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Environmental Information and Sales Growth of Manufacturing Companies: A Perspective from Signaling Theory

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Abstract

Business organizations are facing unprecedented challenges to change their production process in order to reduce their negative impact on the environment. Stakeholders are making it known to business organizations that they are not ready to do business with organizations that damage the environment in which they operate their business. Stakeholders are therefore making it mandatory for the business organization to engage in positive environmentally friendly business activities. Connection has been established between the environmental activities of business organizations and sales growth. Business organizations that intend to increase their value through increment in the sales figure must engage in environmentally friendly business. This study examined the relevance of environmental information to the sales growth. Relevant literature on environmental information and sales growth was analyzed to arrive at conclusion. The finding of the study indicates that business organizations that intend to growth their sales figure must engage in environmentally friendly business activities. It is no more possible for business organizations to look other way and try to pretend when it comes to issues relating to the impact of their activities on the environment. Business organizations need to communicate their stance on the environment to their stakeholders. This communication is normally done through the environmental information in the annual reports. The study concluded that engaging in

environmental activities by the business organization and report such in the annual reports is a prerequisite for positive sales growth.

Keywords: Environmental information, Sales growth, Signaling theory, Stakeholders, Business organization, Corporate growth

1. Introduction

The growth of business organizations depends on their ability to sell their products goods and services. A business organization that cannot sell its products and services will not be able to grow and such organization will remain stagnant. Corporate growth has been facing challenges globally as the global community is witnessing negative corporate growth from one country to the others. The growth of a business organization is very crucial to its survival and sustainability (Adegbie, Ogidan, Siyanbola, & Adebayo, 2020; Dosi, Grazzi, Moschella, Pisano, &Tamagni, 2019; Maama &Appiah, 2019). It will be difficult if not impossible for the business organization to survive without growing. Firm growth is an indicator of successful business activities. The growth of business organization can be in terms of consistent increment in revenue generation, value added, and volume of business activities over a long period (Ali, 2018; Akinlo&Iredele, 2014).

Gupta, Guha, and Krishnaswami (2013) indicate that some people believe that when the business organization is established, it will encounter many obstacles before it matures. After the maturity stage, it will grow and later in its life cycles it will start to decline. They also indicate that there are two schools of thought about firm growth. On one hand, those that belong to the first school of thought believe that firm growth is predictable. On the other hand are those that belong to the second school of thought. The people in this group believe that firm growth is not predictable. This group believes that the growth of a firm is just an opportunistic term therefore, that firm growth is unpredictable and that it is not possible for the entire firms to grow in the same pattern as some may grow; face challenges that will make them to stagnate, then continue to grow, and then decline in any pattern rather than linear or predictable pattern. They indicated that the stages taken by the firms in their growth may be repeated several times and sometimes they revise their growth pattern.

The US manufacturing sector has been witnessing negative growth in recent years especially in the manufacturing sector. The US manufacturing sector was credited for more than seventy percent (70%) of total job losses in all sectors. It has been established that the decline in the manufacturing sector employment was not caused by recession as employment in the US manufacturing sector has been consistently dwindling before the recession. US manufacturing sector has been facing contraction that cannot be attached solely to the economic recession (National Academy of Sciences, 2004). The problem of declining corporate growth in the manufacturing sector globally is still evident recently as the growth in the US manufacturing sector declined in the second half of 2019 (Cox, 2020). The industrial goods manufacturers witnessed 0.03 % growth decline and twelve thousand (12,000) job loss (Cox, 2020). US manufacturing sector growth declined 1.1 percent in the last quarter of 2019 and 2.4 percent in the first quarter of 2020 (United Nations Industrial Development Organization, 2020).

The growth in the manufacturing industry in Canada has been consistently stagnant or sometimes declined for the past twenty (20) years. The stagnating in the wages in Canada has been attributed to the negative growth in the Canadian manufacturing sector. The challenges in the Canadian manufacturing sector have also resulted in reduction in the contribution of the

Canadian manufacturers to the gross domestic product and reduction in the manufacturing sector's employment (Gingrich & Rowlinson, 2020).

The growth in the Chinese manufacturing sector also suffered setback as the industrial goods manufacturers witnessed growth decline. The growth in the industrial goods manufacturers experienced a decline of 4.4% in 2019. This is the lowest negative growth witnessed in the Chinese manufacturing sector since 2002 (Yao &Qiu, 2019).

