Print ISSN: 2288-4637 / Online ISSN 2288-4645
doi:10.13106/jafeb.2021.vol8.no7.0129

Determinants of Human Resource Accounting Disclosures: Empirical Evidence from Vietnamese Listed Companies*

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Received: March 20, 2021 Revised: May 22, 2021 Accepted: June 01, 2021

Abstract

This paper aims to analyze whether company characteristics are potential determinants of human resource accounting (HRA) disclosure practices by Vietnamese listed companies. It examines the human resource disclosure level of 204 companies by content analysis of these companies' annual reports. The study has relied on a multiple linear regression to test the association between a number of corporate attributes and the extent of human resource disclosure in companies' annual reports. The extent of human resource disclosure was measured using unweighted human resource disclosure index. The explanatory variables considered in this study were firm size, firm age, profitability, leverage, industry profile, and auditor type. The results revealed that the most influential variable for explaining firms' variation in human resource disclosure is firm size followed by firm age and profitability. Thus, it can be concluded that firm size, firm age and profitability are major predictors that may affect the variety of HRA disclosure practices on firms listed in the Vietnam Stock Exchange. However, neither industry profile nor auditor type seems to explain differences in human resource disclosure practices between Vietnamese listed firms, indicating that company's industry profile and auditor type are not a matter for the company to disclose HRA information.

Keywords: Human Resource Accounting (HRA), Human Resource Accounting Disclosure, Determinants, Listed Companies, Vietnam

JEL Classification Code: M10, M40, M41, M48

1. Introduction

In the knowledge-based economy characterized by the development of activities that require a growing proportion of knowledge and skills, human resources (HR) become a vital source of value creation and a determinant factor to ensure sustainable growth and development of any organization. Without human resources, other resources cannot be effectively and efficiently operated. An organization with abundant physical resources may sometimes miserably fail unless it has the right people to manage its affairs. Thus the importance of human resources cannot be ignored (Akintoye, Awoniyi, Jayeoba, & Moses Ifayemi, 2016). According to Schultz (1961) HR can be defined as abilities and skills of a certain group of people or an individual person that have value including behavior, experience, knowledge, morale and attitude and altogether give economic value to the organization.

As articulated apparently by many scholars (Mouritsen, 1998; Flamholtz, 1999; Guthrie, Petty, & Johanson, 2001) although several corporations proclaim their employees as

***Acknowledgements:**
The authors would like to thank anonymous referees for their constructive comments on the earlier version of this paper.

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being the corporation's most valuable assets, only a few corporations have utilized models and concepts of measuring human resource in the corporate annual reports. The monetary unit assumption of the conventional accounting does not allow reporting value of company employees in company's financial report because of difficulties in measuring company HR in terms of money. For this reason, there has been increasing dissatisfaction with traditional financial reporting as its inability to provide stakeholders with sufficient information on a company's ability to create value (Boesso & Kumar, 2007; Bozzolan, Favotto, & Ricceri, 2003; Francis & Schipper, 1999; Lev & Zarowin, 1999). As a consequence, raising the need for a different type of information such as disclosure of HR information which brings considerable value to a firm (Abeysekera & Guthrie, 2005; Guthrie, Petty, & Ricceri, 2006) because the main objective of HR disclosures is to satisfy the information needs of users in a manner that enables both decision making and accountability and finally inform the stakeholders about the quality and value of the firm (Firer & Williams, 2003; Petty & Guthrie, 2000).

With the growing awareness of the importance of human recourses, many companies attempt to disclose the human recourses of their companies on a voluntary basis to reduce the information asymmetry and improve the transparency between them and various stakeholders (Petty & Guthrie, 2000; Schneider & Samkin, 2008; Vergauwen, Bollen, & Oirbans, 2007) and also show social responsibility compliance (Dominguez, 2011). Therefore, there is a need to evaluate the HR disclosure practices by companies because evaluating the HR disclosure practices adds a further dimension to the assessment of reporting and recognizes that certain types of information are more useful to readers than others (Hooks & van Staden, 2011) and the factors that affect it. The study focuses on the Vietnamese setting, because most of the present literature is based on an Anglo-Saxon context, and more specifically on developed countries such as Australia, New Zealand, the UK, and the USA. To the best of our knowledge, no rigorous research studies have been done on human resource disclosures in annual report of listed companies in Vietnam. Hence, this study aims at examining the extent of HR disclosure practices and identifying their determinants for Vietnamese listed companies. Two following research questions will be addressed:

- Research question 1: What is the extent of HR disclosure practices of Vietnamese listed companies?
- Research question 2: What is the impact of firm attributes on HR disclosure practices of Vietnamese listed companies?

