2</sup>
<sup>1</sup> Faculty of Business Administration, Kyoto Sangyo University, Kyoto 603-8555, Japan

<sup>2</sup> Faculty of Business Administration, Musashino University, Tokyo 135-8181, Japan

\* Correspondence: yhoshino@cc.kyoto-su.ac.jp

## Abstract

The significance of human capital (HC) has been gaining attention worldwide. However, practices of human resource management (HRM) vary across countries. In Japan, these HRM practices have been shaped by top-down initiatives such as the Charter of Work–Life Balance, the Work Style (WS) Reform, and the mandatory disclosure of HC for publicly listed companies. This study examines the evolution of HRM perceptions in Japanese companies from 2008 to 2024, as well as the quantitative trends and semantic shifts in the mentions of a series of institutional reforms. This study performed text analysis on 51,666 narrative disclosure documents from 3970 listed Japanese companies. Results show that mandatory HC disclosure marked a semantic turning point, shifting the corporate focus from short-term productivity to long-term sustainability. Moreover, the sequential introduction of new concepts has fostered coexistence and semantic reconstruction, rather than competition or exclusion between HC and WS. This study empirically demonstrates that top-down institutional reforms can reshape corporate perceptions beyond mere compliance. It clarifies the dynamics of conceptual coexistence and semantic evolution when related ideas are introduced sequentially. In addition, the findings highlight the value of large-scale narrative disclosure documents in analyzing semantic change.

**Keywords:** human capital; institutional reform; semantic change; text analysis; corporate perception; Japan



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## 1. Introduction

### 1.1. Research Background and Aim

In recent years, the significance of human capital (HC) has been attracting considerable research attention in the fields of economics and management. HC, defined as knowledge, skills, and other attributes that contribute to individual and collective well-being [1], has long been regarded as a fundamental driver of economic and organizational development [2]. Unlike traditional perspectives that treat employees as manageable resources, the HC approach emphasizes their value as capital worthy of investment [3]. Investment in HC fosters national and corporate growth [4,5]; promotes innovation [6]; and improves individual well-being [7].

Given the strategic significances, publicly listed companies are increasingly required to disclose HC-related information. ISO 30414, released in December 2018 [8], established standardized guidelines for HC disclosure. The United States implemented mandatory HC disclosure in August 2020 [9,10]. Similarly, Europe incorporated HC reporting require-

ments into integrated sustainability frameworks [11]. Compared with these developments, Japan's reforms—the 2023 mandate for HC disclosure—are relatively recent.

On the other hand, HRM often reflects distinct national and cultural characteristics [12,13]. Japanese companies have historically been associated with traditional management practices. Following the collapse of the bubble economy in the 1990s, many companies shifted toward restructuring and performance-based payment systems [14,15]. Subsequent government-led initiatives have further shaped the context of HRM in Japan, the Charter of Work–Life Balance (WLB) in December 2007, the Work Style (WS) Reform in 2018 [16], and the mandatory HC disclosure in 2023. These successive top-down reforms provide a unique setting for analyzing how new HRM concepts are introduced and internalized within companies.

Despite the top-down introduction of HRM-related concepts, the current interpretation and implementation of these concepts in Japan remain unclear. Notably, WLB, WS, and HC are often mentioned interchangeably to describe “employee-oriented initiatives,” despite their distinct academic definitions. This study also explores how these concepts interact—whether they compete, coexist, or undergo semantic change over time. Therefore, this study poses the following research questions (RQ):

- RQ1: How has the overall perception of HRM in Japanese companies evolved in response to a series of top-down institutional reforms between 2008 and 2024?
- RQ2: How has the use of the terms WLB, WS, and HC changed in frequency and meaning over time?

Section 1.2 outlines the institutional context of Japan. Section 2 reviews relevant theoretical frameworks, Section 3 describes the methodology, and Sections 4 and 5 present the results and discussion. Section 6 concludes the paper. This study not only clarifies Japanese companies' perceptions of HRM but also provides practical and theoretical implications by examining how successive institutional reforms shape corporate interpretations of HRM-related concepts.

### 1.2. Context of Japan

Postwar Japan developed distinctive HRM practices—lifetime employment, seniority-based promotion, and enterprise unions—that supported economic growths [17,18]. However, this model began to erode following the collapse of the bubble economy in the 1990s [19]. Since then, Japanese companies have undergone extensive restructuring, downsized their workforces [15], and adopted performance-based payment systems [14,20].

In response to worsening labor conditions, “the Public–Private Top-Level Conference for the Promotion of Work–Life Balance” was convened in July 2007, with participation of cabinet ministers, business leaders, and local governments [21]. This conference presented the Charter of WLB and accompanying action guidelines in December 2007, urging companies to improve WLB for employees. In 2010, a tripartite agreement among the government, employers, and labor unions was reached in support of this charter. Although the charter lacked legal force, WLB became one of core concepts in Japanese HRM. However in Japan, the 2008 global economic crisis led to an economic recession, and employment insecurity intensified [22]. At the same time, the contraction of the working-age population, resulting from demographic decline, had long been recognized as a persistent issue in Japan [23,24].

In 2015, Prime Minister Shinzo Abe proposed a bill to the Diet to amend the Labor Standards Act and associated legislation. The proposed revisions aimed to improve conditions for nonregular employees, increase wages, enhance labor productivity, and reduce excessive working hours. The bill was passed in June 2018 and implemented in 2019 [16,25].

Unlike the charter of WLB, The WS Reform possesses legal force. The Reform has led to a decrease in overtime hours and improvement in corporate profitability, among various other outcomes [16,26]. However, in sectors such as transportation/logistics and construction, newly implemented legal restrictions on working hours have raised concerns regarding labor shortages, decreased transport capacity, and increased pressure on earnings in occupations where long work hours were previously normal [27]. Thus, the WS Reform has brought diverse impacts on Japanese companies and society.

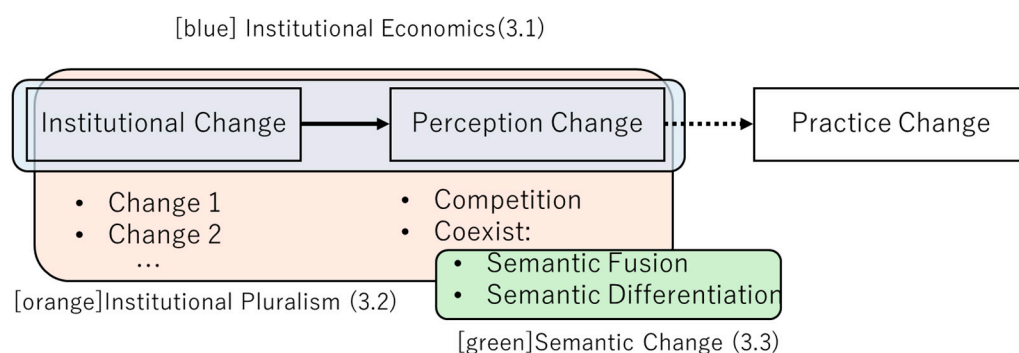
In 2019, the Ministry of Economy, Trade and Industry (METI) established a study group on the sustainable enhancement of corporate value and HC. This initiative led to the publication of the “Report of the Study Group on Improvement of Sustainable Corporate Value and Human Capital”, also known as the “Ito Report on Human Resources,” in September 2020 [28]. The report highlights that employees should not be regarded merely as mere human resources to manage but as capital whose value can increase over time. Given the report’s significant impact, the METI study group published the “Ito Report on Human Resources 2.0” in June 2022 [29].

Concurrently, in February 2022, the cabinet office also established the “Nonfinancial Information Visualization Study Group,” comprising members from industry, government, and academia [30]. This group published the “Human Capital Visualization Guidelines” in August 2022. In June 2021, a committee led by the Financial Services Agency and the Tokyo Stock Exchange (TSE) revised Japan’s Corporate Governance Code [31]. Consequently, disclosure of HC-related information became mandatory for listed companies starting with the fiscal year ending March 2023.

These were top-down reforms; notably, the WS Reform carried legal force and reshaped corporate HRM perceptions. Furthermore, the HC disclosure mandate may further influence these perceptions in the future. However, research exploring how companies interpret or respond to these institutional changes remains lacking.

## 2. Literature Review

This study assumes a causal model among institutional reforms, word usage change, perceptual shifts, and HRM practices (Figure 1). As its theoretical foundation, this study integrates (i) institutional economics, (ii) institutional pluralism, and (iii) semantic change theory.



**Figure 1.** Conceptual Model: Institutional changes (blue) reshape perceptions (orange), which are reflected in word usage (green) and eventually lead to changes in practices. Each color indicates the subsections.

### 2.1. Institutional Change and Perception (Institutional Economics)

North defines institutions as the “rules of the game” in a society—humanly devised constraints that shape human interaction [32,33]. He distinguishes between formal institutions, such as laws and regulations, and informal institutions, such as norms and customs.

Both types of institutions influence people's behavior by reducing uncertainty and transaction costs arising from incomplete or asymmetric information.

In the Japanese context, policies such as the WS Reform and mandatory HC disclosure represent formal institutions, whereas practices such as lifetime employment exemplify informal ones. These examples illustrate how institutional structures constrain organizational practices and expectations. North further emphasizes that institutions shape the incentive structure of society and influence organizational behavior [32]. Institutional reforms do not directly determine corporate behavior but influence it through perceptual shifts. This perspective highlights the importance of examining word usage and semantic change as observable reflections of such shifts.

Beyond structural constraints, North emphasizes that institutions are embedded in society's cognitive and cultural beliefs [33]. Beliefs shape how organizations interpret institutional reforms, and external shocks such as innovation or economic disruption may alter them. For instance, the WS Reform arose from widespread recognition of the problems inherent in existing HRM practices, which eventually led to legal reforms. Similarly, the imported concept of HC reshaped policymakers' and companies' mindsets before being formally institutionalized. This interaction demonstrates how formal institutional change and evolving beliefs recursively influence each other, shaping corporate perceptions of HRM.

North's framework explains how a single institutional order shapes behavior and beliefs. However, it pays less attention to situations where multiple institutional demands interact—some competing, others being selected or consolidated over time. In addition, North's basic theory does not fully capture the possibility that one institutional logic may become dominant, or that overlapping logics may result in hybridization or conflict. Research on institutional pluralism therefore provides a complementary perspective on these limitations.

