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## Internal Stakeholders' Pressure on Environmental Accounting Reporting in SMEs in Shanxi Province, China

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### Abstract

The small and medium enterprises (SMEs) in China have achieved a rapid and sustainable growth for more than three decades that have also contributed to China's economic development. However, the studies on public's sensitivity to environmental issues is still scarce which signals for more research to be conducted on the environmental topics. Therefore, the objective of this study is to examine the pressure of internal stakeholders, namely shareholders and employees of SMEs in Shanxi Province in China towards the need to comply with environmental accounting reporting. One hundred and fifty copies of questionnaires were distributed, but only one hundred twenty-nine ready copies were subsequently collected. The data were then analysed by utilising Partial Least Squares-Structural Equation Modeling (PLS-SEM) using SmartPLS 3.3.2. The results show that SMEs employees in Shanxi Province in China were able to pressure their employers to implement environmental accounting reporting. The insights of this study prove that SMEs employees in Shanxi Province were thoughtful on environmental issues as environmental accounting reporting can improve SMEs performances concerning the environment, inventory and controlling costs, efficient technologies with less pollution, non-polluting products.

**Keywords:** Environmental Accounting Reporting, Shareholder, Employee, PLS-SEM

### Introduction

Environmental issues are becoming increasingly prominent globally, especially in China (Zhu, 2019). These issues such as the thinning of the ozone layer, global warming, deforestation, species extinction, waste disposal, habitat destruction, energy usage, acid rain, desertification, soil erosion, air pollution, water deletion, usage of toxic chemicals, land pollution, nuclear waste, noise pollution, and resource scarcity are some examples of the global environmental problems that are prevalent today (Lin, Wang, Marinova, Zhao, and Hong, 2017). Shanxi, the Chinese largest coal producing province, has the largest coal reserves, which has attributed to several environment issues such as air pollution (Guanrui, 2015). At present, environmental accounting report has drawn more attention in the research field.

Some scholars discuss the factors which affect the Environmental Accounting Reporting (EAR) and offer effective operational methods to improve EAR (Huang and Kung, 2010; Grekova, Calantone, Brenners, and Trienekens, 2016; Zhao and Patten, 2016; Yu and Rowe, 2017; Zhu,

2019). Environmental reporting refers to the information of the relevant environmental behavior, which is published by government or enterprises through a certain form (Meng, 1999). Therefore, the public can realize the current environmental situation and share the environmental information offered in the report. As a result, this would encourage the public to protect the environment, reduce the environmental damage behavior, and promote the harmonious development among social economy, resources, and environment (Zhao and Patten, 2016). Moreover, Empirical findings on EAR is also crucial for the long-term survival of SMEs (Zhang & Tong, 2014).

Stakeholder pressure is considered as one of the most important determinants influencing a firm's environmental strategy. Previous studies on EAR have found that stakeholder may prompt companies to expand their environmental accounting reporting (De Villiers and van Staden, 2012; Huang and Kung, 2010). Therefore, identifying a stakeholder group that may greatly affect EAR expands the current knowledge of EAR in the literature. In addition, based on stakeholder identification, the EAR can be enhanced to bring benefits for both parties: the company and the stakeholder. The internal stakeholders of a company could have a significant impact on the formation of EAR because the company could not exist as an entity without their participation. However, most studies have explored its impact on EAR from the external perspective, few studies from internal. In order to fill this gap, this study focuses on investigating the pressure from internal stakeholder on EAR. According to Tooley, Hooks, and Basnan (2012), shareholders and employees play an important role in the internal stakeholders. Therefore, this study focuses on investigating the followings: (1) whether the pressure from shareholder affect EAR; and (2) whether the pressure from employee affect EAR.

