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INFLUENCE OF CONSTRUCTION FIRMS' OWNERSHIP ON THE LEVEL OF ADOPTION OF SUSTAINABILITY PRACTICES IN NIGER DELTA, NIGERIA

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ABSTRACT

The aim of this research is to assess the influence of firms' ownership on the level of adoption of sustainability practices in Niger- Delta, Nigeria. Data were obtained through interviewees and 1179 copies of structured questionnaire, administered by the researcher and research assistants. The methods of data analysis were simple percentage and spearman rank correlation. The result shows that the locally owned construction firms account for 96.4% of the total number of firms considered in this study while the foreign owned firms account for 3.6% of the total number construction firms studied. The results further revealed that foreign owned firms adopted sustainability practices more than the local firms in Niger Delta, Nigeria. The P-values less than 0.05 significant level, show that firms' ownership influences the level of adoption of firms' sustainability practices in the study area. Hence, this study concluded that firms' ownership has significant influence on the level of adoption of sustainability practices among the construction firms in Niger Delta and can be used as control variable in the adoption of sustainability practices among construction firms. This study recommends that locally owned construction firms should improve their level of adoption of sustainability practices in Niger- Delta, Nigeria.

KEY WORDS: *Construction Firms, Influence, Niger- Delta , Ownership, Sustainability Practices*

INTRODUCTION

According to AlSanad (2015), statistics showed that the construction industry contributes greatly towards unsustainable development, and its impact on both the economy and the environment, is high. AlSanad (2015) also stated that globally, the construction industry consumes forty percent of total energy produced, forty percent of all raw materials and twenty five percent of all timber, and accounts for sixteen percent of total water consumption and forty percent of natural resources extracted in industrialized countries (Pulselli, Simoncini, Pulselli, & Bastianoni, 2007). Construction industry contributes to thirty five percent of global CO2 emissions (Son, Kim, Chong, & Chou, 2011; Wang, Zmeureanu,& Rivar, 2005), and the industry generates between forty five to sixty five percent of the waste deposited in landfills (Yudelson, 2008). Additionally, the construction industry and its associated activities account for a significant amount of harmful emissions, totalling around thirty percent of the greenhouse gases produced globally due to the operations that typically take place during the construction process. Furthermore, eighteen percent of emissions are caused by the transportation and processing of materials associated with it (Yudelson, 2008; Reddy & Jagadish, 2003). These negative impacts of the construction industry on the environment and the

population are both serious and alarming.

Niger Delta region of Nigeria is severely affected by the environmental degeneration as a result of economic activities and oil exploration over the years. According to Kadafa (2012), oil exploration and exploitation which has been on- going for several decades in the Niger Delta, has had disastrous impacts on the environment in the region and has adversely affected people inhabiting that region. The study noted that the region has been rendered one of the five most severely petroleum damaged ecosystems in the world. Similarly, Ite, Ibok, , Ite, & Petters, (2013) observed that the bulk proven oil reserves of the region has encouraged the influx of visitors and multinational oil corporations whose operations have created serious threats to the livelihood of the coast communities in the Niger Delta region. Destruction of habitats, loss of biodiversity, ecosystem destruction, destruction of farmland to access onshore sites and marine resource areas, and water pollution all have extensive implications on the people's livelihood in the region. Apart from the environmental degeneration suffered due to oil exploration, the fact that several construction activities which have been on to accommodate the activities and growing population, also add to the degeneration of the environment. Asad and Khalfan (2007) reported that construction has a significant effect on people's quality of life; construction outputs affect the nature, function and appearance of the towns and countryside in which people live and work. In order to overcome this situation and mitigate these effects, the new concept of sustainable construction has arisen. This concept has become the new philosophy of the construction industry and has introduced various enhancements to previous concepts, these include use of more environmentally friendly materials and resources, improvement in quality of the indoor environment, and implementation of techniques to save resources and reduce waste consumption (Hofenk, Pennings, & Trujillo-Barrera, 2014).

The term sustainability is commonly defined as utilizing resources to meet the needs of the present without compromising the future generation's ability to meet their own needs (World Commission on Environment and Development, 1987). This notion is furthered described by Royal Institute of Chartered Surveyors (2007) as a process that aims at "ensuring that our businesses, public services, natural resources, economy and community have the capacity to continue into the future"

Firms' ownership implies that a firm is locally or a foreign owned firm. Urem, Alcorta, and An (2008) in their study of relationship between foreign ownership and novelty of product innovations in China, where they used R&D unit (which measures whether a firm is engaged in formal R&D activities) as moderator, found that foreign affiliates do not have higher odds than domestic firms to introduce product innovations of higher novelty. A number of empirical studies suggest that R&D expenditure (investment) is related, in varying degrees, to firm ownership type, size, organizational structure, industrial branches and location (Shefer & Frenkel, 2005). It can therefore be assumed that the firm characteristics can support innovation in either ways depending on the perspective and circumstances of the firm.

