



## **The Impact of Corporate Internal Factors on CSR Reports Disclosure Behavior in the Taiwanese Electronic Industry**

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### **ABSTRACT**

Corporate social responsibility (CSR) has drawn much attention from society and has become an important issue in the market, such as corporate governance, employee protection, and environmental protection. However, firms are not asked to issue CSR reports compulsorily in Taiwan. Moreover, the electronics industry has played an important role in Taiwan's industry. Therefore, this study employs the behavioral theory of the firm to examine what kinds of firms are willing to publish the CSR report. We use the listed firms in the electronic industry from 2005 to 2017 as our sample and build the logit and probit model to investigate the relation between five situations firms faced and the intention of CSR report disclosure. The results show that firms with higher performance gaps are more likely to issue CSR reports. When the performance exceeds the target, the firm is more willing to give a CSR report. Similarly, the firm is more inclined to issue a CSR report when there is a smaller gap between performance and target in a negative performance gap. The firm with more potential slack, higher survival distress, less competitive pressure, and lower bankruptcy threat is more willing to issue a CSR report.

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*Keywords:* Behavioral Theory of the Firm, CSR, Organization Slack, Competitive Pressure, Survival Distress, Bankruptcy Threat

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## 1. Introduction

Since the Copenhagen Global Climate Conference and the Kyoto Protocol meeting, CSR has attracted the general public's attention worldwide, and investors have increasingly demanded that companies must fulfill CSR. With the development of the information environment and the Internet, many companies have also begun to pay attention to the possible negative impact of these issues on themselves, such as pollution. In the past ten years, companies have paid more and more attention to CSR performance because different stakeholders have asked companies to improve CSR and issue reports (Chen et al., 2015). These external requirements and pressures include social concerns, regulatory requirements, pressure from consumers and peers, corporate reputation, media, and market advantages (Gallear et al., 2012). For example, as revealed in the documentary "Wal-Mart: The Price of Low Prices," the source of profit for Wal-Mart, a largely American enterprise, comes from low-cost labor and overtime work. This negative news will seriously damage the brand image and affect its profitability and sustainable operation.

Therefore, regarding issues related to CSR, many companies worldwide have also begun to strengthen their investment in CSR. On the one hand, it can satisfy many stakeholders and, on the other hand, can meet the needs of investors to reduce risks. In addition, with the growing importance of socially responsible investment, more and more investors incorporated CSR performance into investment decisions (Scholtens and Sievänen, 2013; Sievänen et al., 2013). Since then, large companies have also begun to require all cooperative companies in their supply chain to meet a certain level of CSR. Against such a background, Taiwanese companies inevitably started to invest in fulfilling CSR. It can be seen from this that CSR is a critical issue that companies in Taiwan and the world must face.

Since the undertaking of CSR by companies has become the mainstream of the world's business practice, according to the survey report of KPMG (2013), it was found that about 51% of the companies in the world included relevant information about CSR in their annual financial reports. Does the disclosure of CSR reports need to be strictly regulated and required, like the disclosure of financial statements? There is no mandatory standard for companies to disclose CSR reports in the Taiwan market. According to the "2021 Taiwan Sustainability Report Status and Trends" presented by the Taiwan CSR Sustainability Reporting Platform, there will be 653 CSR reports in Taiwan in 2021, including 599 listed and OTC companies. Compared with the 1,747 listed and OTC companies in 2021, it is still only 34.3%. Furthermore, in 2021, there are 801 listed OTC companies in the electronics industry, and only 247 companies have voluntarily disclosed CSR reports, accounting for about 30%. It can be seen from this that most companies in the Taiwan market have not announced their CSR reports, and the same is true for the electronics industry. It can be seen that the corporate social responsibility of Taiwan's electronics industry is a link worth exploring.

In academics, researchers have also begun to study CSR-related issues, including strategic, economic, and financial aspects. Much literature also uses the role of stakeholders to explore the value of CSR (Donaldson and Preston, 1995; Freeman, 1984) or how CSR affects financial performance (McWilliams and Siegel, 2000; Ramchander et al., 2012; Waddock and Graves, 1997; Wright and Ferris, 1997). In addition, some scholars have also investigated the impact of CSR on the capital market, such as the impact on risk (Jo and Na, 2012; Wu and Hu, 2018) and the impact on capital costs (El Ghouli et al., 2011; Wu et al., 2014). In recent years, some scholars have begun to study the driving factors of CSR. The external driving factors include the characteristics of external stakeholders (Agle et al., 1999), the active activities of stakeholders (Clark and Hebb, 2004; David et al., 2007; Marquis et al., 2007), and the pressure from institutional investors (Neubaum and Zahra, 2006). Including the motivation of the

management (Deckop et al., 2006; McGuire et al., 2003), the moral commitment of the management team (Muller and Kolk, 2010), the strategic thinking of the CEO (Chin et al., 2013).

Among these studies on the factors that promote CSR, most studies have explored the impact of external normative values on CSR, such as the moral views of stakeholders or institutional investors. Because CSR is considered by the general public and companies as "behaviors that transcend legal norms and corporate interests and promote social interests" (McWilliams and Siegel, 2001), CSR carries a part of corporate value and stakeholder value. Therefore, Petrenko et al. (2016) believe that the driving factors of companies' CSR must be measured from the psychological level within the company. It can be seen that the psychological state of managers caused by different situations in the company will affect the commitment and performance of CSR, and there is relevant literature to explore the factors involved. Therefore, this study focuses on different factors within the company to examine their impact on its voluntary disclosure behavior of CSR reports. These factors include organization slack, performance gap, competitive pressure, survival crisis, and bankruptcy threat. This study aims to explore the motivations for the impact of internal factors on corporate voluntary disclosure of CSR reports.

