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分担研究報告書

労働災害防止対策の推進とESG投資の活用に資する調査研究

CSR関連報告書から見たESG活動と産業保健活動の実態

(日本および台湾での調査)

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研究要旨:

2020年度は、日本の東証一部上場企業を対象に、2020年度発行のCSR関連報告書の発行割合や記載内容を調査し、ESG活動や産業保健活動に関する捉え方や実態を明らかにした。2021年度は、日本と同様の手法を用いて、台湾の上場企業150社でも同様の調査を実施することを目的とした。

TWSE (台湾証券取引所) およびTPEX (タイペイエクスチェンジ) に上場している企業150社を対象とした。ウェブサイトに掲載されている報告書の発行割合や内容を調査した。CSR関連報告書は「CSR報告書」「社会・環境報告書」「サステナビリティレポート」「その他非財務情報の記載があるもの」を対象とし、それぞれ総ページ数が6ページ以上のものを報告書として取り扱った。ウェブサイトに直接記載されている内容は対象から除外し、PDF形式で掲載されているものを発行ありとした。

150社のうち、95社(63%)が製造業であった。87%の報告書がCSR関連報告書という名称であった。労働安全衛生の記述は143社(95%)に認めた。91%の企業がマテリアリティに労働安全衛生を記載していた。64%の企業が労働安全衛生を目標として記述していたが、この中で78%が労働安全のみの記述であり、22%が労働安全と労働衛生との両方を目標として記述していた。労働安全衛生マネジメントシステムの記述(89社、59%)、安全衛生に関する委員会の記述(118社、79%)であったのに対して、メンタルヘルスの記述は56社(37%)であった。

台湾の上場企業では、労働安全衛生に関して記述している企業が多かった。一方で、メンタルヘルスに関する記述は少なかった。台湾ではリーマンショック以降、the Financial Supervisory Commission of Taiwan required Taiwan Stock Exchange (TWSE) and Taipei Exchange (TPEX)がCSR関連報告書の発行を義務付けている。記載内容もGRIに準拠するように求められており、それが徹底されていることが、高い記載率であったこと背景であると考えられる。

詳細な報告は後述の報告書「Survey of Corporate Social Responsibility (CSR) Related Reports in Taiwan」を参照のこと。

A. 目的

企業の社会的責任の取り組みを内外に公表する手段として、CSR関連報告書が用いられている。報告書の発行割合や内容を調査することで、ESG活動や産業保健に関する捉え方の実態を調査できると考え着目した。2020年度は、日本の東証一部上場企業を対象に、2020年度発行のCSR関連報告書の発行割合や記載内容を調査し、ESG活動や産業保健活動に関する捉え方や実態を明らかにした。2021年度は、日本と同様の手法を用いて、台湾の上場企業150社でも同様の調査を実施することを目的とした。

B. 方法

対象：TWSE（台湾証券取引所） and TPEX（タイペイエクスチェンジ） listed companies

ウェブサイトに掲載されている報告書の発行割合や内容を調査した。CSR関連報告書は「CSR報告書」「社会・環境報告書」「サステナビリティレポート」「その他非財務情報の記載があるもの」、統合報告書は「統合報告書」「アニュアルレポート」「その他財務情報・非財務情報共に記載されているもの」を対象とし、それぞれ総ページ数が6ページ以上のものを報告書として取り扱った。ウェブサイトに直接記載されている内容

は対象から除外し、PDF形式で掲載されているものを発行ありとした。

C. 結果

150社のうち、95社(63%)が製造業であった。87%の報告書がCSR関連報告書という名称であった。労働安全衛生の記述は143社(95%)に認めた。91%の企業がマテリアリティに労働安全衛生を記載していた。64%の企業が労働安全衛生を目標として記述していたが、この中で78%が労働安全のみの記述であり、22%が労働安全と労働衛生との両方を目標として記述していた。労働安全衛生マネジメントシステムの記述（89社、59%）、安全衛生に関する委員会の記述(118社、79%)であったのに対して、メンタルヘルスの記述は56社(37%)であった。

D. 考察 および E. 結論

台湾の上場企業では、労働安全衛生に関して記述している企業が多かった。一方で、メンタルヘルスに関する記述は少なかった。台湾ではリーマンショック以降、the Financial Supervisory Commission of Taiwan required Taiwan Stock Exchange (TWSE) and Taipei Exchange (TPEX)がCSR関連報告書の発行を義務付けている。記載内容もGRIに準拠するように求められており、それが徹底されていることが、高い記載率であったことの背景であると考えられる。