There are different findings in literature on the influence of firms' ownership on the level of adoption of sustainability practices. The debate over firms' ownership and sustainability practices ties in with the effect of the country where the company is located. There is a suggestion that local firms are more sensitive to their national, institutional and cultural context and may be more able to implement these practices. Evidence from studies in East Asian companies showed that sustainability practices introduced by locally owned firms fared better in terms of reducing organisational-level staff turnover than foreign-owned firms (Yalabik, Chen, Lawler, & Kim, 2008). However, Dania, Larsen, and Yao. (2013) concluded that multinational firms have higher awareness and knowledge base, capability, organization and capacity to

adopt sustainability practices than indigenous construction firms. In view of these, this study therefore assessed the influence of firms' ownership on the level of adoption of sustainability practices in Niger Delta, Nigeria with a view to establish the correlation between firms' ownership and the level of adoption of sustainability practices among the construction firms operating in Niger Delta, Nigeria.

LITERATURE REVIEW

The variables for measuring the level of adoption of sustainability in this study are the firm sustainability practices and they are ten in number in this study. These include: Leadership, knowledge management practices, organisational innovativeness, organisational culture, corporate governance, stakeholder engagement, transparency and measurement, corporate social responsibility, employment practices and protection of the environment.

There are several areas in the construction industry in which an understanding of the role of individual sustainability leaders is needed. With the current pressure on construction organisations to integrate sustainability in their operations and business strategies, there is increasing demand for leaders who can stimulate a sustainability vision to become part of organisational identity. These individual leaders are the key players in the creation, development and growth of successful sustainability strategies, and ultimately serve as role models from whom new sustainability ideas can be subsequently disseminated out into the wider organisation (Inkoom, 2013)

Knowledge management (KM) can be described as a systematic process of discovering, choosing, arranging, refining and presenting information in such a way that it enhances worker's understanding relative to a particular area of interest (Sommerville & Craig, 2006). Emmitt and Gorse (2003), stated KM is the process by which information is created, captured, stored, shared, transferred, implemented, exploited, and measured to meet the needs of an organisation. In other words, KM is the discipline of creating a thriving work and learning environment that fosters the continuous creation, aggregation, use, and re-use of both organisational and personal knowledge in the pursuit of new business value (Quintas, 2005). This process and action oriented definition of KM indicates that it may be applicable to the improvement of the organisational performance. This is because the construction industry, which is a major sector for the delivery of key government programmes/or infrastructure, is an industry that is heterogeneous, diverse, multi-organisational, and dominated by small and medium size enterprises (SMEs). The high levels of service-inputs characterised by professional knowledge or expertise relative to a specific technical or functional domain may qualify the industry as a knowledge-intensive industry. In fact, documented research findings indicated that design, architecture, surveying, and other construction services are knowledge-intensive service sectors (Egbu & Robinson, 2005). Within any organisation, KM may perhaps have the same degree of importance as labour, plant, and materials (Sommerville & Craig, 2006).

Innovation is the application of new knowledge in an industry in the form of new products, new processes, social change, and organisational change (Widen, 2003). According to the Organisation for Economic Co-operation and Development (OECD, 2005), innovation is defined as a new or significantly improved product (good or service), process (production or delivery method), marketing method (packaging, promotion, or pricing) or managerial method (internal practice). Innovation is neither a single nor an instantaneous act, but rather it is a whole sequence of events that occurs over time, which involves all activities related to bringing new products to the market (Jones & Saad, 2003).

The relationship between organisational culture and sustainability adoption is well documented in the literature (Sharma, 2002; Wong & Avery, 2009; Linnenluecke & Griffiths, 2010; D'Incognito, Costantino, &

Migliaccio, 2013; Al-Jamea, 2014). The culture within an organisation, according to Trong Tuan (2012), is a continuous process of identity building/re-building and meaning-making within an organization, which enables its social integration as well as sustainability of its sub-divisions. It is defined in this study as construction firm's pattern of shared values and beliefs shaping their organisational functions and explaining the norms for behaviour within the organisation.