## 2.2. Institutional Pluralism

Research on institutional pluralism emphasizes that organizations are rarely governed by a single, coherent set of institutional rules. Instead, they operate in environments where multiple institutional demands—such as regulatory frameworks, cultural norms, and managerial fashions—overlap and sometimes conflict. This perspective highlights that institutions are not monolithic but diverse, and that organizations must constantly negotiate among competing or complementary expectations [34,35].

Importantly, institutional pluralism does not imply that multiple logics always coexist in a stable manner. Different institutional logics may compete for dominance, leading to the decline or absorption of some overtime. Organizations may strategically adopt, resist, or hybridize institutional demands depending on their interests and contextual pressures [36]. Thus, pluralism is a dynamic condition that can result in coexistence, conflict, or eventual consolidation.

The perspective of institutional pluralism highlights that multiple institutional logics can coexist within the same organizational field. This view emphasizes that organizations may simultaneously draw upon different, and sometimes conflicting, institutional prescriptions. These logics may coexist, compete, or be reinterpreted depending on contextual factors such as industry structure, regulatory frameworks, and cultural traditions. In the context of HRM reforms, this framework provides a useful lens to analyze how different concepts—such as WLB, WS, and HC—may interact and shape corporate perceptions and practices.

### 2.3. Coexistence, Competition, and Semantic Change

To analyze the impact of multiple institutional changes related to HRM on perceptions, it is first necessary to clarify whether these institutions competed or coexisted over time. If coexistence is observed, three patterns are anticipated. The first is the differentiation of new concepts, where a new concept develops a distinct semantic domain while coexisting with an established one. The second is the differentiation of existing concepts, in which the meaning of an existing concept changes after the introduction of a new one. The third is fusion, where two concepts gradually converge toward the same meaning. These semantic changes represent qualitative shifts that cannot be captured by word frequency alone.

Semantic change refers to the historical, social, or cultural transformation of a word's meaning through processes such as broadening, narrowing, or metaphorical shift [37,38]. Such transformations are not only discussed in the humanities and linguistics but also in management research as a lens for understanding how companies adopt innovations: Rogers [39] noted that adopters often reinvent complex or ambiguous innovations during diffusion phase; management fashion theory highlights how trendsetters and adopters reinterpret concepts over time [40,41]; and the “virus perspective” likens diffusion to infection, emphasizing mutation as elements are selectively highlighted, discarded, or re-framed [42].

Changes in word usage reflect shifts in the perceptions of those who use the words. For example, *Culturomics* research shows that the transition from “the United States are” to “the United States is” reflects the shift in collective recognition—from viewing the United States as a collection of states to perceiving it as a unified nation [43]. Thus, tracing changes in word usage can reveal underlying perceptual shifts over time. Therefore, text analysis serves as a proxy for evolving beliefs or perceptions. Together, these perspectives provide a foundation for examining how older concepts (WLB and WS) may be semantically reconstructed following the institutional introduction of newer concepts (WS and HC).

Overall, prior research suggests that institutional theory explains how a single institutional order shapes corporate perceptions, whereas institutional pluralism highlights the dynamic coexistence and competition of multiple logics. To analyze these dynamics, examining patterns in word frequency, relationships among concepts, and the ways in which meanings shift over time is imperative. Taken together, these perspectives provide the theoretical foundation for this study investigates how Japanese companies perceive and respond to institutional changes. Integrating these three perspectives enables us to understand how institutional reforms influence corporate perceptions through changes in word usage.

## 3. Materials and Methods

### 3.1. Data Collection

Companies primarily communicate nonfinancial information to stakeholders through narrative disclosure (ND) to directly convey their management conditions, perceptions and future vision [31]. Moreover, given that socially significant terms and concepts are continuously included independently of statutory disclosure, ND enables the chronological tracking of corporate perceptions regarding institutional reforms and social demands [44]. For example, during the COVID-19 pandemic, many companies voluntarily disclosed related information despite the absence of any legal obligation [45,46]. In this study, ND is employed as a methodological foundation to capture how institutional concepts such as WLB, WS, and HC emerge and evolve within corporate narratives.

While this approach does not directly measure firm-level performance outcomes, it enables a systematic, macro-level examination [47]. This study examines how institutional



reforms reshape cultural meanings and values in corporate discourse. In this sense, this study complements firm-level empirical analyses rather than serving as a substitute.

This study analyzed a dataset comprising 51,666 documents spanning 17 years from securities reports on 3970 listed Japanese companies. The documents included annual, semi-annual, and quarterly reports. Listed companies were selected owing to their large scale, high social credibility, and representativeness of the Japanese corporate sector.

Data was sourced from *eol*, a corporate financial database provided by I-N INFORMATION SYSTEMS, LTD [48]. A full-text search was conducted using the following terms: *jinteki-shihon* for HC and *hataraki-kata* for WS. For WLB, three search terms were used: *wa-ku-raifu*, *wa-ku-raifu* (both phonetic renderings), and *shigoto-to-seikatsu* (literal translation). These variations were selected to capture the common alternative expressions used in Japanese discourse.

The search was extended beyond the MD&A sections to encompass the entire content of each report, as the target terms could appear in diverse contexts—for example, in references to “HC officers” or “WS service segments.” A full-text search was carried out to retrieve multiple instances within a single report. Each data consisted of the extracted text along with accompanying metadata: company name, industry classification, fiscal year, and date of submission.

Three key considerations informed the data extraction process. First, the analysis period was set from 2008 to 2024 to align with the anticipated corporate response to the charter of WLB, issued in December 2007 and expected to influence disclosures from the following year. Second, calendar years were used instead of fiscal years to maintain consistency with the timing of institutional reforms. Third, non-listed companies were excluded from the dataset they represent only a small proportion—only 356 companies and 1032 documents—which limited their analytical value.

### 3.2. Data Procedures

First, the dataset’s industry classifications were aggregated from TSE’s 33 detailed subcategories into 10 broader categories. This generalized classification was preferred to simplify data overview and analysis.

Second, terminology was standardized through name matching. Given the nuances of the Japanese language, identical terms often appear with varying spellings or scripts, including combinations of *katakana* (a syllabary used primarily to represent foreign loanwords, scientific and technical terms, etc.) and *kanji* (Chinese characters). To resolve this, a custom dictionary was developed to systematically replace inconsistent variants with standardized forms (Table A1 in Appendix A).

The final dataset included 51,666 documents totaling 8.23 million characters. On average, each document contained 159.1 characters (SD = 50.6). Some documents featured two or more keywords—“WLB,” “WS,” and “HC”—with their co-occurrence patterns summarized in Table 1. Understanding these overlaps is crucial for analysis.

Finally, morphological analysis was conducted to enable comprehensive text mining. This study employed KH Coder (version 3 Alpha) for morphological analysis and subsequent textual analyses [49].

In the morphological analysis, forced extraction terms and stop-words were specified (Table A2 in Appendix A). Words *tsuki* (month), *nendo* (fiscal year), *sho-wa*, and *heisei* (former Japanese era names)—were designated as stop-words because they are high-frequency temporal markers that do not contribute to semantic differentiation in the context of this study. Preliminary frequency and co-occurrence analyses indicated that these terms appeared across documents regardless of topic, and retaining them would have introduced noise into the analysis. To confirm the robustness of this decision, we also conducted a pilot

test without stop-words. The results showed no substantive differences in co-occurrence patterns or correspondence analysis, supporting the appropriateness of excluding these terms. Further details of the pilot test are reported in Figure A1 (Appendix C).

**Table 1.** Overview of the Data Counts.

|              |                            | Number of documents |
|--------------|----------------------------|---------------------|
| <b>Total</b> |                            | 51,666              |
|              | Work Life                  | 5134                |
|              | Work Style                 | 33,073              |
|              | Human capital              | 16,179              |
| <b>Union</b> | Union of three words       | 42                  |
|              | Union of two words         | 2636                |
|              | Work Life & Work Style     | 1737                |
|              | Work Life & Human capital  | 153                 |
|              | Work Style & Human capital | 746                 |

Terms such as *hataraki-kata* (work style) and *jizoku-kano-sei* (sustainability) were specified for forced extraction. This was necessary because KH Coder tends to split these compound words into multiple components (e.g., *hataraku* and *kata*; *jizoku*, *kano*, and *sei*). These terms were selected based on their theoretical relevance to our RQs. A preliminary frequency analysis confirmed their importance in capturing the study's core concepts.

### 3.3. Analysis

#### 3.3.1. RQ1: Overall HRM Trends

The analysis was conducted from three perspectives to investigate the overall trend in Japanese companies' perceptions of HRM:

- (1) current snapshot of perceptions.
- (2) centrality of specific industries.
- (3) temporal changes over time.

First, data from 2023 and 2024 including WLB, WS, and HC were extracted to obtain a current snapshot of HRM perceptions. Co-occurrence network analysis was then applied to explore relationships among frequently occurring words. This method visualizes words as nodes connected by edges that represent the frequency of co-occurrence [50]. Strong co-occurring words tend to form clusters, revealing underlying contextual patterns within the documents [49]. Detailed procedures for all text analysis of both co-occurrence network and correspondence analysis are described in Appendix B.1.

Second, the dataset tracked each industry's share over time to identify the dominant industries. This helped pinpoint those driving the evolution of HRM discourse.

Third, correspondence analysis was applied to analyze temporal changes in perceptions. This statistic facilitates quantitative comparisons of word usage across groups and visually maps the relationships between words and groups in 2D plots [49,51]. Correspondence analysis was selected instead of topic modeling owing to its higher reproducibility, suitability for extremely short texts, and robustness against unbalanced group sizes (Appendix B.2).

The dataset was divided into four periods reflecting major institutional milestones and the social issue, the COVID-19 pandemic in 2020:

- 2008–2017: From the charter of WLB announcement to the implementation of the WS Reform.
- 2018–2019: From the implementation of the WS Reform to the COVID-19 pandemic.
- 2020–2022: From the COVID-19 pandemic to the introduction of the HC disclosure.
- 2023–2024: After the HC disclosure mandate.