In addition, whether the pressure from shareholder will affect the EAR still debatable in China. Some scholars argue that shareholder is not support the EAR (Buysse and Verbeke, 2003), and some scholars have opposite view (Gunawan, 2015; Liu, Yu, Bi, & Zhang, 2009). Therefore, the researcher adds this factor into Internal stakeholders to determine this result. The main contribution of this paper is to improve the environmental accounting reporting of SMEs. This paper examines various internal stakeholders' pressure that influence companies to improve environmental accounting reporting in different ways. These pressures can help companies recognize where to carry out environmental work, which has a positive effect on protecting the ecological environment and promoting cleaner production.

### **Literature Review**

Environmental accounting is a new branch of corporate accounting. The importance of environmental accounting has been on the spotlight recently due to the increase of environment problems, economic, social and technological issues (Hasan and Hakan, 2012). According to Meng (1999), environmental accounting is a combination of environmental science, environmental economics, development in economics and accounting, and a reflection and control of enterprise environmental activities and economic activities related to the environment. Environmental reporting refers to the information of the relevant environmental behavior, which is published by government or enterprises through a certain form. So that the managers and the public can realize the current environmental situation and share the environmental information through the environmental report. As a result, it can be inspire the public to protect the environment, constrain the environmental damage behavior

as well as promote the harmonious development among social economy, resources, and environment (Meng, 1999).

Environmental accounting report is the report of the enterprise's environmental accounting results. Environmental accounting reports are mainly financial information based on monetary units. This environmental information includes environmental costs, environmental assets, and environmental liabilities. Moreover, the content of non-financial information mainly includes the implementation of environmental laws and regulations, environmental protection measures adopted by enterprises, and environmental protection policies (Fan and Cheng, 2019). Most of its users are people who have economic interest relationships with enterprises. The public's sensitivity to environmental issues indicates the need for more research to be done in addressing the environmental problems. Therefore, this study coincides with the current needs to influence firms to be more sensitive to the pressure of internal stakeholders such as shareholders and employees of an enterprise in working together protecting the environment. This is to ensure so that future generations can continue enjoying the benefits from a sustainable environment.

Non-compliance with regulations can have significant environmental and industry consequences, such as a criticised business reputation and higher costs. The consequences of amendments to environmental laws is evident in media reports on businesses that incurred environmental fines or plants that had to temporarily suspend operations due to non-compliance with environmental regulations (Al-Anba, 2019; Al-Sharqawi, 2014; Mubasher, 2013). Mokhtar et al. (2016) concluded that when firms face unprecedented pressure to demonstrate environmental dedication, firms would act efficiently by adopting EAR practises promptly to survive. Nevertheless, insufficient research has been done on institutional pressure to employ EAR practises in the China. It is not clear whether existing government regulations and laws require companies to be committed in practise. To address this question, this study explores the relationship between shareholders and employees and EAR practises. This study emphasises that government pressure isn't enough; it must be the right form of pressure. Shareholders and employees play a major role in the internal stakeholders (Tooley, Hooks, and Basnan, 2012). Thus, the aim of this study is to investigate whether shareholder pressure affects EAR., and whether employee pressure affects EAR.

### **Shareholders and Environmental Accounting Reporting**

Shareholders, as the earliest investors who provided registered capital for a company, played an important role in determining the status of various stakeholders of a company. As the owner of an enterprise, a shareholder plays an important role in the operation and governance of the enterprise. They can take part in the development of the enterprise by providing a long-term perspective which focus on long-term benefits and returns. Therefore, shareholders require companies to provide them with relevant reports (Zhang, 2016). However, the theory of shareholder supremacy believes that the existence of an enterprise is to obtain economic benefits, and the ultimate goal of an enterprise is to maximize the benefits of shareholders. In terms of long-term investment returns, shareholders pay more attention to the current economic benefits of the enterprise (Nie, 2016).

However, in recent years, the public's awareness of corporate social responsibility has been rapidly increased, and more stakeholders require companies to report their financial statements as well as non-financial information (for example, sustainability reporting) about the company. This virtually causes the company's management a great deal of dilemma as

they need to promote both shareholders' interest and corporate image concurrently. When managers face pressure from shareholders to pursue report, they are more likely to choose to respond compliantly to this pressure (Guo, 2019). Wu and Xu (2014) assert that shareholders can significantly influence management decisions and play a controlling and guiding role in the field of corporate governance. They have found that companies with a high demand of shareholders are more likely to disclose environmental accounting reporting. Based on the analysis above, we derived the following hypothesis:

H1: There is a significant effect of the pressure from shareholders on environmental accounting reporting.

