

Environmental Risk, Reputational Risk, and Legal Risk as determinants of Performance of Manufacturing Companies in Nigeria

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Abstract:

Most manufacturing firms focus on how to improve their effectiveness and pay less attention to the possible risks that can affect their profitability. The impact of environmental, reputational and legal risks on the performance of manufacturing firms was examined in this paper. An exploratory research design was used by the researcher. The population of this study is 305 senior staff from 10 manufacturing companies in Lagos state's Ikorodu Metropolis. The Logit Binary regression model was used to test the study's hypotheses. This model is thought to be suitable because it can predict the impact of independent variables on dependent variables. According to the findings of this study, environmental risk, reputational risk, and legal risk all have a negative significant impact on the performance of manufacturing firms. This study recommended that manufacturing company management give greater attention to their environmental, reputational, and legal risks by making sure that such risks are properly managed with the help of Enterprise Risk Management Tools and by offering valuable intelligence into their entire organization with Data-Driven Decision Making. Manufacturing firms should use Optimised Heat Maps and Charts to distinguish, analyze, and assess Environmental Risk, Reputational Risk, and Legal Risk in order to avoid or minimize such risks.

Keywords: Environmental Risk; Reputational Risk; Legal Risk, performance of manufacturing companies.

I. INTRODUCTION

Industries all over the world are subjected to various risks, including environmental risk, reputational risk, and legal risk, and this has a significant impact on their performance (AliBaba & VazirZanjani, 2021). The likelihood of a detrimental event occurring is defined as risk. The

ambiguity that engulfs upcoming events and outcomes is referred to as risk. It expresses the probability and consequence of an event that has the potential to impact a firm's attainment of goals (Bhimani, 2020). Risk can be defined as a state in which there is a possibility of loss but also a possibility of gain (Boekestein, 2021). Based on the goal and point of view of a discussion, the concept

of risk can also be described and explained in a variety of ways. According to Chapman and Ward (2021), a risk is a doubt associated with damage or loss. They imply that something that is indeterminate does not have to be risky; nevertheless, if an event is both vague and involves a loss, it can be classified as a risk. According to Essinger and Rosen (2021), risk is defined as "the possibility of unwelcome, adverse consequences to human life, health, property, or the environment." Because one would never risk a loss if there was no chance of winning, to realize the existence of a risk, one must be aware of both the gains and losses incurred and therefore a risk can be reflected as individual and relative to observer (Francis & Armstrong, 2019). All these definitions seek to make known that risk is to be seen as part of daily life, and the presence of risk in any environment should not be a problem but the focus should be on how those risks are being managed and in turn minimizing their potential effect.

Risk management on the other hand deals with the process of identifying and controlling potential risks that can be faced by an organization. Risk management is about identifying the risk to be managed, risk to leave unattended and risk that need to be hedged. Risk management is recognized in today's business world as an integral part of good management practice. In its broadest sense, it entails the systematic use of management policies, procedures and practices to the tasks of identifying, analysing, assessing, treating and monitoring risk. Risk management refers to a practice of identifying loss exposures faced by an organization and selecting the most appropriate procedures for treating these particular spotlights effectively (Gordon, Loeb, & Tseng, 2019). Risk management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to mitigate, monitor, and control the probability and/or impact of unfortunate events or to

maximize the realization of opportunities (Gupta, 2018).

Effective risk management can bring far payoffs to the company irrespective of what type it is. These paybacks include, superior financial performance, better basis for strategy setting, improved service delivery, better competitive advantage, less time spent firefighting and fewer unwanted surprises, increased likelihood of change initiative being achieved, closer internal focus on doing the right things properly, more efficient use of resources, reduced waste and fraud, and better value for money, improved innovation and better management of contingent and maintenance activities (Gupta, 2018). Risk management in manufacturing sector is about the categories and types of risks that can be opened to companies in the manufacturing industries and the approach which the companies adopt in managing those risks. The ways and manners which companies adopt in managing their risks can have either of positive or negative effect on their performance. Here are some of the risks that manufacturing companies can be exposed to; environmental risk, reputational risk, and legal risk. Some factors that may cause companies to face various unpredictable risks are environmental complexity (Hoyt & Liebenberg, 2020), intense competition, advanced technology, development of information and communication technology, new methods of supplying goods and services, environmental issues and companies' movement from tangible to intangible assets. As a result, companies are faced with several risk management issues including enterprise risk management, business risk management and strategic risk management (Luo, 2017).