### 3.3.2. RQ2: Relationships Between the Three Terms

To address RQ2 on whether concepts compete or coexist, descriptive statistics were useful at both the company and document levels. Competition is indicated by one concept's decline alongside another's rise over time. Coexistence occurs when both concepts persist at stable or growing frequencies. These patterns were identified through time-series graphs.

If coexistence is identified, the semantic change is analyzed to clarify whether the meanings of the three concepts are fused or distinct. Correspondence analysis was also conducted using KH Coder. The dataset was divided into twelve groups (Table 2), based on the intersection of three terms—WLB, WS, and HC—and four periods: 2008–2017, 2018–2019, 2020–2022, and 2023–2024.

**Table 2.** Concept–Period Combinations (12 Groups).

|               | 2008–2017   | 2018–2019   | 2020–2022   | 2023–2024   |
|---------------|-------------|-------------|-------------|-------------|
| Work Life     | WLB–2008–17 | WLB–2018–19 | WLB–2020–22 | WLB–2023–24 |
| Work Style    | WS–2008–17  | WS–2018–19  | WS–2020–22  | WS–2023–24  |
| Human Capital | HC–2008–17  | HC–2018–19  | HC–2020–22  | HC–2023–24  |

A methodological challenge arose. While some documents contained multiple concepts (Table 1), correspondence analysis required each document to belong to only one group. Therefore, two alternative datasets were constructed to obtain more robust results (Table 3):

- **Exclusion dataset:** documents containing overlapping concepts were removed.
- **Duplication dataset:** documents containing multiple keywords were duplicated.

**Table 3.** Document Counts in the Exclusion and Duplication Datasets.

|       | Exclusion Dataset | Duplication Dataset |
|-------|-------------------|---------------------|
| WLB   | 3202              | 5134                |
| WS    | 30,548            | 33,073              |
| HC    | 15,238            | 16,179              |
| Total | 48,988            | 54,386              |

Regarding the latter, if a document contained multiple keywords, it was duplicated so that each keyword could be assigned to a separate copy.

## 4. Results

### 4.1. Overall HRM Trends (RQ1)

First, we provide an overview of the recent perceptions of HRM. Figure 2 presents the co-occurrence network analysis focusing on the three terms—WLB, WS, and HC—from 2023 to 2024. A total of ten clusters were identified (Table 4).

These clusters are outlined below. Given the mandatory HC disclosure, HC forms the largest and most central cluster (Orange) in the network, positioning it at the core of HRM discourse and closely associating it with terms such as “our company,” “group,” and “management.” Meanwhile, the WS Reform continues to be widely discussed (Blue). Specifically, emphasis is placed on women’s empowerment (Green), the acquisition of childcare leave (Gray), and the recruitment of diverse employees (Red).





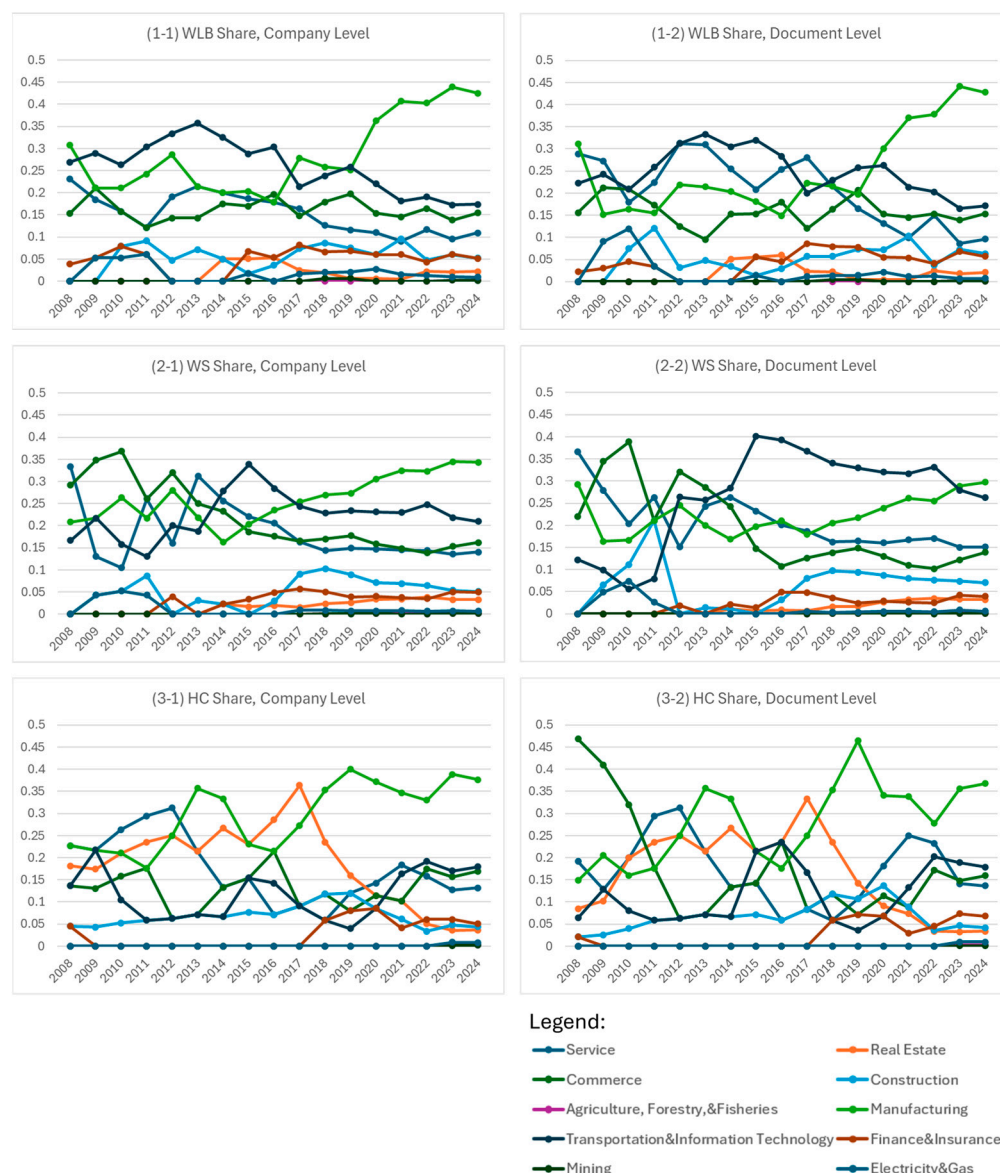
**Figure 2.** Japanese Companies' Perceptions of HRM in 2023–2024. Nodes represent frequently occurring words, and the edges between nodes indicate co-occurrence relationships. The figure suggests that Japanese companies regard HC as a strategically important element and tend to manage specific initiatives—such as promoting women's participation and supporting childcare leave—through index-based frameworks. The Japanese version annotated with edge-wise Jaccard coefficients is provided in Table A3 (Appendix A). The Japanese version is also included in Figure A2 (Appendix C).

**Table 4.** Categories in the Co-occurrence Network in 2023–2024.

| Color      | Description                                          |
|------------|------------------------------------------------------|
| Blue       | promoting WS reform for employees                    |
| Brown      | appointment of directors                             |
| Orange     | our company focuses on HC to improve corporate value |
| Gray       | childcare leave rate                                 |
| Yellow     | setting target indicators                            |
| Green      | risk management for female employees' empowerment    |
| Purple     | improvement of corporate value through productivity  |
| Red        | ensuring diversity                                   |
| Light blue | work life balance                                    |
| Pink       | sustainable growth                                   |

The figure is summarized as follows: Our company focuses on HC as a driver of corporate value, promoting WS reform, ensuring diversity, supporting WLB, and strengthening risk management for female employees' empowerment. To this end, we have appointed directors and monitor indicators such as childcare leave rates. Through these initiatives, our company aims to achieve sustainable growth.

Next, we examine the industries that have contributed the most to the overall HRM discourse. Figure 3 shows the industry distribution of the three terms at both the company and document levels.



**Figure 3.** Share of Companies and Documents Mentioning Each Term by Industry. In both cases, the shares of the manufacturing industry (light green) and the T&ICT industry (navy) are high, indicating that these two sectors have played a central role in the discourse surrounding changes in Japan's HRM institution and perception.

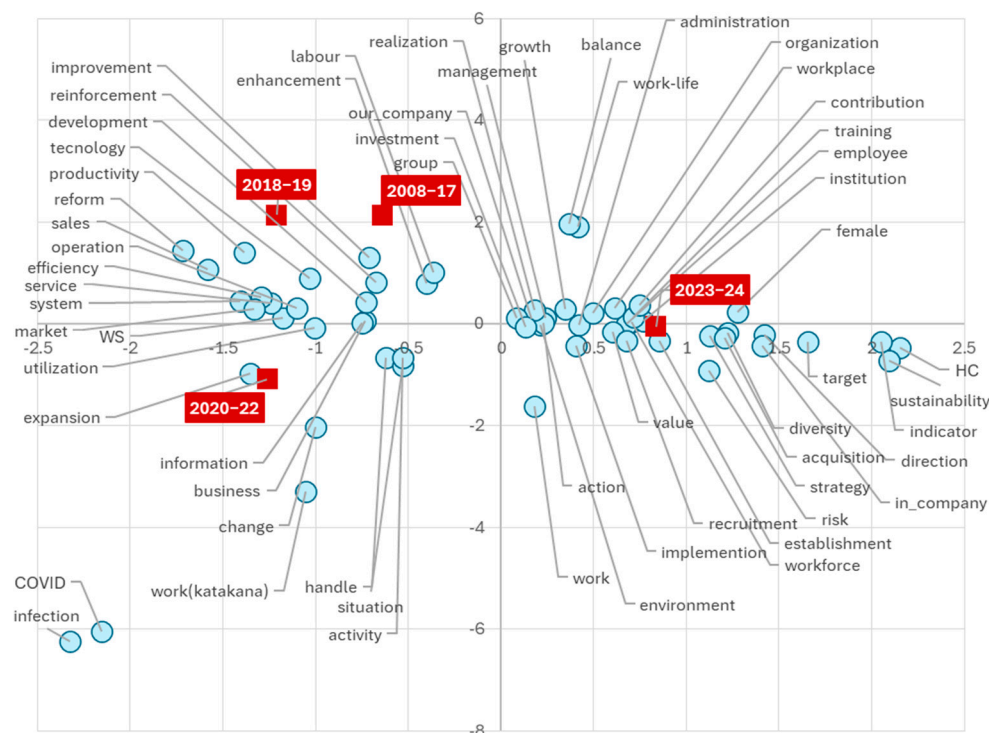
At the company level, the manufacturing sector has consistently accounted for the largest share across all three concepts since 2018 (1-1, 2-1, 3-1 in Figure 3). Among companies that referenced at least one of the terms, 35–45% belonged to the manufacturing industry. Since the disclosure of HC was institutionalized, manufacturing has become the primary player of HRM-related discourse.