The corporate growth in the global manufacturing community has been gradually declining and the trend continued in 2020 when the growth in global manufacturing sectors witnessed a decline of six percent (6%) in the first quarter of 2020. The growth in the North America's manufacturing sectors declined by 2.4 percent and Europe suffered 4.4 percent negative growth. China, which is the largest manufacturer in the world is not exempted from the sluggish corporate growth in the manufacturing sector. Chinese manufacturing sector witnessed 14.1 percent negative growth in the first quarter of 2020 after witnessing sluggish growth in the year 2019. The growth in European manufacturing sector dwindled in all quarters of 2019 and continued in 2020 with 4.4 percent decline in growth in the first quarter of 2020. The growth in the manufacturing sectors in Italy, Germany, France and Spain dropped by 11.0 percent, 6.8 percent, 7.8 percent, and 5.6 percent, respectively. Growth in the Brazilian manufacturing sector declined 2.2 percent in the first quarter of 2019. Japan, the largest manufacturer in Asia witnessed 6.7 percent negative growth in 2019 and 4.2 declined growth in the manufacturing sector (United Nations Industrial Development Organization, 2020). The African continent has been witnessing negative corporate growth since the mid-1980s. The Manufacturing value added has been consistently declining in the African countries since the mid-1980s (Signé & Johnson, 2018).

2. Theoretical Foundation

2.1. Signaling Theory

Signaling theory was propounded by Spence in 1973 when he used the level of education of the potential employees to distinguish or signal their quality that the employer may not have knowledge about (Spence, 1973). The company's various stakeholders are putting more pressures on the management to disclose more information in order to enable them make informed business decision. The management knows more about the business activities of the corporation than the shareholders and other stakeholders. Stakeholders need more environmental information to make informed business decisions. The management must strive to provide the needed information to the company's stakeholders in order to remove any misunderstandings between the company and its stakeholders that may result from lack of information. Signaling theory addresses the issue of information asymmetry due to the fact that the organizational management will have more information about the company than the external stakeholders. Friction may arise between the company and its stakeholders if they believe that the management is not disclosing the information that will reduce, if not eliminate, the information asymmetry. Communication of information between the corporation and its stakeholders is majorly done through its annual reports where both financial and nonfinancial information are expected to be disclosed (Mahmood, Kouser, &Masud, 2019; Connelly, Certo, Ireland, & Reutzel, 2011).

The gathering and communication of information from one party to the other formed the cornerstone of signaling theory especially when there is disparity between the two parties regarding the information that needed to be communicated. The signaling theory helped in reducing the information asymmetry as the signal sent from the signaler is intended to communicate information to the receiver. The usefulness of the signal sent will depend on how the receiver of the communicated information observed it. If the receiver of the signal does not see the signal it will not serve the intended purpose of communicating such information from the signaler to the receiver. The signaler is an insider who has the knowledge about what is going on in the organization and the way he sent the signal and the way the receiver of the signal perceive the signal will make a difference. Both the signaler and the receiver must be able to understand the communicated information or else it will not be useful. The signaler has access to the negative and positive information about his or her organization but it is believed that the signaler usually intentionally communicates positive information to the receiver of such information (Mohamed, Garoui, &Sweiti, 2020; Simoni, Bini & Bellucci, 2020).

Signaling theory is relevant to the environmental information and sales growth of manufacturing companies because of the contentious environmental issues. Stakeholders are getting involved in how the corporation is treating the environment and other stakeholders. The organizational management needs to send positive signal about its environmental activities to the stakeholders. Sending negative environmental signal to the stakeholders by the management may influence the stakeholders such as investor, lenders, customers, and others to withdraw their relationship from such company.

3. Environmental Performance Information

Environmental performance information is information relating to the efforts taken by the corporation in reducing the negative effects of its activities on the environment. It is the information regarding the reduction of pollution, waste, environmental impact in the processes and production, and effective and efficient use of natural resources and energy (Iredele, 2020; Ministry of the Environment Government of Japan, 2003). It is important for the corporation to have environmental goals that must be achieved within fiscal period as well as long term environmental objectives. Comparing the actual environmental activities at the end of the fiscal period with the planned environmental activities at the beginning of the fiscal year will help the corporation to know its stance on environmental issues. It is necessary to have environmental information at the beginning of the fiscal year in order to have information which the corporation can compare with the information at the end of the fiscal period. Environmental performance information is the measuring and evaluating of the environmental impact of activities of the corporation on the environment and the results of the actions taken on the environment (Steelman, Hall, Naish, & Mazzariello, 1977).