### **Employees and Environmental Accounting Reporting**

Stakeholder theory believes that employees' pressure have a significant impact on environmental accounting reporting (Li, 2015). Employees' attitudes toward the organization may also influence the external stakeholders' perceptions about the firm (De Chernatony and Harris, 2000). Employees participate in the development and implementation of corporate strategies, including those related to environmental accounting reporting, as well as reflecting, representing and supporting activities related to environmental accounting reporting (Valentine and Fleischman, 2008). As the company's internal stakeholders and manpower providers, employees of the company are not only the direct participants in production and operation activities, but also the direct victims of environmental pollution. Therefore, they have a strong willingness to know that the company protects the health and environmental friendliness of employees. What environmental protection measures have been taken to ensure that the company's disclosure of its environmental governance results helps employees understand the company's environmental information, evaluate their own interests, and improve their relationship with the company (Bao, 2010). It is observed that the needs of employees can also have an impact on the environmental accounting reporting. Therefore, we propose the following hypothesis:

H2: There is a significant effect of the pressure from employees on environmental accounting reporting.

### **Methodology and Data Analysis**

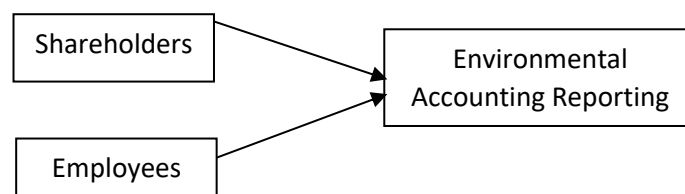
In this study, we employed a quantitative approach and espouse the stakeholder theory to explain the conceptual framework. Our respondents were internal stakeholders which consist of shareholders and employees of various industries in Shanxi Province in China. We utilize a non-probability sampling technique known as purposive sampling to ensure our data for this survey was from reliable sources. Afterwards, a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5) was adopted as a measurement for the independent variables and dependent variable. We used G\*power 3.0 software to estimate the sample size (Faul et al., 2007) by applying the effect size of  $f^2$  0.15,  $\alpha$  error pro 0.05, and power  $G_f$  0.95 with three tested predictors. Thus, we needed 107 respondents as our minimum sample for this study. Therefore, we distributed 150 questionnaires, and 129 completed, and usable copies were recollected. Figure I depicted the research framework that contained statements of three variables under investigation. The variables were examined using multiple items

(Hayduk and Littvay, 2012), and the data was then analyzed using SmartPLS 3.3.2 (Ringle, Wende, and Will, 2015) to assess the hypotheses.

### Framework and Hypotheses Development

The literature review was conducted to scrutinize the internal determinants of environmental accounting reporting and discovered that shareholders and employees play a vital role in environmental accounting reporting. Shareholders' and employees' pressure are the exogenous variables, while environmental accounting reporting is the endogenous variable in this study. We espouse stakeholder theory to help us understand how shareholders and employees create value to the companies (employers) through environmental accounting reporting. Based on the literature mentioned above, this study proposes a conceptual model, as illustrated in Figure 1. Therefore, we formulated two hypotheses to correspond with the objectives of this study.

**Figure 1: Research Framework**



H1: There is a significant effect of the pressure from shareholders on environmental accounting reporting.

H2: There is a significant effect of the pressure from employees on environmental accounting reporting.

### Findings

A total of 129 effective research samples were obtained in this study. Table 1 shows the profile of the companies that describes period of operation, number of employees, and their operation sector. It can be seen in Table 1, most of the companies (43.4 percent) had been operating for 5-10 years, while 27.1 percent had been in the industry for 11-20 years. Moreover, 16.3 percent had been operating for 21-40 years whereas 8.4 percent were among the recently set up companies in less than 5 years. There were only 6 companies (4.7 percent) in this study that had been in the industry for over 40 years.