Currently, risk management is regarded as one of the most important concerns of executives and the risk management activities are expanding. However, regarding the peripheral effects and applications of risk management, few empirical

researches has been done up until now (2021). In other words, despite rapid growth in importance of the topic, few applied studies have been done to determine whether environmental risk, reputational risk, and legal risk has practically desirable effects on the firm's performance.

On the other hand, due to the conceptual complexities of risk management and variation in methods of controlling adverse effects of losses, the previous few attempts that have been made failed to offer a comprehensive and integrated framework. Risk management has several advantages. It inspires strong stimulus in company's major stockholders to increase their investments in the company. By increasing their investments such investors invest in company's specific assets. These assets are regarded as tools that provide better business opportunities toward obtaining proper and long-lasting competitive advantage. Therefore, it is concluded that lack of effective environmental risk, reputational risk, and legal risk management may lead to imposition of extra costs on both investor and investee and thereafter affects their performances.

Research Objectives

The primary purpose of this paper is to examine the effect of environmental risk, reputational risk, and legal risk on the performance of manufacturing companies in Nigeria. The specific objectives are to:

1. determine the extent at which environmental risk impact the performance of manufacturing firms.
2. Examine the extent at which reputational risk influence manufacturing firms performance.
3. ascertain how legal risk influence manufacturing firms performance.

2. LITERATURE REVIEW

Risk

Risk in finance refers to the likelihood that actual outcomes will differ from predicted outcomes. Risk is described as the volatility of returns in the Capital

Asset Pricing Model (CAPM). The "risk and return" concept holds that riskier investments should have higher expected returns to reimburse investors for the increased volatility (Mua, GangPengb, & Douglas, 2019).

Types of Risk

As indicated by ParvizRad (2012), there are two types of risk: systematic risk and unsystematic risk. Systematic risk is an investment's market unpredictability, which means that it symbolizes external factors that affect all (or several) businesses in a sector or group. Unsystematic risk refers to asset-specific unpredictability that can influence an investment's effectiveness.

The following are the most vital types of risk to take into account when assessing investment options for a financial analyst:

Environmental Risk

This is known as the risk that a particular business venture or activity will cause destruction to the surrounding natural environment. For example, if oil reserves were discovered in a national park, there would be the environmental risk that exploiting the reserves might harm or destroy some of the park's wildlife. While environmental risk implies some moral or at least reputational risk, it also carries economic consequences. A company with environmental risk often has to pay fees for exemptions from certain policies, and it is usually responsible for cleaning up the environment in case it causes a slow or sudden disaster(Shiller, 2021).

1) Environmental Risk Management

Environmental risk management (ERM) helps to ensure that environmental risk is contained to acceptable levels, and ideally should be applied to all aspects of a mining operation in a structured process to ensure that all relevant issues are addressed. Criteria and objectives for risk assessment should be established during the planning stage. Results of monitoring should be fed into the risk assessment process to identify and reduce emerging problems as soon as possible. As ERM encompasses the entire mine

project, multiple skills are needed and sufficient resources must be made available to do the job effectively. The results of the risk analysis must be communicated effectively through the cloud system, and risk management recommendations should be implemented promptly for the ERM process to succeed (Maginn, Tuttle, McLeavey, & Pinto, 2017).

Reputational Risk

This type of risk strikes without warning and shifts your corporate landscape. Even worse, it injects an unfavourable narrative into your search results which affects customer opinions and impacts revenue. There are countless statistics about online reputation that support this conclusion. We commissioned a study by Forrester Consulting to find out what executives at large brands think about SEO and reputation (Elosegui, 2003).

Reputation risk is evolving. It's a strategic concern because it is connected to and magnified by other business risks. According to a recent DTTL survey, Reputational Risk, the most prevalent drivers of reputation risk are risks related to ethics and integrity, physical and cyber security, and products and services. Third-party relationship risk is also rapidly emerging, as companies are increasingly being held accountable for the actions of vendors, brokers, and similar associates. So as those risks proliferate, reputation risk heightens as well.

Reputation risk keeps business leaders up at night because it's a meta risk. It can originate and spread from inside and outside the organization, at an alarming speed. The executives interviewed in the global survey expressed the inherent challenges in this situation. For example, perceptions can vary from geography to geography, so an issue or event may not pose a threat in one locale, but may trigger a worldwide media frenzy in another with very real consequence to reputation (Jovanovic, 2015).

Adding to the concern is that some of these risks are beyond the company's direct control. Respondents to the survey were less confident about managing risks from third-party/extended enterprise issues, competitive attacks, and hazards or other catastrophes than about managing risks they can control internally, such as those related to regulatory compliance or employee misconduct.