This study explores the willingness of managers to disclose CSR reports in the face of companies' internal factors. A company's CSR report can enable external investors and other stakeholders to understand the company's current status of CSR. Therefore, through this study, we can understand the internal motivation of companies to disclose CSR reports. Secondly, in this study, the internal factors of the enterprise are divided into different aspects to explore the correlation with the disclosure of the CSR report and by testing the impact of five major elements of the internal factors in the company on the willingness to disclose CSR reports, including performance gap, organization slack, competitive pressure, bankruptcy threat, and survival crisis. To explore the motivation of companies to issue CSR reports under different internal factors of enterprises. Since previous studies seldom examine the willingness of these five corporate behavior variables to disclose CSR reports, this study aims to find the correlation between companies' internal factors and the disclosure of CSR reports behavior to clarify the internal motivations of companies to disclose corporate social responsibility reports voluntarily.

## **2. Literature review**

### **2.1 Behavioral theory of the firm**

The theory of corporate behavior proposed by Cyert and March (1963) and Cyert and March (1992) is aimed at the enterprise as the research object. It discusses the decision-making behavior and process of the company. The key concepts and mechanisms in the behavioral theory of the firm proposed by Cyert and March (1963) are bounded rationality, problematic search, dominant coalition, standard operating procedures, and slack search and innovation. Although bounded rationality was often proposed and used in early research, its influence on companies' decision-making has been more developed in corporate behavior theory. Problematic search began as a study of individual motivations and has since become a model of corporate responses to poor performance. The Dominant Alliance Theory explains how the firm achieves its goals under the different interests of the participants. The standard operating procedure theory provides the regular behavior of the company to become the operating model and practice, so the traditional operating procedure theory becomes the core concept of the organization theory. Finally, the theory of abundance search and innovation explains why enterprises will develop new products and technologies when they have no specific intention to solve problems, and this is also a supplement to problem search theory. The Behavior Theory of Firms contains five points of view: achievement discrepancy, organization slack, competitive pressure, survival distress, and bankruptcy threat.

## 2.2 Bounded rationality, performance gap and CSR

**Bounded rationality** was developed by Simon (1972). Under traditional economics, people are assumed to be rational and can obtain complete information. Therefore, they will choose the most effective solution to satisfy themselves. However, in reality, not all information is available, and people's knowledge, ability, and options they can consider are limited. They may be unable to make the most effective decision, which is called bounded rationality. The impact of bounded rationality on companies' decision-making has been more developed in the theory of corporate behavior. Under the assumption of bounded rationality, companies set expectations based on the information they can obtain because it is incomplete and limited. Based on the available information, the expected goals are divided into historical and social aspiration levels. The historical aspiration level is the performance of the company's past performance. Decision-makers can use these historical data to understand the company's past performance and operating capabilities. Based on this, they can also predict the enterprise's future development potential. The social aspiration level is based on the average performance of the entire industry as a standard. Although companies can use past historical performance as a judgment standard when the company is in a drastic change in the external environment, the predictive ability of historical performance will be significantly reduced, and it may even hinder the company's coping strategies (Levinthal and March, 1993). At this time, social aspiration level is a more appropriate standard.

According to the performance feedback model in the corporate behavior theory proposed by Cyert and March (1963), when the performance gap is greater, the company is more motivated to find other solutions to reduce the gap, thereby improving the utility level of internal and external personnel. This gap represents the difference between the current performance and the expected performance level of the company. Among them, the past performance level (historical expected level) and the performance level of companies in the same industry (social expected level) are used as the target anticipated level for the company's comparison. Arora and Dharwadkar (2011) found that the company's performance will positively affect the decision-making authority of business managers. That is, when the company's performance is higher than expected, investors will give management more power to allocate resources. Similarly, Bromiley et al. (2001) found that if the performance of the enterprise is lower than the expected level, investors will limit the decision-making authority of the enterprise managers and require managers to seek other possible solutions so that the performance of the company can reach the threshold required by investors.

Furthermore, many studies in the past have pointed out that corporate profits are positively correlated with CSR. Companies need good profits to implement and invest in more CSR behaviors. Ferreira et al. (2008) found that large companies with better long-term performance have better management quality. According to the management mentioned above of decision-making authority of managers, this means that good performance enables managers to obtain more power to allocate resources, thereby improving the quality of management. In addition, Balabanis et al. (1998) took large British companies as samples and found that the disclosure of CSR will positively affect the company's financial performance. Waddock and Graves (1997) and Hillman and Keim (2001) also found that companies with better previous financial performance have better CSR performance. The research results of Nelling and Webb (2009) show that the company's market performance will affect the willingness of companies to invest in CSR. McGuire et al. (1988) pointed out that the previous period's stock market and financial performance will positively affect the current period's CSR performance. In summary, when a company can have good financial performance or market returns, managers can gain more authority to allocate resources, thus increasing the motivation to disclose CSR, and therefore introduce the first hypothesis of this study:

**Hypothesis 1:** Company with more performance excess is more willing to disclose the CSR reports.

### **2.3 Problematic search, organization slack and CSR**

Cyert and March (1963) proposed organizational slack-oriented problem-searching behavior and believed profitable companies could gradually accumulate resources. Resources include tangible and intangible resources, such as income and reputation. Particular slack will exist within the company when these accumulated resources exceed those required for normal operations. Organizational slack means the company holds actual or potential resource buffers, enabling the company to adapt to internal and external demands due to strategic changes (Bourgeois, 1981). When the company can have more organization slack, on the one hand, it can lower the threshold for evaluating the program so that many innovative activities and programs can be implemented; on the other hand, it can also provide the resources needed by the company to conduct search behavior (Cyert and March, 1992; Singh, 1986). The more resources an organization has, the more decisions it can make at that time. For example, the abundance and availability of resources allow companies to devote resources to social responsibility (Waddock and Graves, 1997) and enable companies to have higher adaptability when required by stakeholders. In addition, Cyert and March (1963) also believed that when a company is in crisis, there is enough margin to cover part of the loss of profits. It can be seen that organizational slack comes from the accumulation of resources exceeding the necessary resources, and such slack can enable the company to have sufficient ability to respond to the impact of external or internal changes.