At the document level, manufacturing also held the largest share from 2023 to 2024. However, between 2014 and 2022, the transportation and information and communications (T&IC) industry led in documents related to the WS Reform—a trend that shifted in 2023 when manufacturing overtook T&IC.

Manufacturing leads overall in both company and document counts, followed by T&IC. Notably, most companies in the latter belong to the ICT sector, indicating that ICT companies showed strong interest in WS even before formal government discussions began. Despite differences in the number of companies across industries, manufacturing and ICT played leading

roles in shaping corporate perceptions of the terms WLB, WS, and HC during 2023–2024. The causes of these industry-specific biases are discussed in Section 5.

Finally, we examine the evolution of corporate HRM perceptions. Figure 4 presents the correspondence analysis results, segmented into four periods: 2008–2017, 2018–2019, 2020–2022, and 2023–2024. When the component value on the horizontal axis exceeds 80%, the results are judged based on the horizontal axis alone [51]. The horizontal axis in Figure 4 explains 84.11% of the variance, whereas the vertical axis accounts for only 13.48%. Thus, interpretation should focus mainly on the horizontal dimension, with the vertical axis considered as only marginally relevant.



**Figure 4.** Correspondence Analysis of Perceptual Changes Across Four Periods: Red squares represent the four periods (2008–2017, 2018–2019, 2020–2022, 2023–2024), and blue circles indicate 60 salient words. The horizontal axis contrasts “WS for productivity” with “HC for sustainability,” whereas the vertical axis contrasts “WLB for productivity” with “responses to COVID-19.” The figure suggests a shift from WS for productivity toward HC for sustainability over time.

Terms on the left side of the horizontal axis include “WS,” “reform,” “operation,” “efficiency,” and “productivity.” This finding is interpreted as representing a focus on productivity enhancement through WS reform. On the right side, key terms include “HC,” “indicator,” “sustainability,” “target,” “female,” “diversity,” and “in company,” suggesting an emphasis on sustainable growth through the development of diverse HC.

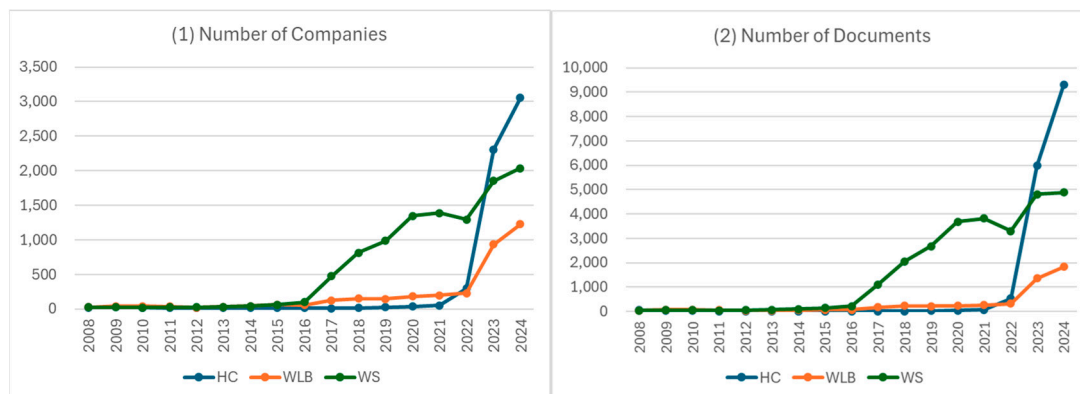
At the top of the vertical axis, the terms “work-life,” “balance,” and “productivity” are prominent, indicating a focus on “WLB for productivity.” In contrast, the bottom of the axis highlights “COVID,” “infection,” and “work,” suggesting that this area represents “responses to the COVID-19 pandemic.”

During the first period (2008–2017), HRM was perceived primarily as the “WLB for productivity,” although WLB also attracted some level of attention. Following the WS Reform (2018–2019), the discourses reinforced the existing trend. Japanese companies increasingly link the WS Reform to their productivity. However, during the COVID-19 pandemic (2020–2022), efforts to accommodate diverse working styles intensified. Following the mandatory HC disclosure institutionalization (2023–2024), perceptions shifted once

again. While productivity remained the dominant focus up to 2022, its relative prominence diminished in 2023 as attention shifted toward broader aspects of HC and sustainability. Companies increasingly regard employees as HC—not merely as human resources to manage—and reshape HRM around corporate sustainability via the development of diverse employee's HC.

#### 4.2. Relationships Between the Three Terms (RQ2)

We conducted a time-series analysis of their usage to determine whether the three terms—WLB, WS, and HC—were in a competitive or coexisting relationship. Figure 5 shows the descriptive results over time.



**Figure 5.** Time-Series Analysis of the Number of Companies and Documents Mentioning Each Term. Both (1) the number of corporations and (2) the number of documents show similar trends. Since 2017, references to WS have increased, and following the sharp rise in HC after 2023, mentions of both WS and WLB have also followed.

Mentions of WS notably increased after 2017, aligning with legislative discussions on the WS Reform in the Diet. References to WLB remained relatively low at both company and document levels but showed a moderate rise in 2017. Mentions of HC disclosure began increasing in 2022 and rose sharply in 2023. Notably, a simultaneous increase in WLB and a rebound of WS were observed across the company and document levels in 2023. This suggests that the mandatory HC disclosure renewed companies' attention to WLB and WS.

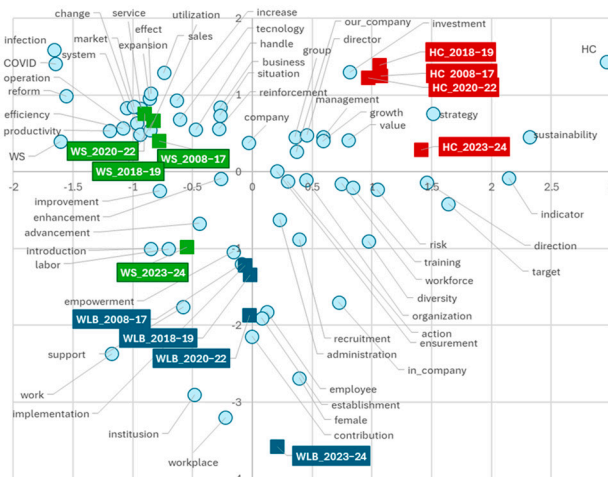
The findings indicate that the sequential introduction of WS and HC did not displace earlier concepts (WS did not replace WLB nor did HC replace WS). Instead, all terms coexisted, potentially reinforcing each other. Given that no clear replacement or decline can be observed, the next step is to examine their semantic changes.

Figure 6a,b present correspondence analyses that consolidate the relationships between words and 12 categories (3 terms  $\times$  4 periods) into a single plot. Figure 6a is based on the exclusion dataset, whereas Figure 6b uses duplication dataset. Figure 7a,b extracts only the 12 categories to enhance visibility.

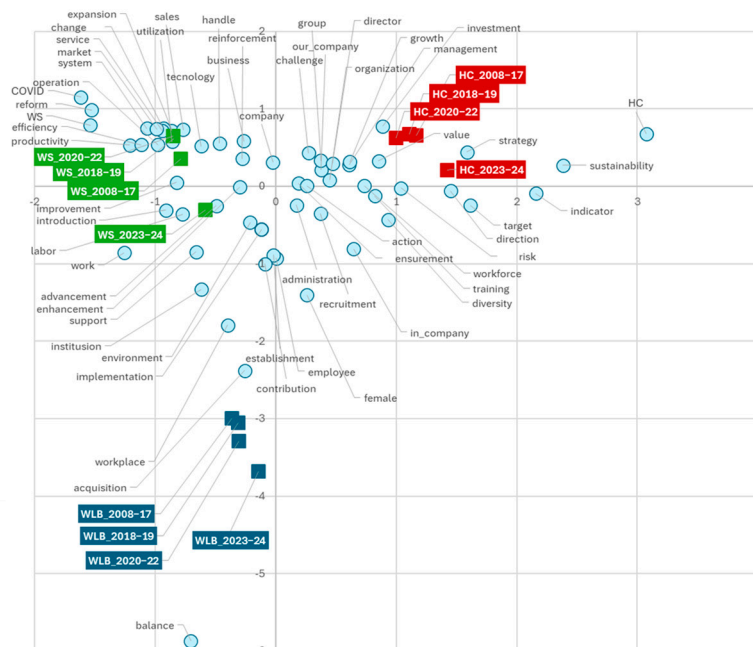
In Figures 6a and 7a (exclusion dataset), the contribution ratio of the horizontal axis was 70.56% and that of the vertical axis was 17.87%. The words with the largest absolute contributions are summarized in Table A4 (Appendix B.1). COVID-19, however, is treated as an exogenous factor and excluded from axis interpretation. The horizontal axis can be interpreted as "Strategic Sustainability vs. Operational Efficiency," and the vertical axis as "Corporate Growth vs. Institutional Practices." Regarding the three categories, WLB is located in the lower part of the vertical axis, indicating "Institutional Practices." HC shifted downward from the first quadrant toward the horizontal axis, suggesting that the nuance of "Corporate Growth" weakened and "Strategic Sustainability" became more salient. WS was located in the fourth quadrant during 2008–2017, 2018–2019, and 2020–

2022, but shifted downward in 2023–2024, moving toward third quadrant. This indicates that, after the mandatory disclosure of HC in 2023, the growth-oriented nuance of WS diminished and was repositioned toward “Institutional Practices” and then, moving closer to WLB.