The responsibilities of the board of directors and the incentives provided to top management are two fundamental attributes of the corporate governance system. Boards of directors perform a monitoring and advising role and ensure that management is making decisions in a way that is consistent with organizational objectives. Eccles, Ioannun, and Serafeim (2012) posited that for organizations that consider environmental and social objectives as core issues for their strategy and operations, the board of directors is more likely to have direct responsibility over such issues; it is also more likely that top management compensation will be a function of sustainability metrics in addition to other traditional financial performance metrics.

Other functions include assisting management in setting strategy, establishing goals, and integrating sustainability into daily business activities, reviewing new and innovative technologies that will permit the company to achieve sustainable growth, reviewing partnerships and relationships that support the company's sustainable growth, and reviewing the communication and marketing strategies relating to sustainable growth. Another important governance feature is the set of metrics that are linked to senior executive compensation. High sustainability firms are more likely to align senior executive incentives with environmental, social, and external (customer) perception performance metrics, in addition to financial metrics.

Engagement is necessary for understanding the stakeholders' needs and expectations in order to make decisions about how best to address them (Freeman, Harrison, & Wicks, 2007). With regards to stakeholder management, prior literature has suggested and empirically shown that it is directly linked to superior financial performance by enabling firms to develop intangible assets in the form of strong long-term relationships, which can become sources of competitive advantage (Hillman & Keim, 2001). In other words, superior stakeholder engagement is fundamentally based on the firm's ability to establish such relationships with key stakeholders over time. Similarly, it has been argued that when a firm is able to credibly commit to contracting with its stakeholders on the basis of mutual trust and cooperation and a longer-term horizon as opposed to contracting in an attempt to curb opportunistic behaviour, then the firm will experience reduced agency costs, transactions costs, and costs associated with team production (Foo, 2007; Cheng, Ioannou, & Serafeim, 2011).

The transparency principle is about disclosure of information to company stakeholders. Epstein (2008) noted that transparent companies provide full disclosure to existing and potential investors and lenders of fair and open communication related to the past, present, and likely future financial performance of the company. They identify their stakeholders, and recognize that they are accountable to internal and external stakeholders, understanding both their informational needs and their concerns about the company's effects on their lives.

Performance measurement is essential for management to determine how well it is executing on its strategy and to make any necessary corrections (Kaplan & Norton, 2008). The quality, comparability, and credibility of information are enhanced by internal and external audit procedures that verify the accuracy of this information or the extent to which practices are being followed

Crowther (2000) defined corporate social responsibility (CSR) as an approach to reporting a firm's activities which stresses the

need for the identification of socially relevant behaviour, the determination of those to whom the company is accountable for its social performance and the development of appropriate measures and reporting techniques. It is also seen to be the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as at the local community and the society at large (World Business Council for Sustainable Development, 2002).

Thus by implication, CSR involves a voluntary act by organisations to integrate social and environmental concerns in their undertakings with numerous stakeholders. The stakeholders include all the members belonging to the corporation's social environs, which contribute to or are encumbered by the corporation's activity. Branco and Rodrigues (2006) supported this view as well.

This principle of corporate sustainability embodies the type of management practices organizations engage in (Epstein, 2008). Adoption of this principle means that firms engage in management practices that promote personal and professional employee development, diversity and empowerment. These organizations regard employees as valued partners in the business, respecting their right to fair labour practices, competitive wages and benefits, and a safe, family friendly work environment. They recognised that concern for and investing in employees is in the best long-term interests of the employees, the community, and the company. Consequently, they strive to increase and maintain high levels of employee satisfaction and respect international and industry standards for human rights. To do this they offer programs such as tuition reimbursement, family leave time, and career development opportunities.

In order to adopt sustainable principles, companies must define their commitment to the natural environment. Organizations espousing this principle strive to protect and restore the environment and promote sustainable development with products, processes, services, and other activities. These organizations are committed to minimizing the use of energy and natural resources and decreasing waste and emissions. At a minimum, they comply with all existing international, national, and local regulations and industry standards regarding emissions and waste. They strive for continuous improvement in the efficiency with which they use resources, and strive to reduce the environmental impact of their activities. They are committed to maximize the use and production of recycled and recyclable materials. According to Inkoom (2013), the following variables are used to measure firms' commitment to environmental protection. These include: Building designs, construction practices and technologies that are environmentally friendly and sustainable; effective communication of sustainability and other environmental management issues among contractors, suppliers and other professionals engaged by the organisation, standardized management systems such as ISO 14001 or environmental management systems (EMS) in your organisation. Others include the use of practices such as implementing effective environmental management programmes, and engaging professional who are ISO 14000 certified, the inclusion of sustainability and other environmental management measures in tendering requirement.