Cyert and March (1963) defined organization slack as the gap between the available and necessary expenditure resources. In addition to being able to operate stably, the ability to carry out many innovative activities within the organization also requires the existence of organization slack (Bourgeois, 1981; Nohria and Gulati, 1996). Because of insufficient organization slack, companies will be more conservative in evaluating innovation activities and investments, which will also lose these opportunities for innovation. Similarly, it is easier for managers to initiate and implement strategic changes with sufficient organization slack (Bourgeois, 1981). Cyert and March (1963) explored the role of organization slack from the perspective of maintaining a dominant position in the company. They pointed out that organization slack is vital in allowing the company to try new strategies and innovative plans under limited resources. Singh (1986) also believed that the existence of an organization slack promotes companies' innovation. From a psychological view, companies with organization slack are more likely to carry out innovative behaviors because it can reduce innovation risk (Thompson, 1969). From an economic perspective, the resources that a company can use and allocate are limited. When a company uses resources for a specific solution, it means that the company has poor capital utilization flexibility (Montgomery and Wernerfelt, 1988). Resource elasticity implies that when the company has scheduling needs or investment opportunities, the company can have enough resources to switch, schedule and apply (Sharfman et al., 1988). Since organization slack provides managers with resources that can be used in response to changing needs in the future, managers will be subject to different degrees of internal and external pressure due to the level of organization slack and flexibility (Sharfman et al., 1988). March (1979) believed that organization slack is not always produced intentionally but may come from accumulating residual resources and untapped opportunities. Organization slack may also be the company's internal resources, including cash, human resources, machine capacity, etc. (Sharfman et al., 1988). Organization slack may be the resources input from the external environment. For example, companies can obtain resources through debt or cash capital increase (Sharfman et al., 1988).

According to the type of organization slack, this study sorts out the various kinds of organization slack and then discusses the types of organization slack one by one. Bourgeois and Singh (1983) divided organization slack into three types: available slack, recoverable slack, and potential slack. According to the definition of Bourgeois and Singh (1983), available slack refers to resources not allocated in the company, such as the excess unallocated and unused capital. Recoverable organization slack is a resource the company uses but can be restored through organizational change. Potential slack refers to the resources that may be increased through specific ways, such as cash capital increase or bond issuance. Many subsequent scholars also adopted this classification method (Bergh and Lawless, 1988; Bromiley, 1991; Cheng and Kesner, 1997; Geiger and Cashen, 2002).

Furthermore, many scholars have studied organization slack and financial performance in the past because the more resources a company can obtain and use, the higher its potential to develop and better performance it may have. Peng et al. (2010) and Zhong (2011) believe that accumulating organization slack can effectively increase the company's operating performance. The organization slack of a company is positively correlated with its operational performance. The higher the organizational slack, the better its financial performance. Second, the better the market performance of the company, the higher the willingness of the company to invest in CSR (McGuire et al., 1988; Waddock and Graves, 1997; Balabanis et al., 1998; Hillman and Keim, 2001; Nelling and Webb, 2009). From this, it can be inferred that companies with higher organization slack can perform better and thus increase the willingness to disclose CSR reports. In addition, Arora and Dharwadkar (2011) also pointed out that companies with more organization slack will lead companies with better corporate governance to better CSR performance. In summary, it can be inferred that there should be a positive relation between organization slack and the willingness to disclose CSR reports, and establish the following assumptions:

**Hypothesis 2:** Company with higher organization slack is more willing to disclose the CSR report.

#### **2.4 Competitive pressure and CSR**

Grewal and Tansuhaj (2001) considered that the degree of competition refers to the degree of competition that companies face with the outside. Boone (2000) pointed out that companies' profits will usually be reduced with the competitive pressure increase, especially those with poor operating efficiency. In addition, the adaption effect shows that intensifying competition will prompt companies to invest more resources to improve productivity. Assefa et al. (2013) found that as competition increases, it will reduce performance and the ability to repay. Profit reduction will affect companies' willingness to disclose CSR reports. Furthermore, Shleifer (2004) pointed out that competitive pressure will cause companies to conduct unethical behaviors, such as employing child labor, earnings management, etc. On the other hand, Jeong and Masson (1990) and Rosenbaum (1993) found that the higher the industry concentration and entry barriers, the better the company's performance. Rosenbaum (1993) further explained that although profits will attract new companies to join the industry, barriers to entry will increase the threshold for new companies to participate. The proportion of new companies joining will decrease with the increase of barriers to entry. Therefore, companies in industries with high concentration can still enjoy better performance. Based on the above literature, this study infers that companies may reduce their willingness to disclose CSR reports when facing high competitive pressure. The assumptions are as follows:

**Hypothesis 3:** Company with lower competitive pressure is more willing to disclose the CSR report.

## 2.5 Survival distress, bankruptcy threat and CSR

In the theory of corporate behavior, when the company's performance is lower than the expected level, to improve the performance, managers will search for and change the originally planned strategy. Therefore, the expected level is also the focus of companies. Since the performance of the company is lower than the expected level, making up for the performance gap is the key strategy of the company at present to create long-term competitiveness. Therefore, when the company's actual performance is lower than the expected level, but the gap is not large, the company is more likely to make up for the performance gap and then emphasize how to change strategies to improve performance. Furthermore, when the company's performance breaks through the survival level, the company may feel the threat of bankruptcy. Currently, the company's focus is not on making up for the performance gap but on how to preserve its strength. Therefore, when the direction of companies is not the expected performance but the survival level, they tend to adopt conservative and rigid coping strategies (Staw et al., 1981). Literature also confirmed the pattern of shifting focus (Miller and Chen, 2004), such as manufacturers' R&D expenditures (Chen and Miller, 2007), equipment expansion in the shipbuilding and railway industries (Audia and Greve, 2006; Desai, 2008), and M&A strategies in the manufacturing industry (Iyer and Miller, 2008). That is, the focus of the enterprise's attention will determine the strategy and behavior that the enterprise finally adopts.