F. 健康危険情報

なし

G. 研究発表

なし

H. 知的財産権の出願・登録状況

なし

I. 引用・参考文献

なし

Final Report

**Survey of Corporate Social Responsibility (CSR)
Related Reports in Taiwan**

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Survey of Corporate Social Responsibility (CSR) Related Reports in Taiwan

1. Objective and specific aims

The objective of this project was to survey Corporate Social Responsibility (CSR) related reports or reports that disclose corporate social activities (CSR reports, hereinafter) in Taiwan. Specific aims of this project include:

- **Specific aim 1:** Collect information about occupational safety and health activities from the most recent CSR reports (i.e., the year 2020).
- **Specific aim 2:** Establish a database for specific aim 1.
- **Specific aim 3:** Produce a final report based on the collected information.

2. Relevant regulations in Taiwan

In light of the 2008 financial crisis, the Financial Supervisory Commission of Taiwan required Taiwan Stock Exchange (TWSE) and Taipei Exchange (TPEX) listed companies to state the company's performance of social responsibilities. The Financial Supervisory Commission of Taiwan issued the amendment of Article 31 of *Regulations Governing Information to be Published in Public Offering and Issuance Prospectuses* on 25 December 2008.^{1,2} To assist companies fulfilling the requirement, TWSE and TPEX announced *Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies* on 6 February 2010.³

At the end of 2014, TWSE and TPEX announced *Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports* on 26 November 2014 and 4 December 2014, respectively.^{4,5} These *Rules* required that companies prepare their CSR reports following the Global Reporting Initiative (GRI) Standards and Sector Disclosures issued by the GRI as well as other applicable rules according to its sector features. The most recent amendments of the above *Principles and Rules* are summarized in **Table 1**. Companies should prepare and file a corporate social responsibility report if they fulfill the following criteria listed in **Table 2**.

Table 1. Regulations on corporate social responsibility reports

Regulation	Authority	Date	Linkage
<i>Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies</i>	Taiwan Stock Exchange Corporation and Taipei Exchange	13 February 2020	http://www.selaw.com.tw/LawArticle.aspx?LawID=G0100284
<i>Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies</i>	Taiwan Stock Exchange Corporation	2 January 2020	http://www.selaw.com.tw/LawArticle.aspx?LawID=G0100517
<i>Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TPEX Listed Companies</i>	Taipei Exchange	2 January 2020	http://www.selaw.com.tw/LawContent.aspx?LawID=G0101624

Table 2. Criteria for companies that are subject to prepare and file a corporate social responsibility report

TWSE listed companies⁶	
1.	At the end of the most recent fiscal year, the company falls into the food industry, chemical industry and financial and insurance industry prescribed in the Taiwan Stock Exchange Corporation Key Points for Classifying and Adjusting Categories of Industries of Listed Companies.
2.	The financial report for the most recent fiscal year submitted pursuant to Article 36 of the Securities and Exchange Act indicates that no less than 50% of the company's revenue is derived from food and beverage.
3.	The financial report for the most recent fiscal year submitted pursuant to Article 36 of the Securities and Exchange Act indicates that the company's capital stock has achieved no less than NT\$5 billion.

TPEX listed companies⁷	
1.	At the end of the most recent fiscal year, the company falls into the food industry, chemical industry, or financial industry prescribed in the Taipei Exchange Directions for Classifying and Adjusting the Industry Categories of TPEX Listed Companies.
2.	The financial report for the most recent fiscal year submitted pursuant to Article 36 of the Securities and Exchange Act indicates that no less than 50 percent of the company's total operating revenue is derived from food and beverage.
3.	The financial report for the most recent fiscal year submitted pursuant to Article 36 of the Securities and Exchange Act indicates that the company's capital stock is not less than NT\$5 billion.

3. Methods

3.1. Data source and scope of companies

TWSE and TPEX listed companies are subject to state the company's performance of social responsibilities since 2010.^{8,9} The Market Observation Post System (MOPS) website consolidated CSR reports of TWSE and TPEX listed companies.¹⁰ We obtained the company lists and CSR reports from the MOPS website.¹⁰

3.2. Sampling strategy

The target sample size was 150, estimated based on the publication date of 2019 CSR reports and lengthen of the study period.^a We conducted a stratified random sampling design with two sampling strata. We defined the first strata by market, i.e., TWSE listed companies and TPEX listed companies. Next, we followed MOPS's classification of industries to define the second strata by industry sector in each market, i.e., 27 categories for TWSE listed companies and 20 categories for TPEX listed companies, respectively. A total of 47 categories were generated.