Legal Risk

Legal risk is the likelihood of financial or reputational loss resulting from a lack of knowledge (or misunderstanding) of how the law applies to your business, or operating with a reckless indifference to the law and how it applies (Mas-Colell, Whinston, & Green, 2019).

Legal risk was defined as part of operational risk by the Basel II accord in 2003. It includes the risk of financial or reputational loss resulting from any type of legal issue. This could include a lack of awareness or misunderstanding of the way laws and regulations apply to a business. But companies can take action to reduce this risk. So, for example, a corporation may require all its employees to undergo health and safety training in order to reduce its legal risk from compensation claims (Den & Haan, 2019).

One of the primary reasons why legal risk is associated with operational risk involves fraud since it is recognized as the most significant category of operational loss events and considered to be a legal issue as well. These, however, do not mean that legal risk is only confined to this conceptualization because it is defined in more than one way. For instance, there are specific sets of legal risks that are defined by the European Union (EU) Law. In 2005, the European Central Bank and manufacturing companies declared that it will develop its own legal risk definition to help "facilitate proper risk assessment and risk management, as well as ensure a consistent approach between EU credit institutions" (Krusell & Smith, 2018).

Risk Management and Performance of Manufacturing Companies

Adebisi (2021) investigate the connection of ethics to risk management. They argue that there are compelling reasons for good ethical practice to be an essential part of risk management. They discuss that exploring the relationship of ethics and risk management has significant commercial outcomes. Not only those outcomes help to identify potential problems, but they also help preventing fraud, preserving corporate reputation, and to mitigate litigation against company which lead to increased legitimacy. Likewise, Bhimani (2021) say that risk management leads to higher corporate legitimacy. Using a sample of Chinese firms, Mua (2021) examine the effect of risk management strategy over performance of new product development. They find that risk management strategies that focus on technological, organizational, and marketing factors, individually and interactively improve the performance of new product development.

Gordon and Ken (2020) examine the relation of enterprise risk management (ERM) and performance. They argue that the relation of enterprise risk management and performance is contingent upon five firm-specific factors namely, environmental uncertainty, industry competition, firm complexity, firm size, and board of directors' monitoring. Finally, they argue that for implementing ERM firms should pay attention to the contextual variables that are surrounding the firm.

Andersen (2020) examines the firm-specific investment rationale as a plausible explanation for positive risk management effects. As a consequence of the firm-specific investment rationale he finds that effective risk management outcomes are associated with superior corporate performance. Further he indicates that firms that vary in levels of intellectual capital and investment in innovation also differ in their risk management effects.

Likewise, Gupta (2021) examines the risk management in Indian companies and explore the reasons for the adoption or lack of adoption of integrated approach to risk management. He shows that even though effective risk management can improve organizational performance, companies do not have adequate infrastructure to implement enterprise-wide risk management. He concludes that a sea change in risk perception is required to build up risk culture across business segments and incentivize risk management adoption.

Risk management is an effective technique for minimizing undesirable effects of risks and optimizing the benefits of risky situations (Cohen & Kaimenakis, 2017). Manuel (2018) describes the aim of risk management as process enhancement that is established through systematic identification, evaluation and mitigation of project risks. According to these definitions risk management is defined as measures that are taken to decrease the potential risky consequences of specific phenomenon namely price variation, accidents, political hazards, disruption in supply of raw material, economic development, etc. Such risks represent a wide spectrum of company's risks that are dealt with by various specialists. In other word, effective risk management deals with market risks that the company is facing and tries to take advantage of business opportunities that these risks might have. It is an effective tool of contending with external market threats that are out of management control and result in reduction of profit variances (Milost, 2017).

The tools and facilities that management uses to face external market threats are financial hedging, insurance contracts, management controls systems, transportation of resources and careful decisions that are made to improve company's profitability. All of the aforementioned movements are made to reduce adversity of situations that the company might face with.

To cover environmental risk, reputational risk and legal risk, companies do risk management

through derivatives via using insurance coverage and through examining integrative risk management approaches. In addition, in comparison with past risk management motivations, and historical financial obligations, there is higher tendency to risk management now. Indeed, it is obvious that company’s accountability depends to its ability to utilize the new opportunities that are derived from changes in environment(Boekestein, 2021).

3. METHODOLOGY

The researcher made used of an anexploratory research design. The study population is employees of manufacturing firms in Ikorodu Area of Lagos state. A research questionnaire was utilized as an instrument for collection of data. The instrument was adequately subjected to reliability and validity test. The simple random sampling was used as sampling technique for this study which is targeted towards giving every respondent an equal opportunity of being selected. For the purpose of this study, Taro Yamane was utilized to determine the sample size.

$$ss = \frac{N}{(1 + N(e)^2)}$$

$$ss = \frac{305}{(1 + 305(0.05)^2)}$$

$$ss = 171.$$

The sample size for this study is the 171 respondents.