(a) Results of Exclusion dataset

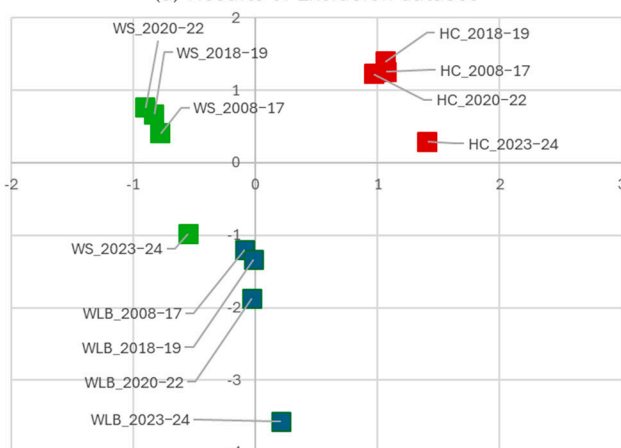


(b). Results of Duplication dataset

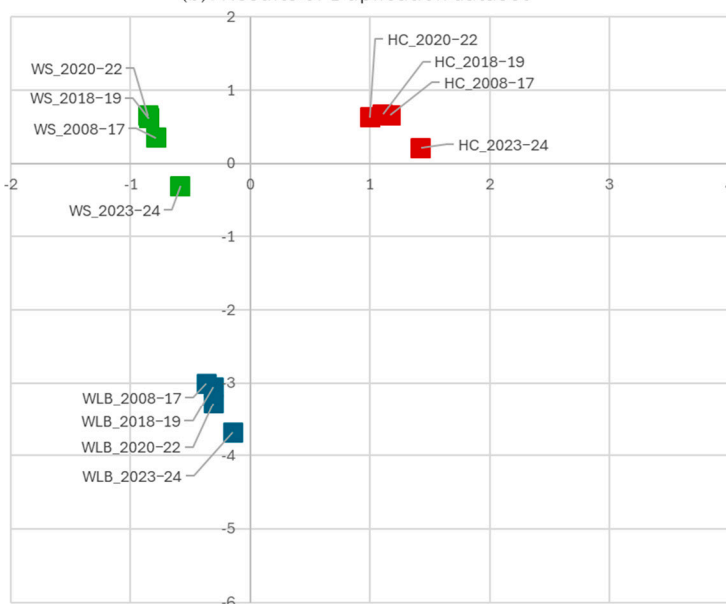


**Figure 6.** (a) left, (b) right. Correspondence Analysis of Three Terms Across Four Periods. The left figure shows the analysis results of the Exclusion dataset, whereas the right figure shows those of the Duplication dataset. Red squares indicate the positions of HC, green squares represent WS, and navy squares represent WLB across the four periods. Blue circles denote 60 distinctive words. Both HC and WS shifted downward in 2023–2024, suggesting that the mandatory disclosure of HC may have altered the meaning or positioning of WS.

(a) Results of Exclusion dataset



(b). Results of Duplication dataset



**Figure 7.** (a) left, (b) right. Semantic Shifts in the Three Terms Across Four Periods. This figure presents only the positions of the 12 categories (three terms  $\times$  four periods) extracted from Figure 6a,b.



In Figures 6b and 7b (duplication dataset), the contribution ratio of the horizontal axis was 56.19% and that of the vertical axis was 31.02%. Compared with Figure 6a, the vertical axis contribution is notably larger. The horizontal axis can be interpreted as “Strategic Governance vs. Operational Efficiency,” and the vertical axis as “System Reform vs. Workplace Practices.” WLB and HC show similar tendencies to those in Figure 6a. WS also shifted downward in both datasets; Although it crossed below the horizontal axis it cannot be clearly positioned within “Workplace Practices.”

Turning to axis interpretation, Figure 6a yielded “Strategic Sustainability vs. Operational Efficiency” (horizontal) and “Corporate Growth vs. Institutional Practices” (vertical), whereas Figure 6b yielded “Strategic Governance vs. Operational Efficiency” (horizontal) and “System Reform vs. Workplace Practices” (vertical). Given that the preprocessing methods differ, the sets of contributing words are not identical. Nevertheless, at a higher level of abstraction, the horizontal axis can be summarized as “Sustainability vs. Efficiency,” and the vertical axis as “Profitability vs. Employee Institutions.”

Focusing on the vertical axis contributions, Figure 6a showed notable changes, but the contribution ratio of only about 18%, these shifts can be interpreted as localized features (i.e., changes dependent on specific word groups or categories). In contrast, Figure 6b showed a higher vertical contribution of 31%, indicating that the downward shift in WS represents a more stable change in the overall structure. Taken together, these results suggest that corporate perceptions of the WS Reform reflect not only localized features but also broader structural changes. In summary, the mandatory disclosure of HC in 2023 significantly influenced previously introduced concepts, particularly WS, by weakening its association with profitability. The following section examines the implications of these semantic shifts for corporate perceptions.

## 5. Discussion

### 5.1. Summary of Key Findings

This study aimed to (1) examine Japanese companies’ perceptions of HRM in response to a series of top-down HRM reforms and (2) analyze how these institutional changes have influenced HRM perceptions based on three terms: WLB, WS, and HC. First, the findings from textual analysis suggest a fundamental shift in Japanese companies’ HRM perceptions and their alignment with sustainability. Focusing on the semantic shifts in key terms, the nuance of productivity—once closely associated with WS—has relatively diminished, giving way to an emphasis on enhancing employee diversity, establishing indicators, and pursuing sustainable growth.

### 5.2. Political, Economic, and Cultural Background of Semantic Shifts

In Japan, long working hours and their associated problems have long been left unaddressed as part of the prevailing work culture [52]. To address this issue, the nonbinding Charter of WLB was introduced. Text analysis revealed that WLB has been primarily associated with “employee welfare” and “workplace environment,” although it was not necessarily mentioned by many companies. This limited uptake plausibly reflects both the lack of enforceability and the decline in corporate performance following the collapse of Lehman Brothers [53]. As corporate performance and stock prices fell, activists exerted pressure on management [54]. This social context and the corporate emphasis on performance align with the text analysis finding that WS was positioned in close proximity to productivity and efficiency during this period.

Since the mid-2010s, the Japanese government has committed to the Sustainable Development Goals (SDGs). Japan’s largest institutional investor, the Government Pension Investment Fund, adopted an ESG-focused stance in 2017 and has since operated an ESG

Index targeting Japanese companies. Against this backdrop, and amid growing public debate over WS Reform and overwork-related issues, companies began to engage more actively with SDGs and ESG initiatives [55]. It is therefore plausible that these policy, economic, and cultural developments may become the background of the shift in Japanese companies' perception, in addition to the mandatory disclosure of HC.

Following the introduction of mandatory HC disclosure in 2023, Japanese companies began to view employees not merely as human resources but as HC, shifting their managerial focus toward long-term corporate value—namely, sustainable growth. In parallel, the concept of WS expanded beyond a narrow emphasis on productivity. As a result, short-term employee output has come to be understood within the broader framework of sustainability. These findings suggest that HC, as a qualitatively distinct concept, has the potential to reshape conventional HRM perception and foster a more integrated, future-oriented approach. This interpretation also explains the rationale for our title, in which “productivity” and “sustainability” are linked: although conceptually distinct, this link summarizes a transition in Japanese companies' HRM perceptions.

### 5.3. Sectoral Structure and Interpretation

While these semantic shifts reflect broad institutional changes, the industrial structure of listed companies also plays an important role in shaping this discourse. The prominence of manufacturing in the discourse is consistent with its structural dominance in the Japanese economy: manufacturing companies account for approximately 35–45% of all listed companies, depending on the year, which closely matches the 35% share observed in Figure 3. This structural feature naturally increases the likelihood that manufacturing-related mentions appear centrally in the analyses. While manufacturing represents a smaller share of GDP (around 20%) and employment (around 15%) at the macroeconomic level [56], its higher representation among listed companies explains its prominence in our dataset. Importantly, however, a subsample analysis of the ICT industry revealed largely similar long-term semantic trends, suggesting that the observed shifts reflect broader institutional changes rather than being driven solely by the manufacturing sector.

## 6. Conclusions, Implications and Future Works

### 6.1. Conclusions

This study examined how Japanese companies' perceptions of HRM have evolved in response to a series of top-down institutional reforms, focusing on three key concepts: WLB, WS, and HC. Through textual analysis of corporate NDs, the findings revealed a semantic shift from productivity-oriented interpretations toward a broader focus on sustainability and long-term value creation. This shift was shaped by overlapping political, economic, and cultural developments, including government-led reforms, the rise in ESG and SDGs, and persistent work culture issues. At the same time, the sectoral structure of listed companies—particularly the dominance of manufacturing—also played an important role in shaping these discourse patterns.

First, this study makes an empirical contribution to understanding HRM perceptions among Japanese companies. Although few studies analyze the prerequisites for HC disclosure and its relationship with engagement [57], limited research has attempted to clarify companies' perceptions [58]. Our analysis provides evidence that HC can transform perceptions of HRM from a “cost factor” to “capital worth investing in for sustainable growth.” In this way, it identifies a shift in HRM perceptions from a short-term emphasis on “productivity” to a long-term focus on “sustainability.”

Second, the study offers theoretical contributions to the literature on institutional reform and corporate perception. The present study shows that institutions can influence not

only compliance but also the cognitive frameworks through which actors interpret reality as emphasized in prior research [33,59]. While prior research has primarily examined institutional impacts on behavior, this study situates its findings within a broader theoretical framework, new institutional economics.

Third, this study examines how multiple related concepts introduced sequentially can coexist and evolve in meaning—a perspective rarely addressed in prior management fashion research, which has typically focused either on the lifecycle of a single concept [40,60] or on the introduction of multiple concepts without examining their interaction [61]. By analyzing how multiple concepts interact and evolve over time, this study bridges these two approaches and extends the scope of management fashion research. Additionally, this study demonstrates that textual analysis of large-scale NDs is an effective tool for identifying both quantitative shifts and semantic changes in concepts. It may also serve as an indirect indicator of how institutional reforms are internalized and disseminated within the business sector.