This paper is organized as follows: the second section presents the theoretical framework and study's hypotheses. A third section is devoted to the methodology and the use of content analysis method. The results and their discussion are provided in a final section.

2. Literature Review and Hypotheses

2.1. Theoretical Framework

According to a shareholders' approach, the voluntary HR disclosure theoretical framework is based on both agency theory and signaling theory. The common hypothesis of these theories is the presence of asymmetric information, which reduces the firm financial value (Botosan, 1997). In this regard, voluntary HR disclosure is justified by its financial value since it reduces agency costs, allows to managers to signal their business performance and to differentiate from competitors. Otherwise, voluntary HR disclosure allows companies to have cheaper funding and improves forecasting investors (Diamond & Verrechia, 1991).

According to a stakeholders' approach, the company performance includes, not only its financial results, but also its global behavior (Carroll, 1979). Shareholders are not exclusively concerned by the firm's activities, but other stakeholders could be harmed in case of company's malfunction. In this sense, voluntary HR disclosure can be a means of gaining legitimacy. It allows the company to demonstrate to different social actors, its involvement in a behavioral social responsibility (Patten, 1991; Roberts, 1992).

2.2. Hypotheses

2.2.1. Firm Size

When looking at company size and voluntary disclosure there are two obvious reasons that larger companies should disclose more information. Firstly, they have the resources to disclose more information. Secondly, large firms have better internal management information systems and therefore they are able to disclose more information (Ousama, Fatima, & Hafiz-Majdi, 2012). The agency theory indicates that bonding costs are expected to increase with size. According to Jensen and Meckling (1976), control (monitoring) becomes more difficult and expensive in large firms. As a result, the adoption of voluntary disclosure enables shareholders to mitigate agency problems and at the same time reduce agency costs associated with any decrease of company value as well as monitoring and bonding costs (Lokman, 2011).

Prior studies that considered firm size as a determinant of voluntary HR disclosure produced different and contrasting results. Several authors have confirmed a positive effect of size on the HR disclosure (Guthrie, Petty, & Ricceri, 2006; White, Lee, & Tower, 2007; Oliveira, Rodrigues, & Craig, 2006; Taliyang, Latif, & Mustafa, 2011; Ousama, Fatima,

& Hafiz-Majdi, 2012; Ferreira, Branco, & Moreira, 2012). Others did not find any significant relationship between firm size and the level of HR disclosure (Cordazzo & Vergauwen, 2012). Hence, the study examines the following hypothesis to find the association between firm size and the extent of HRA disclosures.

H1: *There is a significant impact of firm size on HRA disclosures.*

2.2.2. Firm Age

Firm age as a determinant for disclosure could be explained by stakeholder theory. Companies that have been listed in the capital market for a long time have more experiences to disclosure information of their social responsibility considering the reaction of market for appropriate disclosure (Roberts, 1992). Firms are inclined to provide voluntary disclosures when they plan to issue public debt or equity or to acquire another company in order to give investors explicit information and influence their perceptions (Healy & Palepu, 1993). As a result, the level of disclosure of listed companies is significantly influenced by their capital market listing status. Moreover, Alsaeed (2006) identified that firm age is significantly positively associated with the level of disclosure. Hence, the study tests the following hypothesis to find the association between the age of a company and the extent of HRA disclosures.