The research samples of this study are relatively dispersed, including various types of enterprise personnel, as shown in Table 1. Most companies (27.9 percent) have 201-400 employees, followed by 24.8 percent that had 51-100 number of employees. Furthermore, 24.0 percent had employees about 101-200, 13.2 percent had more than 401 employees, whereas only 10.0 percent has 1-50 employees.

In highlighting the sectors in which the companies were involved in, the samples cover a variety of industries, representing the overall situation of environmental accounting report. Specific analysis of the sectors is shown in Table 1. The construction industry accounted for a

relatively high 16.3 percent; manufacturing is 11.6 percent. Mining, energy, transportation, repair services industry is 5-10 percent, while other industries are less than 5 percent.

Table 1: Profile of the Companies

Description	Item	Frequency	Percent
Period of Operation	< 5 years	11	8.5
	5-10 years	56	43.4
	11-20 years	35	27.1
	21- 40 years	21	16.3
	> 40 years	6	4.7
	Total	129	100.0
No. of Employee	≤ 50	13	10.1
	51-100	32	24.8
	101-200	31	24.0
	201-400	36	27.9
	> 400	17	13.2
	Total	129	100.0
Sector	Agriculture, Forestry, Livestocks and Fishery	6	4.7
	Mining	12	9.3
	Manufacturing	15	11.6
	Energy	9	7.0
	Construction	21	16.3
	Sales Services	5	3.9
	Transportation	9	7.0
	F&B	6	4.7
	IT	1	0.8
	Financial Services	5	3.9
	Property	5	3.9
	Services	5	3.9
	Government Agencies	5	3.9
	Repair Services	7	5.4
	Education	5	3.9
	Health Care	5	3.9
Mass Media	3	2.3	
Synthesis Industry	5	3.9	
	Total	129	100.0

#### A. Assessment of Reflective Measurement Model

Reliability refers to the degree of consistency of measurement indicators under the construct (Mugenda, and Mugenda, 2003). Research Methods: Quantitative and Qualitative Approaches, Acts Press: Nairobi.). Generally, the loading factor, average variance extracted (AVE), and reliability derived from the analysis of the measurement model for all variables

were loading factor > 0.60, Cronbach’s alpha >0.60, composite reliability > 0.70 and AVE > 0.50 (Henseler, Ringle, & Sarstedt, 2015).

From the Table 2, it can be seen that the loading factor of all variables is > 0.60, the Cronbach’s alpha coefficient values of all variables is >0.7, the composite reliability of all variables is >0.7, indicating a good internal consistency. The AVE of the measurement indicators in this study can be seen in Table 2. The AVE of all variables is >0.50, indicating that the measurement indicators meet the requirements of aggregate validity.

Table 2: Reflective Measurement Model Assessment

Construct	Items	Loadings	CA	CR	AVE	AVE > 0.5
Employee	EM1	0.850	0.925	0.941	0.727	Yes
	EM2	0.834				
	EM3	0.888				
	EM4	0.843				
	EM5	0.851				
	EM6	0.849				
Shareholder	S1	0.829	0.920	0.938	0.716	Yes
	S2	0.869				
	S3	0.843				
	S4	0.839				
	S5	0.833				
	S6	0.828				

*\*No item was deleted due to poor loading Composite Reliability < .708 (Hair et al., 2010, & Hair et al., 2014)*

Recently, an alternative measurement of discriminant validity has been developed, which is heterotrait-monotrait ratio (HTMT). In this study, we also used HTMT to test the discriminant validity. It can be seen from Table 3 that the value of HTMT is less than 0.90 (Gold, Malhotra, and Segars, 2001), therefore the discriminant validity conforms to the standard.