The corporation employs environmental performance indicators in the process of measuring and evaluation of its environmental activities. The environmental performance indicators help the corporation to provide information about its environmental activities for both internal and external users. The management of the corporation incorporates these environmental efforts and the outcomes of the action on the environmental activities in its decision making process (Yang, Wen, & Li, 2020; Schultze & Trommer, 2011). The external users such as customers, the loan providers, shareholders, business partners, investors, and the residents of the community where the corporation operates business need this information to make informed decisions regarding their relationship with such corporation. The environmental performance indicators provide environmental information that links the environmental plans of the national and local governments and the environmental efforts of the corporation together. The measuring and evaluation of the environmental activities of the corporation energize the corporation as the results of such exercise shed light on its stance on the environmental issues.

The environmental performance information is the information provided by the corporation on its environmental reports in line with its environmental policies and objectives (Anh, Soa,

&Hanh, 2020; Gallego-Alvarez, Vicente-Galindo, Galindo-Villadon, & Rodriquez-Rosa, 2014). This information provides the management with the information about how much it has achieved from the environmental goals and objectives at the beginning of the fiscal year. This process helps the management to focus on where the attention is most needed in its environmental efforts. That is, the environmental performance information provides information that helps the corporation in making decision regarding the environmental activities. Environmental performance information provides information relating to the effectiveness and efficiency of the corporation's environmental management system (EMS).

4. Sales Growth

Sales growth is the comparison of sales of the company from one period to the other. The company has the growth in sales when the present sales figure is higher than the previous sales figure. Sales growth is very essential to the financial health of the company as this is needed for the increment of remuneration for the employees as well as the long term sustainability of the company. Sales growth is the performance measure of the company as well as the performance of the sales personnel who handles the sales of the company's products and services. Sales growth could result in expansion of the company's business activities, product lines, and to add more new assets to the existing ones. A negative sales growth is not the wish of the company's management but when this happens, it is normally resulted from bad business decisions made in the past. Negative sales growth has dire consequences for the company as continuing decline or negative sales growth can lead to the end of company's business activities. The issue causing negative sales growth needs to be addressed as this means the company's management is not doing certain things right. A positive sales growth is the wish of any company's management as this means increment of market share, revenue, and profits (Chukwu, Idamoyibo, & Akunna, 2020; Bhasin, 2018).

There are different methods of measuring sales growth. A company can choose to measure its sales growth monthly, quarterly, biannually, and annually. A company can measure its monthly, quarterly, and biannually within the year and between the years. It is possible for the company to know its sales growth between the month of October and September. It can also compare its sales in the month of October this year with what it sold in October last year to determine if there is a positive sales growth or negative sales growth. This same process can be applied to the quarterly and biannual sales growth. Sam and Hoshino (2013) mentioned acquisition of new technology and equipment to be used in the production process, retention of talented employees, product exposure, and motivation as the factors that affect sales growth. The percentage increases in sales growth is calculated by subtracting the previous year sales revenue from current year sales revenue and dividing the result by the previous year sales revenue and then multiplying the result by 100 in order to get the sales increment in percentage.

5. Empirical Evidence on Environmental Information and Sales Growth Relationship

Chukwu, Idamoyibo, and Akunna, (2020) investigated how environmental activities was related to the earnings of the business organizations. Their finding established positive but insignificant relationship between environmental activities and earnings of the business organizations. The business organizations' engagement in the environmental activities does not translate to increment in their income figure. The finding of this study was contrary to the widely held belief that engaging in positive environmental business activities that takes the concerns of various stakeholders into consideration during the decision making process would enhance the chance of growing their income figure.

Abdulsalam and Babangida's (2020) assessment of the effect of the sales growth on sustainability reporting and profitability revealed a negative effect of sales growth on sustainability reporting and profitability. This implies that increment in firm sales would result in the decrease in the sustainability reporting and profitability. Data were sourced from the annual reports of the six (6) companies that participated in the study and descriptive and regression statistical procedures were used in the analysis of the data. The study concluded that the companies that participated in the study should not rely solely on the sales growth in enhancing their financial performance. Sales growth and cost reduction should be combined in improving the financial performance of the companies in the study.

Carp, Pvaloaia, Afrasinei, and Georgescu (2019) examined the impact of social and environmental information reporting on sales growth, proxy for firm's growth of fifty nine (59) companies listed on the Bucharest Stock Exchange, Romania. Correlation and multiple linear regression analyses were used to analyze the data gathered from the companies that participated in the study. The participated companies were divided into two categories namely sustainable reporting companies and non-sustainable reporting companies. The finding of the study established increment in the sales of the companies that practice sustainable reporting and no sales increment in the non-sustainable reporting companies. Generally findings of the study revealed that social and environmental information disclosure has little influence on the sales growth of companies investigated. They concluded that increasing social and environmental information disclosure may not have significant increment in the sales of the companies investigated.