^a As of 31 March 2021, a total of 525 companies uploaded 2019 CSR reports to the MOPS website. Among them, 394 were published before 18 September 2020 (Friday in the third week of September). We expected a 10% increase in the number of companies that published 2020 CSR reports, i.e., $394 + 394 \times 10\% \cong 434$. Therefore, we decided the sampling rate of one-third (i.e., $434/3 \cong 145$), plus 1% of total reports (i.e., $525 \times 1\% \cong 5$). Thus, the final sample size was $145 + 5 = 150$.

To estimate the sampling rate, we treated the target sample size (i.e., 150 companies) as the numerator and the total number of 2019 CSR reports released by 30 June 2020 (i.e., 528 companies) as the denominator. Thus, the sampling rate for each category was 28% ($=150/528$). We multiplied the number of companies in each category by 28% and rounded it to an integer. For example, there were six companies in one of the 47 categories. Six multiplied by 28% is 1.68, which can be rounded off to 2. We, therefore, sampled two companies from this category. For categories with ≤ 4 companies, we randomly sampled one company. For categories without an available or insufficient number of reports no later than 10 August 2021, we randomly sampled companies from all the rest unselected companies on 11 August 2021. We followed the Standard Industry Codes of Taiwan, 11th revision, to classify each category into ten industry sectors.¹¹

3.3. Report investigation processes and quality controls

We translated the protocols and database file (i.e., EXCEL template) from English into Chinese. As a pilot study, one investigator (#1) randomly sampled two companies and followed the translated protocols to enter the database. The entered data were reviewed by a senior investigator (#2) to ensure the translated protocol could be understood and implemented. The wordings of protocols and the database were rephrased based on the discussion and agreement between investigators #1 and #2. Next, we recruited three investigators (#3, #4, and #5) and gave them training on the use of protocols and how to input data into the database.

Each sampled CSR report was reviewed independently by two investigators (i.e., #3 & #4, #3 & #5, or #4 & #5). Once completing the first 18 reports ($18/150=12\%$; first batch), these three investigators reviewed the consistency and discrepancy, discussed the potential causes of a discrepancy, and concluded the final answers based on a consensus among all three investigators (#3, #4, and #5). If disputes remained existing, senior investigators (#1 and #2) reviewed and resolved the arguments through discussions with three investigators (#3, #4, and #5) until a consensus was reached. The experience gained from the previous waves could help align data reports and case judgments and reduce deviation caused by different reviewers. We repeated these processes for every 18 reports until the whole 150 reports were completed, a total of nine batches.

During data quality check, we first randomly sampled 5% of 150 reports (i.e., $150 \times 5\% \approx 8$). Second, two investigators (#1 and #2) independently reviewed each tested report ($n=8$). Third, we compared the consistency and discrepancy of data entered by all investigators, i.e., consensus data by investigators #3, #4, and #5, entered data by investigator #1, and entered data by investigator #2. Fourth, we hosted a meeting to discuss discrepancies. Discrepancies were resolved through discussions with all investigators (#1, #2, #3, #4, and #5) until a consensus was reached. Fifth, investigators #3, #4, and #5 made corresponding corrections based on meeting conclusions. We repeated the aforementioned five steps, including randomly sampling another eight reports, reviewing reports (by investigators #1 and #2), solving

discrepancies, and correcting data. Finally, we randomly sampled 20% of reports (i.e., $150 \times 20\% \approx 30$). Each sampled report was independently reviewed and corrected, if applicable, by one investigator (i.e., #3, #4, and #5 completed 30 reports).

3.4. Study period

We divided our study period into three stages: report download, report investigation, and data quality check. For the first two stages, we downloaded and investigated each sampled report from 1 July 2021 to 30 September 2021. As of 1 July 2021, a total of 134 sampled companies released their reports. By 11 August 2021, additional 12 companies released their reports. However, four companies still have not released their reports. Thus, we performed a random sample (as described in Section 3.2) from all companies that published 2020 CSR on 11 August 2021, after excluding those above 146 (= 134 + 12) companies. Finally, we conducted a data quality check and cleaning from 5 October 2021 to 14 November 2021.

3.5. Disputable cases and solutions

We summarized the disputable cases that we encountered during the collection of data. The solutions are available in the **Appendix**.