### 6.2. Implications

The findings of this study have both theoretical and practical implications. The first theoretical implication is that the study offers a framework for clarifying the chain linking “perception–behavior–outcome.” The perceptual shift represents the initial step that influences management strategies, behaviors, and ultimately business performance, even though certain limitations remain [62]. This study therefore lays a necessary foundation for subsequent research to investigate actions and outcomes. The second theoretical implication is that the observed dynamics of a “concept ecosystem”—in which related terms are introduced sequentially [61] and evolve through coexistence and redefinition rather than competition and elimination—provide insights applicable to academic research.

The first practical implication is that while this study analyzes the evolution of HRM perceptions among Japanese companies, its findings have broader relevance. The mechanism by which top-down institutional reforms reshape corporate interpretations and the perceptions likely operates similarly in other countries, industries, or contexts (e.g., DE&I disclosure [63]). Second, for practitioners, the findings suggest that aligning HRM strategies with evolving corporate perceptions can help ensure that institutional reforms are embedded in organizational practices. Managers may incorporate diversity and sustainability metrics into performance evaluation systems to demonstrate compliance and reinforce the internalization of these values. For example, in manufacturing—where demographic decline and skill shortages are pressing issues—the integration of HC and sustainability indicators into workforce institutions may be especially important.

### 6.3. Future Research

The study limitations point to several future research directions. First, an international comparative analysis should be conducted. In particular, comparisons with the US and European contexts, where mandatory HC disclosure has been institutionalized earlier, would help clarify whether the semantic and perceptual shifts observed in Japan represent a generalizable mechanism or a country-specific trajectory.

Second, future research should deepen the theoretical understanding of perception–behavior–outcome linkages and concept dynamics. It should evaluate the effectiveness of ND by linking behavioral indicators (e.g., overtime hours, turnover rates) with performance outcomes (e.g., return on assets, ROA), enabling a multilevel analysis of the linkage. Moreover, the systematic patterns under which concepts compete or coexist and reconstruct meanings—such as the degree of conceptual overlap, the strength of institutional

coercion, and the maturity of prior concepts—should be explored, building on observations from this study.

Third, institutional reforms do not guarantee changes in workplace realities. For example, the persistence of long working hours and sector-specific labor shortages in transportation and construction indicate that cultural and industrial contexts may diverge from policy intent. Future research should therefore incorporate firm- or industry-level data and possibly survey or ethnographic evidence to capture such differentiated effects, thereby complementing discourse-based text-mining approaches like this study.

Finally, diverse analytical approaches could also be explored. For instance, embedding-based analysis could enhance robustness checks and provide different insights.

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**Conflicts of Interest:** The authors declare no conflicts of interest.

## Abbreviations

The following abbreviations are used in this manuscript:

|      |                                                                                       |
|------|---------------------------------------------------------------------------------------|
| HC   | Human Capital                                                                         |
| HRM  | Human Resource Management                                                             |
| MD&A | Management’s Discussion and Analysis of Financial Condition and Results of Operations |
| METI | Ministry Of Economy, Trade and Industry                                               |
| ND   | Narrative Disclosures                                                                 |
| OECD | Organization For Economic Co-Operation and Development                                |
| SDGs | Sustainable Development Goals                                                         |
| T&IC | Transportation and Information and Communications Industry                            |
| TSE  | Tokyo Stock Exchange                                                                  |
| WS   | Work Style                                                                            |

## Appendix A. Parameters Used in Text Analysis

**Table A1.** Name-Matching Dictionary (in Japanese).

| Before        | After      | English Meaning |
|---------------|------------|-----------------|
| (株)           | 株式会社       | Ltd. Or         |
| employee      | 従業員        | employee        |
| human capital | 人的資本       | human capital   |
| human resouce | 人的資源       | human resource  |
| management    | 経営         | management      |
| officer       | 取締役        | officer         |
| WLB           | ワークライフバランス | WLB             |
| worklife      | ワークライフ     | worklife        |
| 企業            | 会社         | company         |
| サステナビリティ      | 持続可能性      | sustainability  |

**Table A1.** *Cont.*

| Before     | After  | English Meaning |
|------------|--------|-----------------|
| 事業         | ビジネス   | business        |
| 仕事と生活      | ワークライフ | work life       |
| 社員         | 従業員    | employee        |
| 人財         | 人材     | workforce       |
| ダイバーシティ    | 多様性    | diversity       |
| 取組         | 取り組    | working on      |
| ヒューマンキャピタル | 人的資本   | human capital   |
| ヒューマンリソース  | 人的資源   | human resource  |
| マテリアリティ    | 重要課題   | materiality     |
| マネジメント     | 経営     | management      |
| 役員         | 取締役    | director        |
| ワークスタイル    | 働き方    | work style      |

**Table A2.** Forced Extraction and Stop-words.

| Category          | Japanese Words                                                                             | English Words                                                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Forced Extraction | 従業員<br>働き方<br>持続可能性<br>持続可能<br>人的資本<br>人的資源<br>ワークライフ<br>可能性<br>生産性<br>多様性<br>重要課題<br>福利厚生 | employee<br>work style<br>sustainability<br>sustainable<br>human capital<br>human resource<br>work life<br>possibiity<br>productivity<br>diversity<br>materiality<br>welfare |
| Stop-words        | 年度<br>平成<br>月<br>昭和                                                                        | fiscal year<br>Heisei<br>month<br>Sho-wa                                                                                                                                     |

**Table A3.** Parameters for main analysis.

|                                                          | Figure 2      | Figure 4      | Figure 6a     | Figure 6b     |
|----------------------------------------------------------|---------------|---------------|---------------|---------------|
| method                                                   | Co-occurrence | Correspondene | Correspondene | Correspondene |
| period                                                   | 2023–2024     | 2008–2024     | 2008–2024     | 2008–2024     |
| Duplicate Handling                                       |               |               | remove        | dupulicate    |
| Number of Words Used                                     | 60            | 60            | 60            | 60            |
| Number of Candidate Words                                | 75            | 75            | 75            | 75            |
| Frequency Bar                                            | 2200          | 4200          | 3800          | 4200          |
| Horizontal Axis (in the case of correspondence analysis) |               | 84.11%        | 70.56%        | 56.19%        |
| Vertical Axis (in the case of correspondence analysis)   |               | 13.48%        | 17.87%        | 31.02%        |

## Appendix B. Analytical Procedures

### Appendix B.1

Here, we describe the points that will be adopted in all subsequent text analysis. First, only nouns were extracted, and their scope was limited to the top 60 most frequent tokens. The first rationale is that in Japanese, verbs are commonly formed by combining a noun stem with “*suru*” (“do” in English), as in *keiei-suru* (“do management”) for the English verb



“manage.” The second rationale is that, based on our preliminary analysis, extremely few of the candidate words appeared in verb form. We therefore judged that analyzing corporate perceptions based solely on nouns would provide a more precise and valid account.

Second, for the qualitative interpretation of the diagram, two authors independently reviewed the terms and then reconciled their interpretations through discussion. Unlike typical content-analysis research, we consider our approach transparent, given that all terms relevant to interpretation were displayed in figures.

**Table A4.** Distinctive words contributing to the axes in Figures 4 and 6a,b.

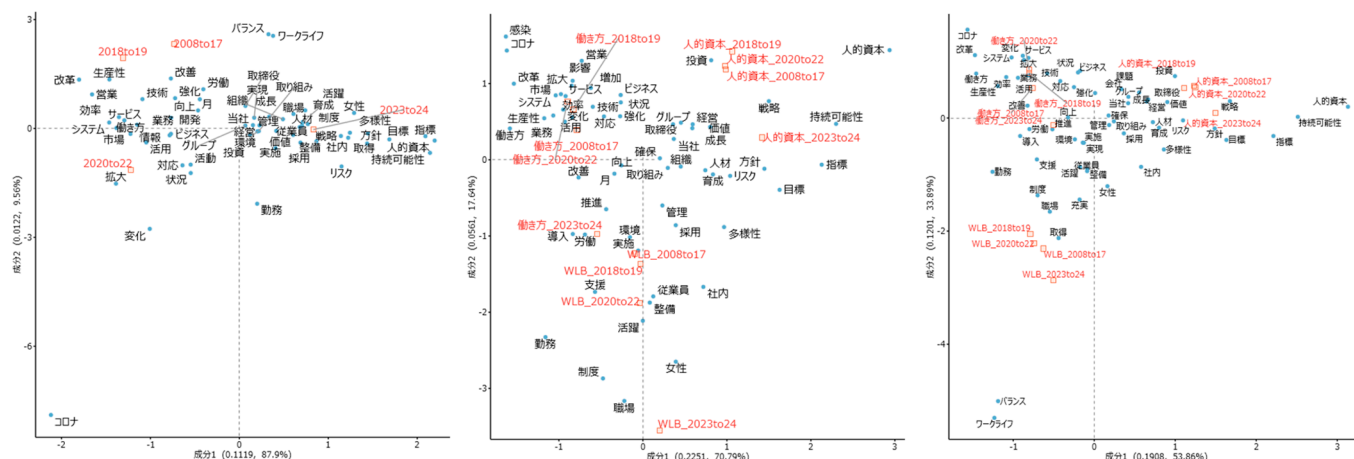
| for Figure 4  |                |                          |                        |                           |                         |                            |
|---------------|----------------|--------------------------|------------------------|---------------------------|-------------------------|----------------------------|
| axis          | direction      | distinctive words        |                        |                           |                         |                            |
| Horizontal    | right<br>left  | infection<br>direction   | COVID<br>target        | reform<br>indicator       | sales<br>sustainability | system<br>HC               |
| Vertical      | upper<br>lower | improvement<br>infection | productivity<br>COVID  | reform<br>work(katakana)  | work-life<br>change     | balance<br>work            |
| for Figure 6a |                |                          |                        |                           |                         |                            |
| axis          | direction      | distinctive words        |                        |                           |                         |                            |
| Horizontal    | right<br>left  | HC<br>efficiency         | sustainability<br>work | indicator<br>productivity | target<br>reform        | strategy<br>WS             |
| Vertical      | upper<br>lower | expansion<br>workplace   | reform<br>institution  | effect<br>female          | sales<br>work           | investment<br>contribution |
| for Figure 6b |                |                          |                        |                           |                         |                            |
| axis          | direction      | distinctive words        |                        |                           |                         |                            |
| Horizontal    | right<br>left  | HC<br>WS                 | strategy<br>reform     | direction<br>work         | risk<br>productivity    | diversity<br>efficiency    |
| Vertical      | upper<br>lower | reform<br>work-life      | WS<br>balance          | investment<br>acquisition | change<br>workplace     | system<br>female           |

Third, the analysis results were output in Japanese; the associated files were translated into English for reporting purposes. In this phase, this study adopted the same procedure as that qualitative interpretation.