Nwokoro (2011) also identified the following variables for measuring firms/organisations' commitment to protection of the environment. These include periodic environmental audit of the firm, development of special training programmes for upgrading knowledge and skills in various discipline required for environmental management, approximate technology that recognise the need to save on energy and which is cost-effective; facilitating management control of environmental practices, development of environmental management plan to reverse environmental degradation, protect human health and the environment, and installing

effective machinery to enhance environmental awareness through public enlightenment

The adoption of sustainability practices takes into account a number of control measures. It is also recognised that different kinds of organisations will apply different kinds of innovative practices, and different countries may place more or less emphasis on particular practices (Cox, Higgins, & Speckesser, 2009). Studies have shown that firm size is a significant factor influencing a company's adoption of sustainable practices. Smaller companies are generally less aware of sustainability practices and lack the time and financial resources to learn about and invest in them (Darnall, Henriques & Sadorsky, 2010). These factors can contribute to small companies being less likely to adopt sustainability initiatives than medium sized companies (Brammer, Hoejmose & Marchant, 2011). However, when SMEs do engage with sustainability they can do so very quickly because individual owners and managers often have significant influence over strategy as well as operational decision making (Darnall, Henriques, & Sadorsky, 2010).

Organization size (as defined by the number of employees) has received substantial attention from researchers and management writers as a fundamental component affecting organizational design, structure and shape. Shaheen and Malik (2012) stated that firm size is the quantity and array of production capability and potential a firm has or the quantity and diversity of services a firm can concurrently make available to its clients. Some researchers claim size influences organizational effectiveness and efficiency and some claim it does not (Amah,, Daminabo-Weje, & Dosunmu, 2013)). Hofler (2010) stated that organisational size has been identified as an important variable that influences organizational performance. Babalola (2013) stated that larger firm has more influence on its stakeholders, therefore larger firms tend to outperform small firms.

Halil and Hasan (2012) examined the effect of firm size on profitability, with evidence from Turkish manufacturing companies. The results of the study showed that firm size has a positive impact on the profitability of Turkish manufacturing companies. Bayyurt (2007) opined that large firms have more competitive power than small firms. This is because large firms have a bigger market share, as well as the opportunity to make more profit. Furthermore, large firms have high capital rates since they have larger resources, and this situation gives them the opportunity to work in more profitable fields with little competition.

METHODOLOGY

Survey design approach was adopted in this study. Data were obtained through interviews and 1179 copies of structured questionnaire, administered by the researcher and research assistants. The researcher interviewed some of the firms' representatives which include Project managers, Architects, Builder and Civil Engineers. The interviewees were purposively selected. The opinions of the respondents were sought on the influence of construction firms' ownership on the level of adoption of sustainability practices**.** Data were collected on a five-point scale of 1, 2, 3, 4 and 5 and were assigned to the options of very low level of adoption, low level of adoption, moderate level of adoption, high level of adoption and very high level of adoption respectively. Methods of data analysis were simple percentage, mean score, and spearman rank correlation. Spearman rank correlation was used to establish the relationship between ownership of construction firms and the level of adoption of sustainability practices among construction firms in Niger Delta, Nigeria. .

Sample Frame and Sample Size

Table 1 shows the sample frame and sample size of this study. The Sample size was determined using the Yamane (1967) equation as shown below

$n = N/1+N(e)^2$

where n = Sample size
N = Finite population
e = Level of significance (0.05).
1 = Unity

This study adopted Yamane (1967) equation for determining sample size because of its simplicity, reliability and validity. These have encouraged its wider acceptance and usage among researchers over a long period of time.

Table 1: Sample Frame and Sample Size of Construction Firms in Niger Delta

State	Sample Frame	Sample Size
Abia	165	117
Akwa Ibom	214	139
Bayelsa	128	97
Cross River	223	143
Delta	200	133
Edo	237	149
Imo	143	105
Ondo	221	142
Rivers	250	154
Total	**1781**	**1179**

Source: Corporate Affairs Commission (2017)

RESULTS AND DISCUSSION

This section contains the results of the analysis of data collected for the study. It contains the descriptive results of the response rate of questionnaire, and firm characteristics. This section also contains the result of influence of firms' ownership on the level of adoption of sustainability practices among construction firms in Niger- Delta, Nigeria.