Companies exist and develop in the market environment and interact with the market and the public. The market environment can be divided into internal and external environments. The goal of most companies is to pursue performance improvement. Due to changes in the environment or the lack of internal mechanisms, the performance of companies is often poor, and they face crises. Yu (2010) believed that companies face global competition, technological progress, social changes, and internal conflicts, and when companies do not find ways to adjust strategies to meet these environmental changes, it will cause a survival crisis. Therefore, companies' strategies must be changed in response to environmental changes. Once the transformation of the enterprise cannot respond to the evolution of the environment, the threat of bankruptcy will arise.

Due to the change in the environment, the companies' performance is worse, which leads to the crisis of survival and the threat of bankruptcy. DeGeorge et al. (1999) and Young and Wu (2003) all found that in order to reach the expected performance threshold, companies will further adopt earnings management to make the performance meet the threshold. Jo and Kim (2008) found that long-term performance is inversely related to information disclosure and earnings management. DeFond and Jiambalvo (1994) found that managers conduct earnings management when the company may default and increase book earnings to reduce the possibility of default. It can be inferred that when a company performs poorly and faces a crisis of survival or bankruptcy, it will try to compensate for the performance gap. This kind of earnings management behavior is contrary to the responsible conduct of CSR, which may affect many stakeholders, such as in the Enron case. Therefore, this study infers that companies with less existential crisis and less threat of bankruptcy will be more willing to disclose CSR reports. The assumptions are established as follows:

**Hypothesis 4:** Company with lower survival distress is more willing to disclose the CSR report.

**Hypothesis 5:** Company with lower bankruptcy threat is more willing to disclose the CSR report.

## 3. Data and Methodology

### 3.1 Samples and data

The samples used in this study are listed companies in Taiwan's electronics industry from 2005 to 2017, which covers companies in 72 sub-industries in Taiwan's electronics industry, with a total of 4,883 observations. The data in this study, including sub-industry projects, all financial statements, and stock price information, are all from the database of the Taiwan Economic Journal. The CSR report information is obtained from the official websites of each company and the Taiwan sustainability reporting platform.

### 3.2 Variables

#### 1. CSR disclosure

This study is based on the CSR report disclosed by the company on its official website, and set a dummy variable  $CSR_{i,t}$ . When the company announces its corporate social responsibility report on the official website, the variable's value is 1; otherwise, it is 0.

#### 2. Organization slack

According to the classification method of Bourgeois and Singh (1983), this study divides organization slack into three types: available slack, recoverable slack, and potential slack. The available slack can be obtained using cash plus accounts receivable and the current ratio as proxy variables. The ratio of operating expenses to accounts receivable is used as a proxy variable in recoverable slack, and the debt ratio is used as a proxy variable in potential slack. The calculation of all variables is shown as follows:

$$AS_1 = \text{cash} + \text{accounts receivable}$$

$$AS_2 = \text{current ratio}$$

$$RS = \text{operating expenses}/\text{accounts receivable}$$

$$PS = \text{debt ratio}$$

where AS denotes available slack, RS denotes recoverable slack, and PS denotes potential slack.

#### 3. Performance gap

This study adopts return on assets (ROA) to measure a company's performance. Waddock and Graves (1997) believed that return on total assets can effectively measure a company's performance. This study follows Bromiley (1991) to calculate the performance gap as the independent variable. When the company's performance is lower than the average performance in the industry, the industry average is used as the standard of expected performance. On the contrary, when the company's performance is higher than the average performance in the industry, the past performance of the company multiplied by 1.05 is used as the standard of expected performance. When the company has a positive performance gap, the company performs better than expected. However, when the company has a negative performance gap, it means that the company does not perform as expected. Many scholars also use this calculation method to study organizational behavior (Bromiley, 1991; Chen and Miller, 2007; Greve, 2003; Miller and Chen, 2004; Wiseman and Bromiley, 1996). The calculation of performance gap is shown as follows:

$$PG = ROA_{i,t} - 1.05 \times ROA_{i,t-1} \text{ if } ROA_{i,t} > ROA_{m,t}$$

$$PG = ROA_{i,t} - ROA_{m,t} \text{ if } ROA_{i,t} < ROA_{m,t}$$

where  $ROA_{i,t}$  denotes company's performance in year  $t$ ,  $ROA_{m,t}$  denotes industry average performance in year  $t$ .

#### 4. Competitive pressure



The degree of industrial competition may lead to competitive pressure for companies, and reducing entry barriers or trade thresholds will significantly increase the competitive pressure for companies (Baldwin and Venables, 1995). Therefore, this study uses industrial concentration as a proxy variable for competitive pressure. Scholars use the Herfindahl-Hirschman index (HHI) to measure industrial concentration, calculated by the sum of the squares of the market shares of all companies in a specific industry at a particular time. Dupire and M'Zali (2018) pointed out that HHI can provide the most accurate industrial concentration. Siotis (2003) and Hoberg and Phillips (2010, 2011) have used HHI to calculate the degree of industry concentration in their research to represent the degree of competition in the industry. A higher HHI means lower competitive pressure. The calculation of HHI is shown as follows:

$$HHI_t = \sum_{i=1}^n MS_{it}^2$$

$$MS_{it} = S_{it} / \sum_{i=1}^n S_{it}$$

where  $S_{it}$  denotes the company's sales in year  $t$ ,  $MS_{it}$  denotes the company's market share in year  $t$ .

### 5. Survival distress

Denis (1994) and Hung et al. (2011) both use the sales growth rate as an indicator to measure the growth rate of companies. Conversely, when the sales growth rate worsens, representing the company's performance has not grown, there may be a survival crisis. When a company faces a survival problem, it will be reflected in a decline in sales or gross profit margin at the earliest. Therefore, this study follows Huang and Chen (2009) to adopt the annual sales growth rate of the previous year as the proxy variable for the survival distress (SD) of the company. The larger value of this variable represents the minor survival distress.