H2: *There is a significant impact of firm age on HRA disclosures.*

2.2.3. Profitability

Signaling theory indicates that a company with better profitability intended to disclosure more information about their operation in order to keep its image up. It is more likely that the management of a profitable enterprise will voluntarily disclose more to the market to enhance the value of the company, as well as the value of their human capital in a competitive labor market (Barako, 2007). However, findings from previous studies regarding the relationship between profitability and voluntary HR disclosure are inconclusive. Studies like Ferreira, Branco, and Moreira (2012) and Haji and Ghazali (2013) found a significant and positive relation. Other authors confirmed a negative association (Firer & Williams, 2003). Bozzolan, Favotto, and Ricceri (2003), Yau, Chun, and Balaraman (2009), and Taliyang, Latif, and Mustafa (2011) found that profitability does not have any significant relationship with the level of HR disclosure. Hence, the discussion above leads us to the following hypothesis:

H3: *There is a significant impact of profitability on HRA disclosures.*

2.2.4. Leverage

Agency theory can also be used to predict the level of voluntary disclosure in relation to the level of leverage in a company (Whiting & Woodcock, 2011). Jensen and Meckling (1976) supposed that agency conflicts are exacerbated by the presence of bondholders in a company's capital structure. It is believed that the higher the level of debt, the higher the level of conflicts of interests among stakeholders (creditors, shareholders, and managers). These agency costs can be reduced by disclosure of information and thus gives an incentive for firms with more debt to disclose more (Oliveira, Rodrigues, & Craig, 2006). In contrast, firms with low level of leverage also have an incentive to disclose more to show their advantage, which are in accordance with signaling theory (Oliveira, Rodrigues, & Craig, 2006). Previous studies show mixed outcomes on the relationship between leverage and HR disclosures. Broberg, Tagesson, and Collin (2010), Prencipe (2004), Williams (2001), and Li and Zhao (2011) found that firms with more debt had more voluntary disclosure. On the other hand, Whiting and Woodcock (2011), Haniffa and Cooke (2002) and Oliveira, Rodrigues, and Craig (2006), among others, found no significant relationship between the level of leverage and voluntary disclosure. Based on some of the previous studies, the following hypothesis purports that:

H4: *There is a significant impact of leverage on HRA disclosures.*

2.2.5. Industry

The nature of a company's industry has been identified as another likely factor associated with voluntary social disclosure practices (Beattie, McInnes, & Fearnley, 2004). For instance, corporations from environmental sensitive industries tend to disclose more environmental information than companies from non-environmental sensitive industries (Hackston & Milne, 1996). The underlying reason is that they face greater pressures from their stakeholders related to environmental concerns than those firms operating in industries considered not to be human resource sensitive. As a result, if they do not disclose environmental information, it could be interpreted by their stakeholders as a signal of bad environmental performance. Wong and Gardner (2005) and Magness (2006) assert that the informational needs of investors vary from industry to another. These authors found that the demand for additional HR information is more intense for firms which belong to industries characterized by significant earnings volatility. Different studies that considered industry as an independent variable of HR disclosure have shown different results. De Silva, Stratford, and Clark (2014) and Branco, Delgado, Sousa, and Sa (2011) have not found industry as a determinant of HR disclosure. However for Cordazzo (2007), Oliveira, Rodrigues, and Craig (2006), and Whiting and Woodcock (2011) industry has appeared to be a significant determinant of HR disclosure practice. Based on some of the previous studies, the next hypothesis purports that:

H5: *There is a significant impact of industry profile on HRA disclosures.*

2.2.6. Auditor Type

Agency theory suggests that independent audit facilitates shareholders in the monitoring process (Jensen & Meckling, 1976). Previous studies have examined the association between the corporate voluntary disclosure and the role of external auditors. Vu (2012) and Pham and Do (2015) indicated that there is no significant difference between the overall level of voluntary disclosures of companies audited by Big4 and non-Big4 auditing firms. Al-Janadi, Rahman, and Omar (2013) found a positive relation between the Big4 auditing firms and the disclosure information. Abd-Elsalam (1999) argues that large audit firms work hard to safeguard their reputation, and they are more independent than small audit firms; therefore, they ask their clients to follow the mandatory disclosures, in addition to disclosing more information voluntarily. Al-Janadi, Rahman, and Omar (2013) and Qu (2011) revealed that being audited by major international auditing firms has a positive and significant impact on the level of voluntary strategic, financial, non-financial, and total information disclosure. Hence, inspired from the discussion above, the following hypothesis purports that:

H6: *There is a significant impact of the auditor type on HRA disclosures.*

3. Research Method

3.1. Research Design

The study is empirical in nature based on secondary data taken from listed companies' annual reports. For this study, randomly-selected 204 non-financial listed companies in the Vietnam Stock Exchange have been considered. Financial firms include banks, financial, insurance and securities companies were excluded as they report under different or specific regulations. The selected companies are classified under two broad headings: non-manufacturing and manufacturing sector. Non-manufacturing sector includes healthcare services, trade, telecommunication, and transportation companies. Manufacturing sector includes plastic, construction materials, fuel and power, mineral, textile, pharmaceuticals and chemical, real estate, and others. The reporting practices of the selected companies are analyzed as of December 31, 2018.