4. Results and Discussions

The database was established as shown in the supplementary excel file. A total of 441,328 employees in 150 companies were covered in these reports. These 150 companies accounted for 43% of TWSE and TPEX listed companies that uploaded their reports to the MOPS website on or before 10 August 2021.^b

Table 1 shows the number and proportion of studied companies in each industry sector of each market. TWSE listed companies account for 75% (=113/150) of studied companies, while TPEX listed companies account for 25% (=37/150). The manufacturing sector accounts for the majority number of companies (63%), followed by the financial and insurance sector (9%), others (7%), information and communication sector (6%).

Table 1. Number and proportion of companies in each industry, by market

Industry sectors	TWSE		TPEX		All	
Total	113	(100%)	37	(100%)	150	(100%)
Manufacturing	73	(65%)	22	(60%)*	95	(63%)
Electricity and Gas Supply	1	(1%)	0	(0%)	1	(1%)
Construction	6	(5%)	1	(3%)	7	(4%) [†]
Wholesale and Retail Trade	4	(4%)	2	(5%)	6	(4%)
Transportation and Storage	5	(4%)	0	(0%)	5	(3%)
Accommodation and Food Service Activities	1	(1%)	2	(5%)	3	(2%)

^b A total of 278 TSWE listed companies and 74 TPEX listed companies uploaded their CSR reports to MOPS on or before 10 August 2021.

Information and Communication	6 (5%)	3 (8%)	9 (6%)
Financial and Insurance Activities	10 (9%)	3 (8%)	13 (9%)
Arts, Entertainment and Recreation	0 (0%)	1 (3%)	1 (1%)
Others	7 (6%)	3 (8%)	10 (7%)

Abbreviations: TWSE=Taiwan Stock Exchange; TPEx=Taipei Exchange. *Rounded up to allow the sum of proportion to reach 100%. †Rounded down to allow the sum of proportion to reach 100%.

Table 2 summarizes the characteristics of published reports and activities disclosed in the reports of studied companies. By the size of companies (measured as the number of employees), the number of selected companies in each group accounts for about 22%–28% of all selected companies. Most companies published reports entitled Corporate Social Responsibility Report (87%), followed by Corporate Sustainability Report (12%). The average number of reports was 98 ± 35 pages, ranging from 35 to 229 pages. As of 4 October 2021,^c 39% of companies published reports in both Chinese and English versions.

Most companies (97%) defined material issues as those which were important to the company’s economic, environmental, and social impacts. Among them, 91% mentioned occupational safety and/or health in the list of material items. All companies (100%) mentioned occupational safety and/or occupational health in their reports, although to varying extents. We further identified that 95% of companies had a section related to occupational safety and health, which varied from a short paragraph to several long paragraphs.

Setting goals for occupational safety and health can help companies manage occupational safety and health and do more. Sixty-four percent of companies set their occupational safety and/or health goals; however, most companies of these companies (78%) set goals for occupational safety only, whereas 22% of these companies set both goals. In Taiwan, there were some health management certifications related to a healthy workplace. For example, the Health Promotion Administration, Ministry of Health and Welfare certified healthy workplaces and tobacco-free workplaces. Nevertheless, most companies (73%) did not set the goal of acquiring certification related to a healthy workplace.

The existence of occupational safety and health system represents a systematic Plan-Do-Check-Act (PDCA) management of occupational safety and health as well as with the commitment of top management.¹² In addition to OHSAS18001 and ISO45001, the Occupational Safety and Health Administration, Taiwan (Taiwan OSHA) referred to OHSAS18001 and ILO 2001 and launched Chinese guidelines for Taiwanese companies in 2008, named Taiwan Occupational Safety and Health Management System (TOSHMS).¹³ Overall, 59% of companies have been certified by OHSAS18001, ISO45001, and/or TOSHMS.

^c Last date of data input.

The occupational safety and health committee comprises representatives of employers and employees to discuss matters concerning occupational safety and health. According to the *Occupational Safety and Health Management Regulations*, high-risk companies with employees ≥ 100 in an operation unit (e.g., factory, plant, site, and branch) or moderate-risk factories with employees ≥ 500 in an operation unit are subject to establishing an occupational safety and health committee in that unit.¹⁴ If the total number of employees in all high- and moderate-risk units reaches 500 or more, the company is subject to establishing an occupational safety and health committee for the entire company.¹⁴ Similar regulations apply to low-risk companies, but only when the total number of employees in all low-risk units reaches 3,000 or more.¹⁴ In our studied companies, 79% of them had such a committee or equivalent (e.g., labor-management meetings) to communicate occupational safety and health issues between representatives of employers and employees.