Questionnaire Distribution and Response in the Study

One of the research instrument used in this study was structured questionnaire. The questionnaire was administered among the construction firms operating in Niger Delta, Nigeria. The results of analysis were presented in Table 1.

Table 1 showed that the number of questionnaire administered to the construction firms in Niger Delta were 117, 139, 97, 143, 133, 149, 105, 142, and 154 in Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, and Rivers state respectively. From the questionnaire distributed, the response rate ranges between 76.1% and 94.7%. Delta state received the highest response rate of 94.7% while Abia State got the least rate of 76.1 %. In all, an overall response rate of 83.2**%** was achieved. Groves (2006) noted that a response rate of at least 50 percent is considered adequate for analysis and reporting, a response of 60 percent is good and a response rate of 70 percent is very good. As a guide, researchers typically seek response rates of at least 70% to feel confident that their sample is representative of the sample frame. Hence, the overall response rate of 83.2% in this study is considered very good and adequate.

Firm Characteristics

Firms' characteristics considered in this study comprised of location of construction firms, and ownership of construction firms.

Location of Construction Firms

Table 2 shows the distribution of construction firms in each state in Niger Delta, Nigeria. The percent of firms in Abia, Akwa Ibom,

Table 1. Questionnaire Distribution and Response Rate

S/N	States	Number of questionnaire administered	Number of questionnaire returned	Percentage of questionnaire returned (%)	Overall Response Rate (%)
1	Abia	117	89	76.1	
2	Akwa Ibom	139	113	81.3	
3	Bayelsa	97	85	87.6	
4	Cross River	143	112	78.3	
5	Delta	133	126	94.7	
6	Edo	149	114	76.5	
7	Imo	105	92	87.6	
8	Ondo	142	109	76.8	
9	Rivers	154	140	90.1	
10	TOTAL	1179	980		83.2

Bayelsa and Cross river states are 9.1%, 11.5%, 8.7% and 11.4%. Others are Delta, Edo, Imo, Ondo and Rivers with their percents of 12.9%, 11.6%, 9.4%, 11.1% and 14.3% respectively. Table 2 shows a good distribution of the construction firms among the states in Niger Delta. This implies that the results from this study represents the situation in Niger Delta and can be relied on.

Table 2: Location of Construction Firms

States	Frequency	Valid percent
Abia	89	9.1
Akwa Ibom	113	11.5
Bayelsa	85	8.7
Cross River	112	11.4
Delta	126	12.9
Edo	114	11.6
Imo	92	9.4
Ondo	109	11.1
Rivers	140	14.3
Total	980	100.0

Ownership of Construction Firms

The result of analysis on Table 3 shows that the locally owned construction firms account for 96.4% of the total number of firms considered in this study while the foreign owned firms account for 3.6% of the total number construction under consideration in this study. This clearly shows that majority of the construction firms operating in Niger Delta are predominantly locally owned firms. The locally owned firms comprised of small and medium construction firms.

Table 3: Ownership of Construction Firms

Ownership of Firms	Frequency	Valid Percent
Locally owned	945	96.4
Foreign owned	35	3.6
Total	980	100.0

Influence of Ownership of Construction Firms on the Level of Adoption of Sustainability Practices

Table 4 shows the results of the correlation between ownership of construction firms and the level of adoption of sustainability practices among the construction firms in Niger Delta, Nigeria, using the Spearman rank correlation test at P-value ≤0.05. The P-value of 0.001 which is less than the 0.05 significant level set for the test shows that there is a significant correlation between ownership of construction firms and traits of transformational leadership (charismatic leadership-idealised influence). It implies that the ownership of construction firms significantly influences the level of adoption of charismatic leadership- idealised influence by the construction firms in Niger Delta.

The correlation of the ownership of construction firms with charismatic leadership (inspirational motivation) indicates that there is a significant correlation between the ownership of the firms and the level of adoption of charismatic leadership-inspirational motivation. This connotes that the ownership of construction firms significantly influences the level of adoption of charismatic leadership-inspirational motivation among the construction firms in Niger Delta. Furthermore, it is shown in this study that there is a significant correlation between ownership of construction firms and intellectual stimulation. This implies that the ownership of construction firms significantly influences the level of adoption of intellectual stimulation by the construction firms. This study also reveals that there is significant correlation between the ownership of construction firms and individual consideration. It implies that ownership of construction firms significantly influences/affects the level of adoption of individual consideration.