All the data used in this study are manually collected from the annual reports of the respective companies for the period. For listed companies, annual reports are mandatorily audited by external independent auditors and have generally been approved by the State Securities Commission of Vietnam (SSC). Therefore, information produced in company annual reports are taken as reliable and comparable. Listing age is collected from the web sites of the two stock exchanges in Vietnam, namely Hanoi Stock Exchange (HNX) and Ho Chi Minh Stock Exchange (HOSE) and monthly review by HNX and HSX.

3.2. HRA Disclosure Checklist and Index

A human resource disclosure index was constructed, which consists of 26 items of information. By referring to the human resource disclosures a list of voluntary disclosures was prepared based on the review of relevant literature and the information that firms supply in their annual reports to shareholders. In order to decide what data to collect, an exploratory analysis was carried out with the aim to obtain a checklist that capture the human resource disclosure items mainly used in earlier studies (Gray, 1995; Hackston & Milne, 1996; Faisal, Situmorang, Achmad, & Prastiwi, 2020; Nguyen, Ha, & Dang, 2020; Nguyen, Nguyen, Nguyen, Le, & Do, 2020). From the analysis, a checklist was developed including the items, which we consider that Vietnamese companies can disclose human resource information in their annual reports (Table 1). A dichotomous approach to scoring the items was adopted, in which an item scores one if disclosed and zero if otherwise. This procedure is conventionally termed the unweighted approach, and it was adopted for the study as other researchers have used it successfully (Cooke, 1992; Hossain & Hammami, 2009; Vu, 2012; Pham & Do, 2015). The score of each company was totaled to find the net score of the company. An HRA_DI was then computed by using the following formula:

$$\mathrm{HRA\_DI}_j = \sum_{t=1}^{n} \frac{d_{\mathrm{ij}}}{d} \times 100$$

Where, $\mathrm{HRA\_DI}_j$ = Human resource accounting disclosure index of company j; d_{ij} = 1 if item d_{ij} of the company j is disclosed, and 0 if otherwise; d = maximum number of items; n = number of items that might be disclosed by a sample company.

3.3. Research Model

The estimated multiple linear regression model employed to test the relationship between firm specific related variables and the level of human resource disclosure is:

Table 1: HRA Disclosure Variables

No	Disclosure Item	No	Disclosure Item
1	Training courses	14	Information on accident statistics
2	Training hours/days per employee	15	Equal opportunity statement
3	Money invested in training	16	Labor management relation
4	Number of employees	17	Collective activities
5	Number of employees by gender	18	Providing recreation activities/facilities
6	Number of employees by qualification	19	Providing food, fuel, travel
7	Number of employees by functions	20	Providing day-care
8	Employees' age distribution	21	Remuneration policies
9	Talent recruitment & retention	22	Employee share purchase schedule
10	Employee survey	23	Relation with union/labors
11	Occupation health & safety	24	Age of BOD member
12	Providing low cost health care to employees	25	Gender
13	Sick absence level	26	Education

$$\text{HRA\_DI} = \beta_0 + \beta_1\text{SIZE} + \beta_2\text{AGE} + \beta_3\text{PRO} + \beta_4\text{LEV} + \beta_5\text{IND} + \beta_6\text{AUD} + \varepsilon$$

Where, HRA_DI: Human resource accounting disclosure index, β_0: Intercept, SIZE: Log of total assets, AGE: years of operation in the market as a listed company, PRO: profit-ability, ratio of net income to assets (ROA), LEV: leverage, ratio of total debt to total equity of a company as reported, IND: industry, dummy variable whose value is 1 if the company belongs manufacturing sector and 0 in the contrary case, AUD: auditor type, dummy variable whose value is 1 if the auditor is one of the Big4 and 0 if otherwise, β_1: coefficient to independent variables, ε: residual errors.