Table 3: HTMT Criterion

	Employee	Shareholder
Employee	[REDACTED]	[REDACTED]
Shareholder	0.888	[REDACTED]

*Criteria: Discriminant validity is established at HTMT0.90 (Gold et al., 2001)*

**B. Assessment of Formative Measurement Model**

Table 4 demonstrates the formative measurement models, the formative construct must highly correlate with a reflective measure of the same construct. This type of analysis is known as redundancy analysis (Chin, 1998a, 1998b). Specifically, Hair, Hult, Ringle, Sarstedt, and Thiele (2017) mention that redundancy analysis can be achieved by using formative construct as an exogenous latent variable predicting the same construct operationalized by reflective indicators or global single item, which summaries the essence of the construct that the formative indicators are intended to measure. It is important that path coefficient linking the constructs should be at least above the threshold of 0.70 to provide support for convergent validity of the formative construct (Hair et al., 2017). Based on the assessment through redundancy analysis, the formative constructs for Economic, Litigation, Pollution, and Environmental path coefficients are 0.973, 0.841, 0.983, and 0.985 respectively which is more



than 0.700. Therefore, the formatively measured constructs have sufficient degrees of convergent validity (Klassen and Whybark, 1999).

Table 4: Formative Measurement Model Assessment

Construct	Items	Convergent Validity	Weight	VIF	t-value weights	Sig
Economic	ECO1	0.973	0.400	1.901	25.705	0.000 **
	ECO2		0.384	1.808	26.412	0.000 **
	ECO3		0.385	1.747	27.983	0.000 **
Litigation	LIT1	0.841	0.841	1.000	32.984	0.000 **
Pollution	POL1	0.983	0.274	1.645	20.402	0.000 **
	POL2		0.314	2.029	25.095	0.000 **
	POL3		0.299	1.795	24.321	0.000 **
	POL4		0.327	2.133	24.581	0.000 **
Environmental	ENV1	0.985	0.334	2.033	26.727	0.000 **
	ENV2		0.247	1.321	14.697	0.000 **
	ENV3		0.334	2.022	25.583	0.000 **
	ENV4		0.322	1.917	22.661	0.000 **

Lateral Collinearity: VIF 3.3 or higher (Gold et al., 2001) Note: > 1.96\*\*

### C. Assessment of Structural Model

After ensuring that all indicators of the measurement model are acceptable, the next step is to evaluate the structural model that shows its role and capabilities. Indicators that should be examined and reported initially are path coefficient significance, R square values, effect size ( $f^2$ ), and predictive relevance ( $Q^2$ ) (Hair et al., 2014).

In this study, the indicator values were obtained through a bootstrapping with re-samples of 5000. Table 5 presents the path coefficient result for the hypothesis. The threshold of p-value is less than 0.05 as proposed by Hair et al. (2017). Therefore, it can be seen in Table 5 that H2 is supported whereas H1 is not supported.

Table 5: Path Coefficients

Direct Effects	Beta	S.E.	t-value	p-value	LLCI	ULCI	Decision
H1: Shareholder -> EAR	0.165	0.091	1.803	0.072	-0.019	0.331	Not Supported
H2: Employee -> EAR	0.176	0.087	2.021	0.044	0.015	0.353	Supported

Path Coefficient 0.01, 0.05 (Hair et al. 2017)

The thresholds of effect size ( $f^2$ ) > 0.02 means weak effect, while > 0.15 means moderate effect, and > 0.35 means strong effect. According to Cohen 1989,  $R^2$  values should be more than 0.26.  $Q^2$  > 0.00 means large,  $0.02 \leq Q^2 < 0.15$  means weak predictive power,  $0.15 \leq Q^2 < 0.35$  means moderate predictive power, and  $\geq 0.35$  means strong predictive power. Additionally, the inner VIF values that need to be tested are less than 5. From Table 6, we can know the effect size ( $f^2$ ) was 0.035, which means a weak effect.  $R^2$  measures the model's predictive accuracy and higher values indicate higher levels of predictive accuracy. In this

study, the  $R^2$  value was 0.918, so the result of  $R^2$  value was considered substantial. All the VIF ( $< 5$ ) fit for the standard and the structural model can be recommended. The predictive relevance ( $Q^2$ ) from Table 6 values are greater than 0.35, which means strong predictive power.