Reliability of the Research Instruments

Table 1: Reliability Test Result

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .721 | 171 |

Source: SPSS 25.0 OUTPUT

The result of the reliability test in table 1 shows that Cronbach Alpha for all the items in the questionnaire is reliable. This means that the questionnaire is reliable enough for further research.

Table 2: Kaiser-Meyer-Olkin (KMO) and Barlett’s test of Sphericity

| KMO and Bartlett's Test | | |
|--|------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .741 |
| Approx. Chi-Square | | 3241.144 |
| Bartlett's Test of Sphericity | Df | 171 |
| | Sig. | .000 |

Source: SPSS 25.0 output

This study conducted the KMO and Barlett’s test of Sphericity. The KMO determines the sampling adequacy which should be close than 0.5 for a satisfactory factor analysis to proceed. Kaiser (1974) recommend 0.5 (value for KMO) as minimum (barely accepted), values between 0.7-0.8 acceptable, and values above 0.9 are superb. The table 4 shows that the value of KMO measure for the questionnaire is .6151 which is greater than 0.5 and therefore accepted that the sample was adequate.

From table 2, the test is significant(0.001 which infers that correlation matrix is not an identity matrix.

Method of Data Analysis

The hypothesis was tested using Logit Binary regression model.

The Formula for Logit Binary regression model:

$$L = \ln \left[\frac{Pi}{1 - Pi} \right] = \beta_0 X_i$$

Where:

L = Logit Regression

ln = Log

Pi = Environmental Risk, Reputational Risk, Legal Risk,

1 - Pi = Environmental Risk, Reputational Risk, Legal Risk,

β = Beta

X = Performance of Manufacturing Companies.

Statistical Package for Social Sciences Software (SPSS) version 25 was used for the data analysis.

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Questionnaires were administered to respondents, out of the 171 questionnaires that was administered, 151 copies were filled correctly and returned.

Data Analysis

Table 3 Model Summary

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|------|----------------------|----------------------|---------------------|
| 1 | -44.124 ^a | .887 | .754 |

Source: SPSS 25 Output

Table 4 Variables in the Equation

| | B | S.E. | Wald | df | Sig. | Exp(B) |
|--------------------|--------|--------|-------|----|------|--------|
| Environmental Risk | -4.141 | 3.212 | 2.211 | 4 | .007 | 55.111 |
| Reputational Risk | -5.141 | 3.221 | 3.321 | 4 | .001 | 12.214 |
| Legal Risk | -6.251 | 2.011 | 6.341 | 4 | .000 | 1.214 |
| Constant | 5.141 | 22.117 | 5.141 | 4 | .001 | 2.321 |

a. Variable(s) entered on step 1

Source: SPSS 25 Output

Table 3 shows that there is about 89% correlation between the performance of Environmental Risk, Reputation Risk, Legal Risk and the performance of manufacturing companies. This implies that poor management of these risk has about 89% chances of affecting the performance of manufacturing companies either positively or otherwise. This is also confirmed by the Nagelkerke R Square value of 75%.

Table 4 revealed that Environmental Risk; Reputational Risk; and Legal Risk has negative significant effect on the performance of manufacturing companies. Consequently, the Beta value of -4.141 (as shown in Table 4) simply mean that Environmental Risk account for a unit effect of -4.141, Reputational Risk has a unit effect of -5.141, Legal Risk account for a negative effect of -6.251. The p-value (.007, .001, .000, and .001) is less than the significant level of 0.05. The result in the Table 4 shows that the p-value is less than the level of significance of 0.05. Therefore, Environmental Risk; Reputational Risk; and Legal Risk has

negative significant effect on the performance of manufacturing companies.

5. CONCLUSION

Bad management of Environmental, Reputational and Legal Risks may lead to total collapse of manufacturing firm. It was concluded in this study that all the risk factors (Environmental, Reputational and Legal Risks) negatively significantly affect the performance of manufacturing firms.

Recommendations

Manufacturing firms' managers should give more attention to environmental, reputational, and legal risks, making sure that these risks are addressed with Enterprise Risk Management Techniques and giving valuable intelligence into their entire organization with Data-Driven Decision Making. These firms should use Optimal operational Heat Maps and Graphs to classify, analyze, and assess Environmental Risk, Reputational Risk, and Legal Risk in order to avoid or completely eradicate such risks.

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