Employers shall provide employees with all necessary education and training to prevent occupational accidents and protect workers' safety and health. Such a requirement is written in Article 32 of the *Occupational Safety and Health Act*.¹⁵ We observed that 91% and 67% of companies provided education and training related to occupational safety and health, respectively. Specifically, 62% of companies provided education and training related to both occupational safety and health, 34% with either occupational safety or health and 4 % without any education or training related to occupational safety and health.

Statistics on occupational injuries and illnesses provide information regarding the extent to which workers are impacted by occupational hazards. Ninety percent of companies reported the outcomes, such as zero occupational injuries and the number of cases. More detailed disclosure—i.e., working hour losses due to occupational injuries and illness—was observed in 84% of companies.

Table 2. Characteristics of published reports and disclosed activities of studied companies (N=150)

Characteristics	Number of companies	Proportion
Size of company		
<300	42	28%
300–999	37	25%
1,000–2,999	34	22%*
$\geq 3,000$	37	25%
Title of reports		
Corporate social responsibility report	131	87%
Corporate sustainability report	18	12%
Others	1	1%
With English reports		
Yes	58	39%

No	92	61%
Mention of material issues		
Yes	146	97%
<i>Including both occupational safety and occupational health</i>	130	89%
<i>Including either occupational safety or occupational health</i>	3	2%
<i>Not including occupational safety and occupational health</i>	13	9%
No	4	3%
With occupational safety and/or health section(s)		
Yes	143	95%
No	7	5%
Mention of goals related to occupational safety and/or health		
Yes	96	64%
<i>Both occupational safety and health</i>	21	22%
<i>Either occupational safety or health[†]</i>	75	78%
No	54	36%
Healthy workplace certification		
With goals and being certified	5	3%
With goals but not yet being certified	2	1%
Without goals but being certified	34	23%
Without goals and not yet being certified	109	73%
Existence of occupational health and safety management system(s)		
Yes	89	59%
No	61	41%
Existence of occupational safety and health committee or equivalent		
Yes	118	79%
No	32	21%
Education related to occupational safety		
Yes	137	91%
No	13	9%
Education related to occupational health		
Yes	100	67%
No	50	33%
Mental health support		
Yes	56	37%
No	94	63%
Report of occupational injury and illness related outcomes		
Yes	135	90%
No	15	10%
Report of working hour losses due to occupational injury and illness		
Yes	126	84%
No	24	16%

Abbreviation: N=Number of companies. *Rounded down to allow the sum of proportion to reach 100%. [†]Only goals for occupational safety were reported.

The number of employees determines whether requirements of occupational safety and health regulations are compulsory or not.¹⁴ In addition, larger companies typically have more human and financial resources to manage such occupational safety and health risks.¹⁶ We found that companies with more employees had a higher proportion of disclosing occupational safety and health activities, especially occupational health-related ones (**Table 3**).

Table 3. Number and proportion of companies disclosed occupational safety and health activities, by size of company

Characteristics	Size of company				P-value*
	<300 (N=42)	300-999 (N=37)	1,000-2,999 (N=34)	≥3,000 (N=37)	
Mention of goals related to occupational safety	25 (60%)	19 (51%)	25 (74%)	27 (73%)	0.13
Mention of goals related to occupational health	4 (10%)	3 (8%)	4 (12%)	10 (27%)	0.07
Existence of occupational health and safety management system(s)	15 (36%)	18 (49%)	27 (79%)	29 (78%)	<0.01
Existence of occupational safety and health committee or equivalent	24 (57%)	28 (76%)	30 (88%)	36 (97%)	<0.01
Education related to occupational safety	35 (83%)	33 (89%)	33 (97%)	36 (97%)	0.08
Education related to occupational health	20 (48%)	20 (54%)	26 (76%)	34 (92%)	<0.01
Mental health support	5 (12%)	11 (30%)	10 (29%)	30 (81%)	<0.01
Report of occupational injury and illness related outcomes	32 (76%)	36 (97%)	32 (94%)	35 (95%)	<0.01
Report of working hour losses due to occupational injury and illness	25 (60%)	35 (95%)	31 (91%)	35 (95%)	<0.01

Abbreviation: N=Number of companies. *Chi-square tests

5. Conclusions

TWSE and TPEX listed companies have been subject to publish CSR reports since 2010. This project collected 2020 CSR reports and extracted information related to occupational safety and health activities for 150 companies. Our findings showed that 95% of companies had a section related to occupational safety and health, and 59% have obtained occupational safety and health management system certifications. In addition, the proportion of disclosing occupational safety and health activities was higher in large companies.