### 6. Bankruptcy threat

Regarding the issue of whether a company is facing bankruptcy, the Z-score proposed by Altman (1983) is often used by literature as an indicator of the bankruptcy threat for a company. March and Shapira (1992) and Singh (1986) believed that when companies face a predicament, they often take high-risk behaviors to break away from it. Xu and Zhang (2009) used Altman's Z to predict the financial crisis of Japanese companies. Acosta-González and Fernández-Rodríguez (2014) also used Altman's Z as one of the assessment benchmarks for the financial crisis. When using a one-stage forecast method, Altman's Z has a good prediction rate for companies in financial crises. In addition, Altman's Z has good classification accuracy in company forecasting for financial crises, and its ability to predict short-term company risk crises is also better than other models (Altman et al., 2017). The results of Chen et al. (2004) and Huang et al. (2007) confirmed that Altman's Z can predict Taiwan's financial crisis. Altman's Z has also been widely used in previous studies on corporate strategic behavior (Chen and Miller, 2007; Miller and Chen, 2004) and has also been used in the empirical research of company bankruptcy in Taiwan (Lee and Yeh, 2004). Therefore, this study also uses Altman's Z as a proxy variable for bankruptcy threat. The larger Altman's Z score represents the lower probability of bankruptcy and the lower bankruptcy threat. The calculation of Altman's Z score is shown as follows:

$$\text{Altman's } Z = 1.2 \times \frac{\text{working capital}}{\text{total assets}} + 1.4 \times \frac{\text{retained earnings}}{\text{total assets}} + 3.3 \times \frac{\text{EBIT}}{\text{total assets}}$$

$$+ 0.6 \times \frac{\text{market value of equity}}{\text{total liabilities}} + 1.0 \times \frac{\text{sales}}{\text{total assets}}$$

## 7. Control variable

This study used company size (SIZE) as the control variable, and the calculation method is the natural logarithm of the book value of total assets at the end of the previous year. Adams and Hardwick (1998) and McElroy and Siegfred (1985) pointed out that the company's size will affect the strategic motivation and the investment in CSR. Udayasankar (2008) found a U-shaped relation between size and CSR performance. Large-scale and small-scale companies are more likely to assume CSR, while medium-scale companies are less. It can be seen that the size of the company impacts the willingness to take CSR. Therefore, this study includes the company size as a control variable to control the impact of companies with different sizes on the disclosure of CSR reports.

### 3.3 Model

This study's dependent variable is whether a CSR report is disclosed, and it is a categorical variable. Therefore, this study employs logit and probit regression to build the research model to analyze the dependent variable as a categorical variable. This study aims to investigate the influence of the internal factors of the previous year and the current period on the willingness of the company to disclose CSR reports. The model established the impact of various internal factors in the previous period on the disclosure of CSR in the current period. The models are shown as follows:

$$CSR_{i,t} = \beta_0 + \beta_1 SLACK_{i,t-1} + \beta_2 PG_{i,t-1} + \beta_3 HHI_{i,t-1} + \beta_4 SD_{i,t-1} + \beta_5 AZ_{t-1} + \beta_6 SIZE_{i,t-1} + \varepsilon_t$$

where  $CSR_{i,t}$  is a categorical variable that denotes whether the company discloses a CSR report. When a company has disclosed the CSR report,  $CSR_{i,t} = 1$ ; when a company has not disclosed the CSR report,  $CSR_{i,t} = 0$ .  $SLACK_{i,t}$  denotes the company's organization slack in year  $t$ .  $PG_{i,t}$  denotes the company's performance gap in year  $t$ .  $HHI_{i,t}$  denotes the company's competitive pressure in year  $t$ .  $SD_{i,t}$  denotes the company's survival distress in year  $t$ .  $AZ_{i,t}$  denotes the company's bankruptcy threat in year  $t$ .

## 4. Empirical Results

### 4.1 Descriptive statistics

Table 1 is the descriptive statistics of this study. It shows that some companies have voluntarily disclosed their CSR reports from 2005. From 2005 to 2017, the proportion of companies in the electronics industry in voluntary disclosure of CSR reports (CSR) was 0.158. There are still a small number of companies that voluntarily disclose CSR reports. It is still waiting for the government or relevant groups to promote companies to disclose CSR reports voluntarily. The average performance gap (PG) is -3.188, which shows that the average performance of companies in the electronics industry is lower than expected, whether historical goals or social expectations. In addition, the average value of HHI is 0.335, indicating that the competition in the electronics industry may be relatively high.

**Table 1. Descriptive statistics**

	Mean	Median	Max.	Min.	St. dev.
CSR	0.158	0.000	1.000	0.000	0.365
AS1	14.300	14.183	20.452	5.659	1.509
AS2	291.527	172.185	5331.180	0.000	1886.151
RS	1.642	0.468	95.550	-0.311	19.541
PS	0.356	0.340	0.9859	0.0000	0.216
PG	-3.188	-2.434	56.143	-59.439	8.128
HHI	0.335	0.280	1.000	0.092	0.207
SD	0.242	0.015	19.660	-1.000	6.380
AZ	5.419	2.854	147.226	-78.496	86.292
SIZE	15.613	15.404	21.908	6.880	1.418

Note.

AS1 and AS2 represent available slack; RS represents recoverable slack; PS represents potential slack; PG represents performance gap; SD represents survival distress; HHI represents competitive pressure; AZ represents Altman's Z score and bankruptcy threat.

#### 4.2 Correlation coefficient and univariate analysis

Table 2 is the correlation coefficient matrix of this study. This study used the Pearson correlation coefficient as the statistic to test the correlation between any two variables. First, it shows that the available slack (AS1) is significantly positively correlated with CSR (0.392,  $p < 0.001$ ), which means that a company with more resources available is more willing to disclose the CSR report. The potential slack (PS) is also significantly positively correlated with CSR (0.059,  $p < 0.001$ ), which represents that a company with more potential slack is more willing to disclose the CSR report. The performance gap (PG) is also significantly positively correlated with CSR (0.060,  $p < 0.001$ ), which means that when the company's performance exceeds the expected performance more, the company is more willing to disclose the CSR report. The competitive pressure (HHI) and the CSR also show a significant positive correlation (0.095,  $p < 0.001$ ), which means that a company with lower competitive pressure is more willing to disclose CSR reports. The bankruptcy threat (AZ) and CSR also showed a significant positive correlation (0.045,  $p = 0.002$ ), which means that a company with a lower bankruptcy threat is more willing to disclose CSR reports. Finally, SIZE also showed a significant positive correlation with CSR (0.480,  $p < 0.001$ ), indicating that larger companies are more willing to disclose CSR reports.