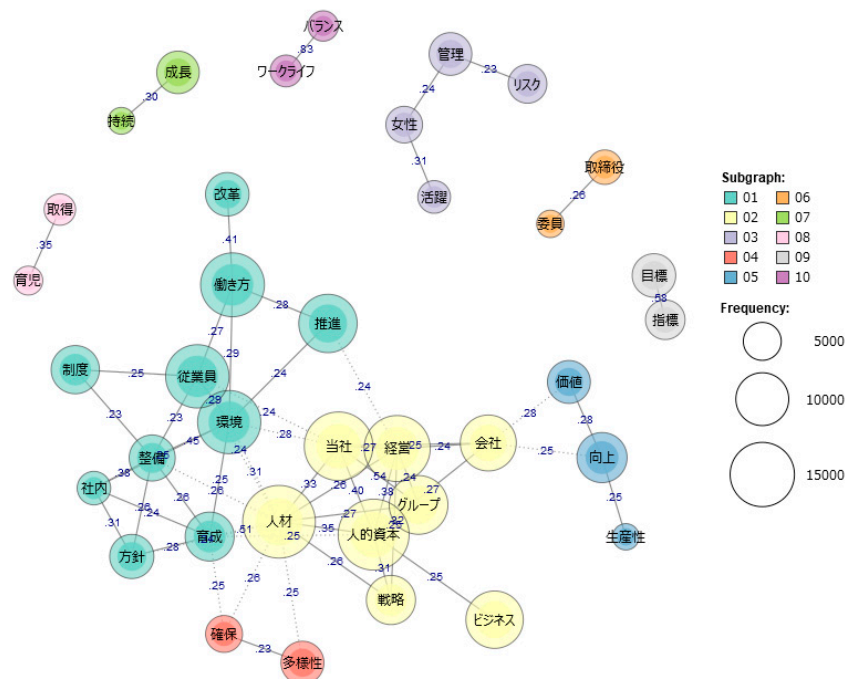
#### Appendix B.2

Notably, although topic modeling is widely used to extract latent themes from textual data [64], correspondence analysis was chosen for the following reasons. First, it employs statistical, rather than probabilistic, techniques—favoring reproducibility. Second, it reduces classification errors when analyzing very short NDs—some as brief as 13 characters with high length variance. Third, it normalizes within-group word-frequencies to compensate for varying document counts across periods. These features make correspondence analysis particularly appropriate for interpreting HRM-related narratives before and after institutional reforms.

## Appendix C. Additional Analysis (Labels in Japanese)



**Figure A1.** (right). Co-occurrence analysis without stop-words (corresponding to Figure 4). (center). Correspondence analysis without stop-words (corresponding to Figure 6a). (left). Correspondence analysis without stop-words (corresponding to Figure 6a). Note: To ensure robustness and reproducibility, these figures are presented directly as KH Coder outputs. As KH Coder operates in Japanese, the labels remain in the original language to preserve analytical integrity. Table A5 presents the Japanese–English Term Mapping Table. When stop-words such as *nendo* (fiscal year), *sho-wa*, *heisei*, and *tsuki* (month) were retained, they formed chronological clusters but did not alter the substantive interpretation of semantic shifts related to WLB, WS, and HC.



**Figure A2.** Co-occurrence analysis with Jaccard coefficient in Japanese (corresponding to Figure 3). Note: To ensure robustness and reproducibility, these figures are presented directly as KH Coder outputs. As KH Coder operates in Japanese, the labels remain in the original language to preserve analytical integrity. Table A5 presents the Japanese–English Term Mapping Table.

Table A5. Japanese–English Term Mapping Table.

| Japanese | English        | Japanese | English        | Japanese | English       |
|----------|----------------|----------|----------------|----------|---------------|
| グループ     | group          | 環境       | environment    | 状況       | situation     |
| コロナ      | COVID          | 管理       | administration | 職場       | workplace     |
| サービス     | service        | 技術       | technology     | 人材       | workforce     |
| システム     | system         | 強化       | reinforcement  | 人的資本     | HC            |
| バランス     | balance        | 業務       | operation      | 推進       | advancement   |
| ビジネス     | business       | 勤務       | work           | 制度       | institution   |
| リスク      | risk           | 経営       | management     | 成長       | growth        |
| ワーク      | work(katakana) | 月        | month          | 整備       | establishment |
| ワークライフ   | work-life      | 効率       | efficiency     | 生産性      | productivity  |
| 委員       | member         | 向上       | enhancement    | 戦略       | strategy      |
| 育児       | childcare      | 採用       | recruitment    | 組織       | organization  |
| 育成       | training       | 市場       | market         | 増加       | increase      |
| 営業       | sales          | 指標       | indicator      | 多様性      | diversity     |
| 影響       | effect         | 支援       | support        | 対応       | handle        |
| 価値       | value          | 持続       | sustain        | 投資       | investment    |
| 課題       | challenge      | 持続可能性    | sustainability | 当社       | our_company   |
| 会社       | company        | 実現       | realization    | 働き方      | WS            |
| 改革       | reform         | 実施       | implementation | 導入       | introduction  |
| 改善       | improvement    | 社内       | in_company     | 年度       | fiscal year   |
| 開発       | development    | 取り組み     | action         | 平成       | Heisei        |
| 拡大       | expansion      | 取締役      | director       | 変化       | change        |
| 確保       | ensurement     | 取得       | acquisition    | 方針       | direction     |
| 活動       | activity       | 従業員      | employee       | 目標       | target        |
| 活躍       | contribution   | 女性       | female         | 労働       | labor         |
| 活用       | utilization    | 昭和       | Sho-wa         |          |               |
| 感染       | infection      | 情報       | information    |          |               |

## References

1. Healy, T.; Cote, S. *The Well-Being of Nations: The Role of Human and Social Capital. Education and Skills*; Organisation for Economic Cooperation and Development: Paris, France, 2001.
2. Becker, G.S. Investment in Human Capital: A Theoretical Analysis. *J. Political Econ.* **1962**, *70 Pt 2*, 9–49. [\[CrossRef\]](#)
3. van Marrewijk, M.; Timmers, J. Human Capital Management: New Possibilities in People Management. *J. Bus. Ethics* **2003**, *44*, 171–184. [\[CrossRef\]](#)
4. Gruzina, Y.; Firsova, I.; Strielkowski, W. Dynamics of Human Capital Development in Economic Development Cycles. *Economies* **2021**, *9*, 67. [\[CrossRef\]](#)
5. Kucharčíková, A.; Mičiak, M.; Tokarčíková, E.; Štaffenová, N. The Investments in Human Capital within the Human Capital Management and the Impact on the Enterprise's Performance. *Sustainability* **2023**, *15*, 5015. [\[CrossRef\]](#)
6. Capozza, C.; Divella, M. Human Capital and Firms' Innovation: Evidence from Emerging Economies. *Econ. Innov. New Technol.* **2019**, *28*, 741–757. [\[CrossRef\]](#)
7. Sovbetov, I. Does Employee Happiness Create Value for Firm Performance? *Humanit. Soc. Sci. Commun.* **2025**, *12*, 703. [\[CrossRef\]](#)
8. ISO 30414:2018; Human Resource Management—Guidelines for Internal and External Human Capital Reporting. International Organization for Standardization: Geneva, Switzerland, 2018. Available online: <https://www.iso.org/obp/ui/#iso:std:iso:30414:ed-1:v1:en> (accessed on 26 July 2025).
9. Georgiev, G.S. The Human Capital Management Movement in U.S. Corporate Law. *Tul. L Rev.* **2020**, *95*, 639.
10. Vithana, K.; Jayasekera, R.; Choudhry, T.; Baruch, Y. Human Capital Resource as Cost or Investment: A Market-Based Analysis. *Int. J. Hum. Resour. Manag.* **2023**, *34*, 1213–1245. [\[CrossRef\]](#)
11. EFRAG Sustainability Reporting|EFRAG. Available online: <https://www.efrag.org/en/sustainability-reporting> (accessed on 26 July 2025).
12. Brewster, C. Comparative HRM: European Views and Perspectives. *Int. J. Hum. Resour. Manag.* **2007**, *18*, 769–787. [\[CrossRef\]](#)
13. Easterby-Smith, M.; Malina, D.; Yuan, L. How Culture-Sensitive Is HRM? A Comparative Analysis of Practice in Chinese and UK Companies. *Int. J. Hum. Resour. Manag.* **1995**, *6*, 31–59. [\[CrossRef\]](#)
14. CONRAD, H. From Seniority to Performance Principle: The Evolution of Pay Practices in Japanese Firms since the 1990s. *Soc. Sci. Jpn. J.* **2010**, *13*, 115–135. [\[CrossRef\]](#)