The finding of Deswanto and Siregar's (2018) study indicated that firm sales figure has positive significant effect on the environmental disclosure of the firm. The business organization that increases its sales figure will be in a better position to have financial resources needed to engage in environmental activities that may not be possible with the business organization that is experiencing sales decline. Given the fact that sales income of the business organization is one of the proxies used to determine the size of the organization, it is expected that large business organizations stand better chances of engaging in environmental activities than the small business organizations. They collected data from two hundred and eleven (211) listed companies on the Indonesia Stock Exchange and analyzed the collected data using descriptive and panel data regression statistical techniques. They concluded that the government should work on improving the enforcement of the environmental rules and regulations to enhance the disclosure of the environmental activities information in the annual reports by the business organizations in Indonesia. They argued that improvement in enforcement of the environmental rules and regulations would enhance the low disclosure of the environmental information experienced now in Indonesia.

The importance of firm sales growth was established in the work of Li, Gong, Zhang, and Koh (2018). They studied the effect of environmental, social, and governance disclosure on firm value. The finding of the study indicated positive significant effect of environmental, social, and governance disclosure on firm value. In addition, using sales growth as a control variable between environmental activity variable and firm value, the result indicated positive significant effect of sales growth on the firm value. The value of the firm is related to its ability to sell its products or services. The business organization that sees growth in its sales stands better chance of increasing its value. Three hundred and sixty seven (367) large United Kingdom public firms participated in the study and the data gathered for the study were analyzed with the help of descriptive and panel data regression statistical methods.

Companies stay in business when the society needs their goods and services and this will normally be reflected in the increment of the sales of their goods and services. The business organization that cannot increase the sales of their goods and services over a long period of time may be facing business survival and sustainability problem (Curcio& Wolf, 1996). It is the wish of all the business organizations to consistently see increment in their cash inflows while simultaneously having reduction in their cash outflows. The high cash flow ratio that reflects sales growth is most desirable for the business organizations that want to remain competitive in their respective industries. This is so as high cash flow ratio of business organizations implies that such business organizations do not have problem in generating revenue from the sales of their goods.

Oraka and Egbunike (2016) investigated the effect of environmental disclosure practices on cash flow ratio of twenty two consumer goods manufacturing companies listed in the Nigeria Stock Exchange. They employed descriptive research design and the data collected from the annual reports of the participated companies in the study were analyzed using multiple regression technique. The finding of the study indicated that environmental information reporting does not have significant effect on the cash flow ratio of the consumer goods manufacturing companies listed on the Nigeria Stock Exchange. They concluded that this may be due to lack of mandatory environmental information disclosure in Nigeria. They recommended that reporting environmental information on the companies' annual reports should be mandatory as well as prescribing accounting standard that will support environmental information disclosure. They recommended that the government should make proactive effort in supporting companies to embrace environmental information reporting culture. This will foster an environment where the companies will operate their business activities without any kind of hindrance. Introduction of environmental information audit was also recommended.

Consumers' awareness about health and safety issue globally has changed their demand for goods and services. Consumers are now more interested in consuming goods but do not want to consume just any goods. They are interested in the health and safety on the ground during the production process to the point when it gets to the consumers. The health and safety of the company's products is a reflection of the health and safety given to the employees by the organization's management. Disclosing the environmental information relating to the products of the company and its employees in the annual reports will help the company in increasing the sales of its products thus enhancing its sales revenue and performance. In line with this reasoning, Ngwakwe (2017) examined the relationship between the health and safety of product and sales growth of a company in South Africa.

Ngwakwe (2017) collected data for the case study of Woolworths Holdings Limited South Africa were collected from its archive. Pearson correlation was used to analyze and determine the relationship between the health and safety of the company's product and sales growth. The findings of the study confirmed that there is significant positive relationship between the health and safety of the company's product and its sales growth. Consumers are willing to buy more goods from Woolworths Holdings Limited South Africa when it reports health and safety information of its products on its annual reports. The study concluded that disclosing environmental and health issue is a strategic tool used to enhance organizational performance. Investing on and disclosing product health and safety information in the annual report is a worthwhile investment as this serves as promotional strategy and it also makes financial sense.

The study recommended that those companies that have been complying with reporting health and safety information in their annual reports should continue to do so while those who are reluctant to do so should comply.