In addition, according to the Pearson correlation coefficient matrix, all correlation coefficients are less than 0.7, indicating no high correlation between any two independent variables in this study. Therefore, the collinearity problem does not exist in the regression analysis model, and the independent variables can be placed in the same regression.

**Table 2. Correlation matrix**

	CSR	AS1	AS2	RS	PS	PG	HHI	SD	AZ	SIZE
CSR	-									
AS1	0.392*** (<0.001)	-								
AS2	-0.014 (0.324)	-0.068*** (<0.001)	-							
RS	0.022 (0.133)	-0.071*** (<0.001)	0.029** (0.040)	-						
PS	0.059*** (<0.001)	0.089*** (<0.001)	-0.100*** (<0.001)	0.011 (0.438)	-					
PG	0.060*** (<0.001)	0.146*** (<0.001)	-0.022 (0.125)	-0.037** (0.011)	-0.035** (0.016)	-				
HHI	0.095*** (<0.001)	-0.022 (0.130)	0.037*** (0.009)	0.055*** (<0.001)	-0.016 (0.255)	0.008 (0.559)	-			
SD	-0.014 (0.312)	-0.012 (0.412)	0.000 (0.978)	-0.002 (0.865)	0.033** (0.022)	0.012 (0.410)	0.009 (0.548)	-		
AZ	0.045*** (0.002)	-0.040*** (0.005)	0.247*** (0.000)	-0.006 (0.682)	-0.061*** (0.000)	0.020 (0.173)	0.058*** (0.000)	-0.003 (0.860)	-	
SIZE	0.480*** (<0.001)	0.632*** (<0.001)	-0.073*** (<0.001)	-0.036** (0.012)	0.070*** (<0.001)	0.106*** (<0.001)	0.045*** (0.002)	-0.018 (0.202)	0.014 (0.321)	-

Note.

1. AS1 and AS2 represent available slack; RS represents recoverable slack; PS represents potential slack; PG represents performance gap; SD represents survival distress; HHI represents competitive pressure; AZ represents Altman's Z score and bankruptcy threat.
2. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

### 4.3 Results from Logit regression

First, this study employed the logit model to examine the effect of the five internal factors of the company on the willingness to disclose CSR reports. The results are shown in Table 3. Regarding the impact of the performance gap on the willingness to disclose CSR reports, no matter in Model 1 (0.022,  $t=3.015$ ), Model 2 (0.022,  $t=2.978$ ), Model 3 (0.022,  $t=2.992$ ) or Model 4 (0.023,  $t=3.127$ ), the performance gap (PG) all have a significant positive effect on the CSR in four models. This result shows that when a company's performance exceeds the expected level more, the company is more willing to disclose CSR reports. Hypothesis 1: Company with more performance excess is more willing to disclose the CSR reports is supported by empirical results. In addition, when a company's actual performance is lower than expected, a company with a smaller performance gap is more willing to disclose CSR reports.

**Table 3. The impact of internal factors on CSR disclosure (Logit model)**

	Model 1	Model 2	Model 3	Model 4
$AS1_{t-1}$	0.169** (2.504)			
$AS2_{t-1}$		0.000 (-0.942)		
$RS_{t-1}$			0.001 (0.083)	
$PS_{t-1}$				0.645** (2.055)
$PG_{t-1}$	0.022*** (3.015)	0.022*** (2.978)	0.022*** (2.992)	0.023*** (3.127)
$HHI_{t-1}$	1.078*** (4.820)	1.053*** (4.728)	1.003*** (4.453)	1.077*** (4.829)
$SD_{t-1}$	-1.102*** (-6.038)	-1.056*** (-5.882)	-1.023*** (-5.629)	-1.095*** (-6.011)
$AZ_{t-1}$	0.027*** (4.150)	0.028*** (3.365)	0.010 (0.824)	0.029*** (3.671)
$TA_{t-1}$	0.880*** (12.248)	1.023*** (25.503)	1.027*** (26.100)	1.019*** (25.635)
Intercept	-18.632*** (-28.191)	-18.587** (25.657)	-18.437*** (-27.930)	-18.615*** (-28.304)
McFadden $R^2$	0.279	0.277	0.273	0.278

Note.

1. AS1 and AS2 represent available slack; RS represents recoverable slack; PS represents potential slack; PG represents performance gap; SD represents survival distress; HHI represents competitive pressure; AZ represents Altman's Z score and bankruptcy threat.
2. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

Second, regarding the relation between organization slack and CSR reports disclosure, Model 1 shows that the available slack (AS1) has a significant positive impact on CSR (0.169,  $t=2.504$ ); Model 4 shows that potential slack (PS) has a significant positive effect on CSR (0.645,  $t=2.055$ ); recoverable slack (PS) did not significantly affect CSR in all models. It still can be inferred that a company with more organization slack is more willing to disclose CSR reports. *Hypothesis 2: Company with higher organization slack is more willing to disclose the CSR reports* is supported by the empirical results.

Third, in terms of the competitive pressure of the company, it shows that the competitive pressure (HHI) affects CSR positively and significantly in model 1 (1.078,  $t=4.820$ ), model 2

(1.053,  $t=4.728$ ), model 3 (1.003,  $t=4.453$ ) and model 4 (1.077,  $t=4.829$ ). When a company feels lower competitive pressure, it is more willing to disclose CSR reports. *Hypothesis 3: Company with lower competitive pressure is more willing to disclose the CSR reports* is supported by empirical results.

Fourth, in terms of survival distress (SD), it shows that the effect of survival distress on CSR is significantly negative in Model 1 (-1.102,  $t=-6.038$ ), Model 2 (-1.056,  $t=-5.882$ ), Model 3 (-1.023,  $t=-5.629$ ) and Model 4 (-1.095,  $t=-6.011$ ). The results show that when a company faces greater survival distress, it is more willing to disclose CSR reports. *Hypothesis 4: Company with lower survival distress is more willing to disclose the CSR reports* is not supported by empirical results. The possible reason is that when a company faces survival distress, according to the problem-seeking theory, the company may begin to search for ways to increase sales. CSR, which includes issues such as product quality, customer relations, employee relations, and even environmental protection and human rights that the general public cares about, may become an excellent way to assist the company in solving survival distress.