15. Kang, J.-K.; Shivdasani, A. Corporate Restructuring during Performance Declines in Japan. *J. Financ. Econ.* **1997**, *46*, 29–65. [CrossRef]
16. Takahashi, K.; Kodama, N.; Arita, K.; Kazama, H.; Sakai, S.; Takeuchi, M.; Owan, H. Has Japan's Work Style Reform Had the Intended Effect? *Appl. Econ.* **2025**, *57*, 2757–2780. [CrossRef]
17. Abegglen, J.G. *The Japanese Factory: Aspects of Its Social Organization*; Free Press: New York, NY, USA, 1958; p. xiii142.
18. Moriguchi, C. Japanese-Style Human Resource Management and Its Historical Origins. *Jpn. Labor Rev.* **2014**, *11*, 58–77.
19. Iyoda, M. *Postwar Japanese Economy: Lessons of Economic Growth and the Bubble Economy*; Springer Science & Business Media: Berlin/Heidelberg, Germany, 2010; ISBN 978-1-4419-6332-1.
20. Lehmberg, D. From Advantage to Handicap: Traditional Japanese HRM and the Case for Change. *Organ. Dyn.* **2014**, *43*, 146–153. [CrossRef]
21. Gender Equality Bureau Cabinet Office Website Promoting Work-Life Balance. Available online: <https://www.cao.go.jp/wlb/government/index.html> (accessed on 5 August 2025).
22. Hirokawa, S. The Psychological Impact of Job Loss in Japan after the “Lehman Shock”. *Jpn. Labor Rev.* **2012**, *9*, 41–58.
23. Clark, R.L.; Ogawa, N.; Kondo, M.; Matsukura, R. Population Decline, Labor Force Stability, and the Future of the Japanese Economy. *Eur. J. Popul.* **2010**, *26*, 207–227. [CrossRef]
24. Venne, R.A. Population Aging in Canada and Japan: Implications for Labour Force and Career Patterns. *Can. J. Adm. Sci./Rev. Can. Sci. L'adm.* **2001**, *18*, 40–49. [CrossRef]
25. Kojima, S.; North, S.; Weathers, C. Abe Shinzō's Campaign to Reform the Japanese Way of Work. *Asia-Pac. J.* **2017**, *15*, e3. [CrossRef]
26. Burdin, G.; Kambayashi, R.; Kato, T. *The Impact of Overtime Limits on Firms and Workers: Evidence from Japan? S Work Style Reform*; IZA-Institute of Labor Economics: Bonn, Germany, 2024.
27. RIETI-Outlook on the 2024 Problem: Seizing the Chance to Change the Low-Pricing Model. Available online: <https://www.rieti.go.jp/en/papers/contribution/kuroda-sachiko/03.html> (accessed on 21 September 2025).
28. Ministry of Economy, Trade and Industry Study Group on Sustainable Corporate Value Enhancement and Human Capital. Available online: [https://www.meti.go.jp/shingikai/economy/improving\\_corporate\\_value/index.html](https://www.meti.go.jp/shingikai/economy/improving_corporate_value/index.html) (accessed on 5 August 2025).
29. Ministry of Economy, Trade and Industry Study Group for Realizing Human Capital Management. Available online: [https://warp.da.ndl.go.jp/info:ndljp/pid/14455765/www.meti.go.jp/shingikai/economy/jinteki\\_shihon/index.html](https://warp.da.ndl.go.jp/info:ndljp/pid/14455765/www.meti.go.jp/shingikai/economy/jinteki_shihon/index.html) (accessed on 5 August 2025).
30. Cabinet Office New Capitalism Realization Headquarters/New Capitalism Realization Conference. Available online: [https://www.cas.go.jp/jp/seisaku/atarashii\\_sihonsyugi/wgkaisai/index.html](https://www.cas.go.jp/jp/seisaku/atarashii_sihonsyugi/wgkaisai/index.html) (accessed on 5 August 2025).
31. Japan Exchange Group, Inc. Enhancing Corporate Governance. Available online: <https://www.jpx.co.jp/english/equities/listing/cg/index.html> (accessed on 8 August 2025).
32. North, D.C. *Institutions, Institutional Change and Economic Performance*; Cambridge University Press: Cambridge, UK, 1990; ISBN 978-0-521-39734-6.
33. North, D.C. *Understanding the Process of Economic Change*; Princeton University Press: Princeton, NJ, USA, 2010; ISBN 978-1-4008-2948-4.
34. Kraatz, M.S.; Block, E.S. Organizational Implications of Institutional Pluralism. In *The SAGE Handbook of Organizational Institutionalism*; Sage Publishing: London, UK, 2008; pp. 243–275. [CrossRef]
35. Greenwood, R.; Raynard, M.; Kodeih, F.; Micelotta, E.R.; Lounsbury, M. Institutional Complexity and Organizational Responses. *Acad. Manag. Ann.* **2011**, *5*, 317–371. [CrossRef]
36. Thornton, P.H.; Ocasio, W.; Lounsbury, M. *The Institutional Logics Perspective: A New Approach to Culture, Structure, and Process*; OUP Oxford: Oxford, UK, 2012; ISBN 978-0-19-960193-6.
37. Ullmann, S. *Semantics: An Introduction to the Science of Meaning*; Oxford B. Blackwell: Oxford, UK, 1964.
38. Blank, A.; Koch, P. *Historical Semantics and Cognition*; Walter de Gruyter: Berlin, Germany, 1999; ISBN 978-3-11-016614-9.
39. Rogers, E.M. *Diffusion of Innovations*, 5th ed.; Simon and Schuster: New York, NY, USA, 2003; ISBN 978-0-7432-5823-4.
40. Abrahamson, E. Management Fashion. *AMR* **1996**, *21*, 254–285. [CrossRef]
41. Benders, J.; Nijholt, J.; Heusinkveld, S. Using Print Media Indicators in Management Fashion Research. *Qual. Quant.* **2007**, *41*, 815–829. [CrossRef]
42. Røvik, K.A. From Fashion to Virus: An Alternative Theory of Organizations' Handling of Management Ideas. *Organ. Stud.* **2011**, *32*, 631–653. [CrossRef]
43. Michel, J.-B.; Shen, Y.K.; Aiden, A.P.; Veres, A.; Gray, M.K.; The Google Books Team; Pickett, J.P.; Hoiberg, D.; Clancy, D.; Norvig, P.; et al. Quantitative Analysis of Culture Using Millions of Digitized Books. *Science* **2011**, *331*, 176–182. [CrossRef]
44. Banker, R.D.; Potter, G.; Srinivasan, D. An Empirical Investigation of an Incentive Plan That Includes Nonfinancial Performance Measures. *Account. Rev.* **2000**, *75*, 65–92. [CrossRef]

45. Hao, J.; Pham, V.T. COVID-19 Disclosures and Market Uncertainty: Evidence from 10-Q Filings. *Aust. Account. Rev.* **2022**, *32*, 238–266. [[CrossRef](#)]
46. Zyznarska-Dworczak, B.; Rudžionienė, K. Corporate COVID-19-Related Risk Disclosure in the Electricity Sector: Evidence of Public Companies from Central and Eastern Europe. *Energies* **2022**, *15*, 5810. [[CrossRef](#)]
47. Macanovic, A. Text Mining for Social Science—The State and the Future of Computational Text Analysis in Sociology. *Soc. Sci. Res.* **2022**, *108*, 102784. [[CrossRef](#)]
48. I-N Information Systems, Ltd. Company Information. Available online: <https://www.indb.co.jp/corporate/> (accessed on 26 July 2025).
49. Higuchi, K. *KH Coder 3 Reference Manual*; Ritsumeikan University: Kyoto, Japan, 2016.
50. Yano, Y.; Nakamura, T.; Ishitsuka, S.; Maruyama, A. Consumer Attitudes toward Vertically Farmed Produce in Russia: A Study Using Ordered Logit and Co-Occurrence Network Analysis. *Foods* **2021**, *10*, 638. [[CrossRef](#)]
51. Greenacre, M. *Correspondence Analysis in Practice*; CRC Press: Boca Raton, FL, USA, 2017.
52. Ono, H. Why Do the Japanese Work Long Hours? *Jpn. Labor Issues* **2018**, *2*, 35–49.
53. Wiggins, R.; Piontek, T.; Metrick, A. The Lehman Brothers Bankruptcy A: Overview. *J. Financ. Cris.* **2019**, *1*, 39–62. [[CrossRef](#)]
54. Buchanan, J.; Chai, D.H.; Deakin, S. Unexpected Corporate Outcomes from Hedge Fund Activism in Japan. *Socioecon. Rev.* **2020**, *18*, 31–52. [[CrossRef](#)]
55. Carneiro, L.S.; Henry, M. Integrating the Sustainable Development Goals into Corporate Governance: A Cross-Sectoral Analysis of Japanese Companies. *Sustainability* **2024**, *16*, 6636. [[CrossRef](#)]
56. Ministry of Economy, Trade and Industry White Paper on Manufacturing 2025 (Annual Report Based on Article 8 of the Basic Act on the Promotion of Core Manufacturing Technology). Available online: <https://www.meti.go.jp/report/whitepaper/mono/2025/index.html> (accessed on 22 September 2025).
57. Elamer, A.A.; Kato, M. Governance Dynamics and the Human Capital Disclosure-Engagement Paradox: A Japanese Perspective. *Compet. Rev.* **2024**, *35*, 76–99. [[CrossRef](#)]
58. Kamitani, S.; Matsuoka, M.; Nakai, T. Text Mining Analysis of Human Capital Information Disclosure in a Corporate Governance Report. In Proceedings of the Annual Conference of JSAI, Hamamatsu, Japan, 28–31 May 2024; Volume JSAI2024, p. 216GS1003. [[CrossRef](#)]
59. Ambrosino, A.; Fiori, S. Ideologies and Beliefs in Douglass North's Theory. *Eur. J. Hist. Econ. Thought* **2018**, *25*, 1342–1369. [[CrossRef](#)]
60. Abrahamson, E.; Fairchild, G. Management Fashion: Lifecycles, Triggers, and Collective Learning Processes. *Adm. Sci. Q.* **1999**, *44*, 708–740. [[CrossRef](#)]
61. Madsen, D.Ø.; Slåtten, K.; Berg, T. From Industry 4.0 to Industry 6.0: Tracing the Evolution of Industrial Paradigms Through the Lens of Management Fashion Theory. *Systems* **2025**, *13*, 387. [[CrossRef](#)]
62. Baert, P. Unintended consequences: A typology and examples. *Int. Sociol.* **1991**, *6*, 201–210. [[CrossRef](#)]
63. Marrone, A.; Pontrelli, V.; Oliva, L. Diversity, Equity, and Inclusion in Environmental Social and Governance Disclosure: An Empirical Analysis of Governance Determinants. In *Diversity and Equity in Accounting: Emerging Issues, Challenges and Opportunities*; Agostini, M., Beretta, V., Demartini, M.C., Ghio, A., Trucco, S., Eds.; Springer Nature: Cham, Switzerland, 2025; pp. 83–95, ISBN 978-3-031-78247-3.
64. Jelodar, H.; Wang, Y.; Yuan, C.; Feng, X.; Jiang, X.; Li, Y.; Zhao, L. Latent Dirichlet Allocation (LDA) and Topic Modeling: Models, Applications, a Survey. *Multimed. Tools Appl.* **2019**, *78*, 15169–15211. [[CrossRef](#)]

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