The quest to increase the sales of the organization cut across all industries regardless of what the companies in the various industries are producing, steel industry inclusive. The ability of the companies to sell their products is a prerequisite to remain in business. The environmental issue is pervasive in environmentally sensitive industry such as steel industry. Hsu (2017) investigated the relationship between environmental information disclosure and sales growth which is proxy for firm performance. Data were collected from sixty eight (68) companies in the steel industry listed on Shanghai Stock Exchange, China. The collected environmental reporting data were segregated into financial and nonfinancial reporting and regression technique was used to analyze the gathered data for the study. The findings of the study indicated that there is negative relationship between the environmental financial information disclosure and sales growth, proxy for firm performance.

The environmental financial information has no effect on the company's sales growth as any attempt to increase environmental financial activities and disclosing such environmental financial information in the annual reports will result in the reduction of sales growth. The results of the study also established that there is no relationship between environmental nonfinancial performance and sales growth of the companies that participated in the study. The study also revealed that quantification of the environmental non-financial information is too complicated and therefore has no effect on the financial performance of the company.

Chen, Tang, and Feldmann (2015) examined the relationship between environmental management practices and company performance of manufacturing companies in three countries namely Sweden, China, and India. They collected data from thirty seven (37) manufacturing companies which were analyzed using Spearman's rho to determine the relationship between environmental management practices and performance of the companies in the study. The finding of the study established the existence of negative relationship between environmental management practices and sales growth – proxy for company's performance – of the participated manufacturing companies. This result was attributed to the difference between the time of implementation of the environmental management practices and the reflection time of such activities in the market. This difference in time will increase costs and therefore reduce the sales of the company's goods in the market.
They concluded that implementing environmental management practices may not result in the sales growth in the short run. However, they argue that environmental management practices will benefit the company in the long run when their environmental friendly products are accepted in the market. They therefore recommended that the manufacturing companies should adopt and practice environmental management practices.

Suttipun and Stanton's (2012) investigation of the relevance of the environmental information disclosure on firm sales revealed that disclosure of the firm environmental activities does not have significant relationship with firm sales. Data were gathered from the websites of the fifty (50) companies listed on the Stock Exchange of Thailand. The multiple regression model indicated that spending money on the environmental activities does not imply that there will be increment in the sales of the firm. The study concluded that firm's environmental activities do not relevant to the sales growth.

6. Discussion and Conclusion

This study analyzed the relevance of environmental information to the sales growth of the manufacturing companies from the perspective of signaling theory. Empirical studies on the relationship between environmental information and sales growth were analyzed to determine the relevance of environmental activities on sales growth. The only reason business organizations are in business is because they have customers to buy their goods and services. The global awareness about consequences of activities of business organization on the environment has necessitated organizational stakeholders to put pressure on the organizations to engage in environmentally friendly business. The result of this study is mixed. Some studies believed that business organizations can only increase their sales figure by engaging in environmentally friendly business activities while others cannot see the relationship between environmental information and sales growth. However, most of the empirical studies reviewed indicated that environmental activities of business organizations determine their growth through increment in the sales figure. It is evident in this study that stakeholders especially the consumers are not interested in doing business with business organizations that damage the environment.

The consumers would not be happy with the business organization that damages the environment in which they live. Taking care of the environment is in the best interest of business organizations as input resources and human resources they need to operate their business can only be available if the environment is taken care of. The users of information in the annual reports expect business organizations to provide them with information they can use to make informed business and economic decisions. The quality of information in the annual reports would be reflected in the quality of business decision made by users of such information. It is therefore paramount that business organizations provide both quantitative and qualitative information in their annual reports. Providing this type of information would help the stakeholders to know the stance of business organizations on the environment thus help them to make informed decisions on whether to do business with such organization or not. The information in the annual reports is the only signal that stakeholders receive from business organizations. The stakeholders' decision on whether to continue doing business with the organization or not would depend on the type of information in the annual reports. Positive environmental information would encourage stakeholders to continue doing business with the organization while negative environmental information would discourage stakeholders to continue doing business with such organization.

Based on the analysis done in this study, it is concluded that business organizations that have intention of growing their sales figure must engage in environmentally friendly business activities. This would help them to sell their products and services as consumers are not interested in spending their hard earned money to business organizations that damage the environment.

This study contributes to knowledge in the following areas. First, it shed more light on the understanding of environmental information. Second, the study established the relevance of environmental information to the sales growth. Third, it adds to the scanty literature on environmental issues.

The limitation of this study is that it used other people's works to draw its conclusion. Even with this limitation, the author believed that this study contributed to knowledge as mentioned above. The study also has decision making implication for the organizational management. It is established in the study that the management that intends to grow sales figure of the organization, especially manufacturing companies must engage in environmentally friendly activities.

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