Finally, in terms of bankruptcy threat (AZ), it shows that the bankruptcy threat (AZ) has a significant positive impact on CSR, whether in Model 1 (0.027,  $t=4.150$ ), Model 2 (0.028,  $t=3.365$ ), or Model 4 (0.029,  $t=3.671$ ). However, the bankruptcy threat (AZ) does not significantly affect CSR in Model 3 (0.010,  $t=0.824$ ). It means that when a company faces a lower bankruptcy threat, it is more willing to disclose the CSR reports. *Hypothesis 5: Company with a lower bankruptcy threat is more willing to disclose the CSR reports* is supported by empirical results. In addition, SIZE also positively affects CSR in all models. It shows that larger companies are more willing to disclose CSR reports.

#### 4.4 Results from probit regression

This study employed the probit model to examine the effect of the five internal factors of the company on the willingness to disclose CSR reports. The results from the probit model, shown in Table 4, are similar to those from the Logit model. First, regarding the impact of the performance gap on the willingness to disclose CSR reports, no matter in Model 1 (0.012,  $t=3.021$ ), Model 2 (0.012,  $t=3.022$ ), Model 3 (0.012,  $t=3.053$ ) or Model 4 (0.013,  $t=3.127$ ), the performance gap (PG) all have a significant positive effect on the CSR in four models. This result shows that when a company's performance exceeds the expected level more, the company is more willing to disclose CSR reports. *Hypothesis 1: Company with more performance excess is more willing to disclose the CSR reports* is supported by empirical results. In addition, when a company's actual performance is lower than expected, a company with a smaller performance gap is more willing to disclose CSR reports.

Second, regarding the relation between organization slack and CSR reports disclosure, Model 1 shows that the available slack (AS1) has a significant positive impact on CSR (0.105,  $t=2.812$ ); Model 4 shows that potential slack (PS) has a significant positive effect on CSR (0.297,  $t=1.694$ ); recoverable slack (PS) did not significantly affect CSR in all models. It still can be inferred that a company with more organization slack is more willing to disclose CSR reports. *Hypothesis 2: Company with higher organization slack is more willing to disclose the CSR reports* is supported by the empirical results.

Third, in terms of the competitive pressure of the company, it shows that the competitive pressure (HHI) affects CSR positively and significantly in model 1 (0.622,  $t=5.118$ ), model 2 (0.597,  $t=4.940$ ), model 3 (0.574,  $t=4.713$ ) and model 4 (0.611,  $t=5.046$ ). When a company feels lower competitive pressure, it is more willing to disclose CSR reports. *Hypothesis 3: Company with lower competitive pressure is more willing to disclose the CSR reports* is supported by empirical results.

Fourth, in terms of survival distress (SD), it shows that the effect of survival distress on CSR is significantly negative in Model 1 (-0.622,  $t=-6.182$ ), Model 2 (-0.594,  $t=-5.985$ ), Model 3 (-0.577,  $t=-5.771$ ) and Model 4 (-0.612,  $t=-6.110$ ). The results show that when a company faces greater survival distress, it is less willing to disclose CSR reports. *Hypothesis 4: Company with lower survival distress is more willing to disclose the CSR reports* is not also supported by empirical results.

Finally, in terms of bankruptcy threat (AZ), it shows that the bankruptcy threat (AZ) has a significant positive impact on CSR, whether in Model 1 (0.016,  $t=4.016$ ), Model 2 (0.016,  $t=3.254$ ), or Model 4 (0.017,  $t=3.583$ ). However, the bankruptcy threat (AZ) does not significantly affect CSR in Model 3 (0.006,  $t=1.062$ ). It means that when a company faces a lower bankruptcy threat, it is more willing to disclose the CSR reports. *Hypothesis 5: Company with a lower bankruptcy threat is more willing to disclose the CSR reports* is supported by empirical results. In addition, SIZE also positively affects CSR in all models. It shows that larger companies are more willing to disclose CSR reports. Through the analysis of these two different models, because there is not much difference in the results, it can be said that the results of this study have a certain degree of robustness.

**Table 3. The impact of internal factors on CSR disclosure (probit model)**

	Model 1	Model 2	Model 3	Model 4
AS1 <sub>t-1</sub>	0.105*** (2.812)			
AS2 <sub>t-1</sub>		0.000 (-0.589)		
RS <sub>t-1</sub>			0.002 (0.369)	
PS <sub>t-1</sub>				0.297* (1.694)
PG <sub>t-1</sub>	0.012*** (3.021)	0.012*** (3.022)	0.012*** (3.053)	0.013*** (3.127)
HHI <sub>t-1</sub>	0.622*** (5.118)	0.597*** (4.940)	0.574*** (4.713)	0.611*** (5.046)
SD <sub>t-1</sub>	-0.622*** (-6.182)	-0.593*** (-5.985)	-0.577*** (-5.771)	-0.612*** (-6.110)
AZ <sub>t-1</sub>	0.016*** (4.016)	0.016*** (3.254)	0.006 (1.062)	0.017*** (3.583)
TA <sub>t-1</sub>	0.486*** (12.326)	0.578*** (27.256)	0.578*** (27.823)	0.574*** (27.279)
Intercept	-10.509*** (-30.564)	-10.422*** (-29.417)	-10.412*** (-30.266)	-10.493*** (-30.637)
McFadden R <sup>2</sup>	0.280	0.278	0.274	0.279

Note.