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Appendix: Disputed cases and solutions

1. Title Name of CSR related report: Other reports (Excel column N)

Most reports used the title “CSR report” (n=131; 87%), followed by “Sustainability report” (n=18; 12%). There is one report that used “Sustainability and CSR report” as the title. We, therefore, classified it into “Other report” (n=1; 1%).

2. Company Size (Excel column G)

We defined the column “Company Size” (Excel column G) as the number of employees in Taiwan. While 91% of companies (n=136) reported the number of employees in Taiwan, 9% (n=14) reported the number of employees worldwide or in East Asia or did not report any number. For companies that reported the number of employees worldwide or in East Asia or did not report the number of employees, we estimated the number based on the descriptions in the reports, company website, the website of Ministry of Economic Affairs of Taiwan, and MOPS website.

3. Materiality: Mention of "occupational accident prevention" in material items (Excel column S) and Mention of "health management / worker health management" in material items (Excel column T)

Most companies showed the CSR a materiality matrix, a table of potential material issues, or both. Although some companies listed “occupational safety and health” in the matrix, some of them didn’t consider “occupational safety and health” as a material item. Such kinds of companies provide no or very limited information about “occupational safety and health” activities. In the database, we entered “1” if the company listed “occupational safety and health” as one of the topics to be discussed no matter it was identified as a material item or not.

4. Goal (Target): Mention of goal of "occupational accident prevention" (Excel column U) and Mention of goal of "health management / worker health management" (Excel column V)

Many companies set “Zero Accident” as one of the goals. In such a case, we entered “1” in Excel column U. For companies further mentioned goals related to occupational health (e.g., preventing occupational diseases), we entered “1” in Excel column V.

5. Goal (Target): Goal of "Certification as a Health Management Brand / Excellent Health Management Corporation" (Excel column W)

According to the English protocol manual, if the company has set the goal of acquiring “Certification as a Health Management Brand / Excellent Health Management Corporation,” it should be entered as “1,” which is an option only for Japan. In our database, we still inputted it because there were some health management certifications in Taiwan. For example, the Health Promotion Administration, Ministry of Health and Welfare, certified healthy workplaces¹⁷ and tobacco-free workplaces. We entered “1” for such cases.

6. Details of specific activities: Occupational health and safety management system (Excel column X)

In addition to OHSAS18001 and ISO45001, we had TOSHMS in Taiwan. While the former two are certified by non-governmental certification bodies, TOSHMS is certified by our government. Thus, for companies with any one of them, we entered “1” in Excel column X.

7. Outcome: Education for occupational accident prevention (Excel column Z)

According to the English protocol manual, if emergency evacuation training is not directly related to the prevention of occupational accidents, it should be entered as “0” accordingly. However, some companies like Bank provided training related to emergency evacuation, such as fire. This kind of company had no other known occupational safety risk, such as a chemical spill. Another example is that some companies (including manufacturing companies) only mentioned words such as “providing irregular emergency evacuation or fire extinguish training.” Sometimes, it was not clear the hazards in each company because many reports only provided limited information. Therefore, we judged based on the safety risk in the industries. For example, we entered “1” if companies mentioned an emergency evacuation or fire extinguisher training and the companies belong to the financial and insurance sector. In contrast, we entered “0” if companies only mentioned an emergency evacuation or fire extinguisher training but the companies belong to the manufacturing industry.

8. Outcome: Health education (Excel column AA)

Many companies only mentioned they would provide regular or irregular health workshops to workers. Taking the example of “Lotus”, the company only mentioned they would regularly provide health examinations and safety and health workshops as well as medical consultations to employees (under the heading of “medical/insurance”). Another example is that some companies mentioned that they would provide CPR training. For these two cases, we entered “0” because they are irrelevant to health education. However, for companies that provided CPR training, we entered “1” in excel column Z, i.e., Outcome: Education for occupational accident prevention.

9. Outcome: Others (Specific examples) (Excel columns AG and AH)

Here, we focused on COVID-19 and the protection of employee health. We also entered the information in other cases, such as near misses and infectious disease prevention.