Table 6: Model Quality Assessment

Direct Effects	$f^2$	$R^2$	VIF	$Q^2$
H1: Shareholder -> EAR	0.035	0.918	4.502	0.702
H2: Employee -> EAR	0.035		4.838	

*Lateral Collinearity:  $VIF \leq 5.0$  (Diamantopoulos & Sigauw 2006)*

*$R^2 \geq 0.26$  consider Substantial (Cohen, 1989)*

*$f^2 \geq 0.26$  consider Substantial (Cohen, 1989)*

*$Q^2 > 0.00$  consider large (Hair, 2017)*

*$0.02 \leq Q^2 < 0.15$ : weak predictive power*

*$0.15 \leq Q^2 < 0.35$ : moderate predictive power*

*$Q^2 \geq 0.35$ : strong predictive power*

## Discussion

The main concern of this study is to examine whether the pressure from internal stakeholders (shareholder and employee) would have an impact on Environmental Accounting Reporting. The findings will be valuable for the managers in SMEs in Shanxi province, China, specifically, as well as all companies in developing countries in general. Based on the analysis, we can see the results which indicate that H2 is supported but H1 is rejected. The results of H1 corroborates with the study conducted by Huang and kung (2010) indicating that shareholder does not support the EAR (Environmental accounting reporting).

This study also supported the findings of Huang and Kung (2013), citing that many companies have been experiencing flaws relating to ownership systems. The reason for the lack of apparent relationship between shareholder pressure and EAR, is that many companies have imperfect ownership systems, inability to perform the role of shareholders in management and supervision, and inefficient to realize the importance of environmental reporting. They tend to focus only on maximizing company's profitability and financial status, while showing poor sense of social responsibility, as well as failure taking into account on the long-term development and sustainability of the enterprises. The study suggests that, this particular stakeholder is unable to influence environmental accounting reporting on the part of the firms. On another note, the results indicating H2 is supported, was also echoed by Gamerschlag et al. (2010) who found that pressure from employees positively influence EAR. This is due to the participation of employees in the production and operation of enterprises, hence, they will be directly affected by environmental pollution and benefit from environmental protection activities. Therefore, they need to know the environmental protection measures taken and the results of their governance. Employees' understanding of the enterprise's environmental information helps them to assess their own welfare which

improve their relationship with the enterprise, enhance environmental management, and increase their enthusiasm for production and operation.

### **Conclusion**

This study sets out with the objective to investigate the effect of the pressure from internal stakeholders on environment accounting reporting of SMEs in Shanxi province, China. Empirical results show that firms respond to pressure from employees, which plays a dominant role in encouraging the EAR in SMEs in Shanxi province, China. The study indicates that employees can be considered as an important means that could pressure companies to form external pressures for companies to form ethical beliefs about environmental issues, encourage companies to develop environmental ethics regulations, and sound environmental values. However, the pressure from shareholders did not appear to have an effect on EAR. These results support the opinion that employees in SMEs in Shanxi Province should value environmental issues as environmental accounting reporting can improve SMEs performances concerning the environment, inventory and controlling costs, efficient technologies with less pollution, and non-polluting products, etc. This study also deemed important as it can increase the awareness of environmental reporting among SMEs in the province.

Nevertheless, this study also has some limitations, which attributed to the following two aspects. First, from the perspective of managers, this paper explores the role of internal stakeholder pressure on environmental accounting reports. There are many non-internal stakeholders in enterprises, which may also have an impact on corporate environmental accounting. Therefore, future studies should explore independent effects or joint effects of other potential stakeholders based on this research framework. Second, it only explores the direct impact of internal stakeholder pressure on environmental accounting reports of SMEs in Shanxi Province, ignoring the impact of other provinces and enterprises. Therefore, future research can be extended to other provinces to expand the sample size and cover more enterprises, to make the results more generalizable.

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