Table 2: HRA Disclosure Levels

Class	No of Company (*N*)	Valid Percent	Cumulative Percent
10–20	4	1.96	1.96
20–30	18	8.82	10.78
30–40	80	39.22	50.00
40–50	60	29.41	79.41
50–60	14	6.86	86.27
60–70	26	12.75	99.02
70–73	2	0.98	100
Total	204	100	

4. Results and Discussion

4.1. Distribution of HRA Disclosures

Table 2 presents the distribution of human resource disclosure levels in terms of number of items disclosed as percentage of the total disclosure.

The modal class of HRA disclosure items 30–40 percent indicates that maximum 80 companies' HRA disclosure level is 30 to 40 percent while 18 companies disclose from 20 to 30 percent of total disclosure items. The table also shows that more than 79 percent of the sample companies are less than 50 percent of HRA disclosure items. The remaining 21 percent companies have an HRA_DI between 50 percent and 73 percent. It implies that the level of human resource accounting disclosure of listed companies in the Vietnam Stock Exchange is rather low.

4.2. Descriptive Statistics

Table 3 illustrates the descriptive statistics for proxies of firm attributes such as SIZE, AGE, PRO, LEV, IND, AUD and HRA_DI as the overall index of the HRA disclosure.

On the average, HRA_DI is 42.99 percent with standard deviation of 12.53 varying significantly among companies from 11.54 percent to 73.08 percent. This means that each listed company averagely disclosed nearly 43 percent of HRA indicators in its annual report. Therefore, it clearly shows that listed companies in Vietnam disclosed less than half of the information and there are rooms for improvement in terms of HRA disclosure of Vietnamese listed companies as disclosing the HRA is at the emerging stage. The SIZE shows the average value of 13.87 with standard deviation of 0.981. Mean value of AGE is 8.41 with the minimum and maximum of 2 years and 17 years respectively. PRO shows an average of 8.796 with the standard deviation of 8.701 and also it holds the minimum and maximum values of –3.762 and 41.63 respectively. The LEV has the average as 1.227 with the standard deviation of 1.36 and the minimum and maximum values of 0.032 and 7.736 respectively.

Table 3: Descriptive Statistics of Variables

Variables	Obs	Mean	Std. Dev	Min	Max
SIZE	204	13.87	0.981	11.82	16.24
AGE	204	8.41	3.080	2	17
PRO	204	8.796	8.701	–3.762	41.63
LEV	204	1.227	1.36	0.032	7.736
IND	204	0.74	0.442	0	1
AUD	204	0.26	0.422	0	1
HRA_DI	204	42.99	12.53	11.54	73.08

4.3. Hypothesis Testing

The Kolmogorov-Smirnov test reports the significant value of 0.112, which allows accepting that sample data are normally distributed. The Pearson correlations show that SIZE and PRO of company are positively correlated with HRA_DI while LEV is negatively correlated with HRA_DI (Table 4).

To find out the association of HRA_DI with corporate characteristics, a multiple regression model is executed. Table 5 summarizes the results of OLS regression analysis. It is apparent that the *F*-value is 8.532 (p = 0.000) which statistically supports the significance of the model. The multiple correlation coefficient (R) is 0.654; the R^2 and adjusted R^2 are 0.428 and 0.412 respectively, indicating that 42.8% of the variation in Human Resource Accounting Disclosure Index can be predicted from the selected independent variables (Table 5). The regression results show that the size of the company (represented by the natural log of company's total assets) has a significant positive relationship with HRA_DI (β = 0.381, sig. = 0.000). It is suggesting that the companies with bigger size disclose larger extent of HRA information. So, H1 is strongly supported, meaning

Table 4: Pearson Correlations

Correlation	SIZE	AGE	PRO	LEV	IND	AUD	HRADI
SIZE	1.00						
AGE	0.290*	1.00					
PRO	–0.300	0.002	1.00				
LEV	0.375*	–0.256	–0.370	1.00			
IND	–0.005	–0.1588	–0.058	0.063	1.00		
AUD	0.104	–0.080	–0.060	–0.090	–0.093	1.00	
HRADI	0.090*	–0.089	0.280**	–0.210**	–0.022	0.049	1.00

Note: ** and *indicates significant at 5% and 10% level of significance based on *t*-statistics.