1. AS1 and AS2 represent available slack; RS represents recoverable slack; PS represents potential slack; PG represents performance gap; SD represents survival distress; HHI represents competitive pressure; AZ represents Altman's Z score and bankruptcy threat.
2. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

#### 4.5 Robustness check

This section employs the logit and probit models for analysis. The difference from the previous section is that this section simultaneously puts all the independent variables into the regression model to explore whether the results will be inconsistent. The results are shown in Table 5. It

shows that, except that the variables of bankruptcy threat become insignificant, the other results are roughly the same as the previous results. A company with more organization slack, a larger positive performance gap, lower competitive pressure, lower survival distress, or a larger size is more willing to disclose the CSR reports.

**Table 4. Robustness check**

	Logit model		Probit model	
	Model 5	Model 6	Model 5	Model 6
AS1 <sub>t-1</sub>	0.183*** (2.596)		0.115*** (3.005)	
AS2 <sub>t-1</sub>		0.000 (0.027)		0.000 (0.367)
RS <sub>t-1</sub>	0.002 (0.234)	0.000 (0.028)	0.002 (0.541)	0.001 (0.32)
PS <sub>t-1</sub>	0.426 (1.281)	0.564* (1.678)	0.166 (0.911)	0.259 (1.388)
PG <sub>t-1</sub>	0.023*** (3.055)	0.023*** (3.077)	0.013*** (3.059)	0.013*** (3.127)
HHI <sub>t-1</sub>	1.052*** (4.635)	1.032*** (4.573)	0.609*** (4.96)	0.588*** (4.81)
SD <sub>t-1</sub>	-1.113*** (-5.899)	-1.067*** (-5.769)	-0.623*** (-6.037)	-0.595*** (-5.867)
AZ <sub>t-1</sub>	0.017 (1.275)	0.018 (1.397)	0.009 (1.377)	0.009 (1.183)
TA <sub>t-1</sub>	0.854*** (11.585)	1.016*** (25.304)	0.471*** (11.779)	0.574*** (26.982)
Intercept	-18.526*** (-27.78)	-18.505*** (-27.159)	-10.450*** (-30.168)	-10.464*** (-29.511)
McFadden R <sup>2</sup>	0.276	0.274	0.277	0.275

Note.

1. AS1 and AS2 represent available slack; RS represents recoverable slack; PS represents potential slack; PG represents performance gap; SD represents survival distress; HHI represents competitive pressure; AZ represents Altman's Z score and bankruptcy threat.
2. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

## 5. Conclusions and limitations

This study explores the impact of internal factors on CSR report disclosure behavior in Taiwanese electronics companies. By collecting CSR reports on the official website of companies, this study built a category variable of whether to disclose CSR reports. Then this study used the five internal factors proposed by the corporate behavior theory, including organization slack, performance gap, competitive pressure, survival distress, and bankruptcy threat, to explore whether these internal factors will affect the behavior of companies to disclose CSR reports.

The results show that when the company's performance in the previous year is higher than expected, a company with more performance excess in the last year is more willing to issue the CSR report. When a company has more available slack or potential slack in the previous year, then the company is more willing to issue the CSR report. A company with more organization slack is more willing to disclose the CSR report. The lower the competitive pressure of the company in the previous year, that is, the higher the industry concentration, the more willing the company is to disclose its corporate social responsibility report. The only result that doesn't



support our hypothesis is survival distress. In our hypothesis development, a company faces survival distress because of poor performance. When a company has poor performance, it means that the company should be less willing to issue CSR reports. However, the results indicate that companies are more willing to disclose CSR reports when they face survival distress. According to the problem-seeking theory, companies may invest in CSR to improve the company's image and convey good product quality to customers when the company faces survival crises. The results of the hypotheses and empirical support of this study are summarized in Table 6.

**Table 6. The hypothesizes and the empirical results**

Hypothesis	Empirical results
H1: Company with more performance excess is more willing to disclose the CSR reports	supported
H2: Company with higher organization slack is more willing to disclose the CSR reports	supported
H3: Company with lower competitive pressure is more willing to disclose the CSR reports	supported
H4: Company with lower survival distress is more willing to disclose the CSR reports	did not support
H5: Company with a lower bankruptcy threat is more willing to disclose the CSR reports	supported

The results that these five internal factors affect companies' willingness to issue CSR reports can fulfill the gaps in the literature that have not been discussed. In addition, the results can also provide references for companies, government, supervision departments, investors, and the public. A company investing in CSR requires good financial performance supported by the public. The impact of organization slack, performance gap, and bankruptcy threat on a company's CSR reports disclosure behavior comes from good financial performance. When a company has better financial performance, it is more willing to invest in CSR activities and issue CSR reports. A company with investing CSR can be supported more by investors and the government. That is the sustainable operation of a company. In addition, The result of the effect of survival distress on CSR reports disclosure is different results from the hypothesis. The results show that a company with survival distress is more willing to issue CSR reports. When a company faces survival distress, managers will search for ways to improve its performance and operate sustainably. The results also show that a company with lower competitive pressure is more willing to issue CSR reports. Although the companies are not facing intense competition, they are still willing to invest in CSR to benefit shareholders and all stakeholders.

These results show that CSR is a win-win strategy for companies, the government, investors, and the public. Companies can get better returns and growth of performance by assuming CSR. Stakeholders' benefits can also be protected. This study hopes the results bring more ideas and reflection to the public and companies. Company In addition to making profits, companies can also protect the benefits of everyone in the world and make the world to become a harmonious world. This is the value of CSR and the expected result of companies investing in CSR.

The limitation of this study is to investigate whether the company has voluntarily disclosed the CSR report by searching the company's official website. It can only build a dummy variable and may be biased because some companies still have not published their CSR reports online but have actually invested a lot of resources in CSR. Therefore, if quantitative data related to CSR scores can be obtained in the future, it will be possible to measure CSR performance more accurately and explore the relationship between internal factors and CSR performance.

In addition, there should be proxy variables that are more suitable for research under competitive pressure. For example, when the original HHI is averaged over five years to obtain a moving average, it can more accurately measure the degree of competition in the industry. In terms of bankruptcy threat, many scholars have also improved Altman's Z to make it more accurately predict a company's financial crisis. In summary, in addition to exploring samples from other industries, follow-up research can also improve variables, which is worthy of further development and discussion in follow-up research.

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