Table 5: Regression Results

Model	B	Std. Err.	Beta	*t*-value	Sig.	VIF
_cons	–13.540	12.757		–1.061	0.290	
SIZE	4.867	0.992	0.381	4.904	0.000***	1.499
AGE	3.773	0.305	0.289	3.681	0.000***	1.395
PRO	0.393	0.101	0.273	3.900	0.000***	1.217
LEV	–2.951	0.731	–0.320	–4.038	0.000***	1.561
IND	–0.921	1.838	–0.033	–0.501	0.617	1.045
AUD	–0.813	1.878	–0.029	–0.433	0.666	1.091
R-squared = 0.4277; Adj. *R*-squared = 0.4122; Durbin-Watson = 1.062						
F-value = 8.532; Sig. = 0.000						

Note: ***Indicates significant at 1% level of significance based on *t*-statistics.

that there is a significant and positive association between company size and level of HRA disclosure.

The model also shows that there is a significant and positive association between firm's age and HRA_DI (β = 0.289, sig. = 0.000). Thus, H2 is strongly supported, indicating that companies have been listed in the capital market for a long time tends to disclose more HRA information. It is also found out that there is a significant and positive impact of profitability on HRA disclosure practices (β = 0.273, sig. = 0.000). Hence, H3 is also strongly supported, suggesting that the companies with higher profitability disclose more HRA information. On the other side, it exists a significant and negative association between leverage and the extent of HRA disclosure (β = –0.320, sig. = 0.000) showing that higher debt reduces firm's voluntary disclosure of HRA information. This finding is in contradiction to Broberg, Tagesson, and Collin (2010) and Williams (2001) who found that higher debt leads to higher level of voluntary disclosure. The remaining independent variables (IND and AUD) have a statistically non-significant effect that indicates no association between the industry and auditor type and the level of HRA disclosure. Consequently, H5 and H6 are not supported. Thus, it is concluded that there is no evidence that industry type is associated with HRA disclosure level. And, there is also no association between auditor type and the overall level of HRA disclosure of companies. This finding supports the conclusions on the non-association between auditor type and companies' voluntary disclosure concluded by Vu (2012) and Pham and Do (2015). In total, the model shows different levels of association between HRA_DI of the listed companies in Vietnam and other independent variables except industry type and auditor type.

5. Conclusion

Human Resource Accounting information of an organization is an important factor to decision makers in the era of knowledge-based economy. The aim of this study is to analyze whether a company characteristics are potential determinants of human resource disclosure practices by Vietnamese listed companies. It examines the human resource disclosure level of 204 companies by content analysis of these companies' annual reports. The study has reported the results of a multiple linear regression to test the association between a number of corporate attributes and the extent of human resource disclosure in companies' annual reports. The extent of human resource disclosure was measured using unweighted human resource disclosure index. The explanatory variables considered in this study were firm size, firm age, profitability, leverage, industry profile, and auditor type.

The results revealed that four out of six testable hypotheses are supported by the results. The findings showed that corporate human resource accounting disclosure levels are associated with some company characteristics. For Vietnamese listed companies, three variables that were found to be strongly significant and positive in determining disclosure levels are firm size, firm age and profitability. The most influential variable for explaining firms' variation in human resource disclosure is firm size followed by firm age and profitability. Thus, it can be concluded that firm size, firm age, and profitability are major predictors that may affect the variety of HR disclosure practices on firms listed in the Vietnam Stock Exchange (VSE). The possible reasons for the results could be that large companies, companies with listing length and companies with higher profitability in VSE are motivated to disclose more HRA information in their annual report to uphold their image, to signal their business performance, and to differentiate from others. Therefore, it seems that the agency theory and the signaling theory, as captured by these variables, are the most relevant theories for explaining human resource accounting disclosures of Vietnamese listed companies. In contrary, it exists a significant but negative association between leverage and the extent of HRA disclosures. Apart from these, neither industry profile nor auditor type seems to explain differences in human resource practices between Vietnamese listed firms. It indicates that company's industry profile and auditor type are not a matter for the company to disclose HRA information.

This study suffers from limitations that could be addressed in future work. The research covers a single year and two broad industry categories in order to understand the nature of variations of overall disclosure. Additional research is needed to assess the trends of human resource disclosures and to know whether the quality of disclosure has improved over time. Moreover, the scope of the research may be extended by increasing the sample size and cross-industry examination.

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