The correlation between ownership of construction firms in Niger Delta, Nigeria and knowledge management practices indicates that the ownership of construction firms significantly influences the level of brainstorming, face-to-face interaction, and mentoring. It is revealed that ownership of firms influences the recruitment of experienced employee. This implies that the ability of the firm to recruit experienced

employees is influenced by the ownership. However, the level of commitment and actively encouraging their employees to seek out improvements and share ideas, and providing or supporting training programmes for the employees is not determined by the ownership of firms. This study reveals that the ownership of construction firms significantly influences the level of protection of firms' business's intellectual property, and the capacity to participate in the development of industry standards and practices. However, the level of enhancement of firms' business's technical capabilities is not influenced by the ownership of firms.

This study shows that there is a significant correlation between the ownership of construction firms and the level of building relationships with existing clients. Also, the capacity to attract new clients/customers is influenced by the ownership of the firm. However, there is no significant correlation between ownership of construction firms and the ability of the construction firms to deliver products/ services that reduce clients' cost. This implies that the ownership of construction firms significantly influenced the ability of the firms to build relationships with existing clients, and attract new clients/customers. However, the ownership of the firms did not significantly influence the ability of the construction firms to deliver products/ services that reduce clients' cost.

The correlation of ownership of construction firms with knowledge management strategies shows that ownership of firms significantly influences the level of maintaining a formal system for transferring project leanings into firms' continuous business processes, and measuring how well the changes in the firms have worked. However, active monitoring of international best practice is not influenced by the ownership of the firms. Furthermore, ownership of firms influences to ability of the firms to pursue alliance. However, rewarding staff for maintaining networking linkages with strategically useful industry participants, and pursuing partnering on projects are not influenced by the ownership of firm.

The results of correlation between ownership of construction firms and organisational culture practices shows that ownership of firms significantly influences the degree to which power is expected to be equally shared and the degree to which individuals are encouraged to be integrated into groups . It also influences the extent to which gender role differences are maximised or minimised in the firms. The correlation of ownership of construction firms with shareholders' right shows that ownership significantly influences shareholders' right to convey or transfer shares and obtaining relevant information on timely basis. However, it does not influence securing of ownership registration.

This study reveals that there is significant correlation between ownership of construction and the ability of the stakeholders to have the right to access timely, relevant, and reliable information on governance issues in which they have a right to participate and performance enhancing mechanisms for employee participation. However, ownership of firm does not influence the adoption of legal and mutually established rights of stakeholders.

It is revealed in this study that ownership of construction firms significantly influences the level of adoption of transparency and disclosure among construction firms in Niger Delta. The result indicates that ownership of construction firms significantly influences the level of application of high ethical standards at the board of directors. It also shows that the ownership of construction firms significantly influences the board of directors in taking into account the interests of other stakeholders. Furthermore, the ownership of the construction firms significantly influences the capability of the board of directors in taking objective independent judgement.

The result shows that there is significant correlation between ownership of construction firms and the level of adoption of stakeholders' engagement by the construction firms. This connotes that ownership of construction firms significantly

Table 4: Influence of Ownership of Construction Firms on the level of Adoption of Sustainability Practices

Sustainability Practices	Ownership of Construction Firms				
	Mean	S.D	R	P-Value	Decision
Traits of Transformational Leadership:					
Charismatic Leadership- idealised influence					
Emphasizes the importance of having a strong sense of mission	3.6663	.72168	0.138	0.001	Reject
Goes beyond self-interest for the good of the organisation	3.6520	.77785	0.148	0.001	Reject
Encourages organisational members to think beyond the immediate	3.6469	.72729	0.143	0.001	Reject
Charismatic leadership-Inspirational Motivation					
Displays a sense of power and confidence	3.8541	.92503	0.093	0.004	Reject
Articulates a compelling vision of the future	3.6969	.77564	0.109	0.001	Reject
Expresses confidence that goals will be achieved	3.6990	.73730	0.096	0.003	Reject
Intellectual Stimulation					
Seeks a broad range of perspectives when solving problems	3.5735	.73140	0.124	0.001	Reject
Encourages others to challenge the status quo	3.5286	1.21793	0.151	0.001	Reject
Has ideas that forces employees to rethink and Question the usual way of doing things	3.6020	1.21061	0.170	0.001	Reject
Individual Consideration					
Spends time teaching and coaching organisation members	3.5010	.70530	0.105	0.001	Reject
Focuses on developing the strength of team members	3.5316	.73718	0.145	0.001	Reject
Seeks that the interest of employees are given due consideration	3.5745	.76140	0.186	0.001	Reject
Knowledge Management practices					
Brainstorming	3.6857	.76651	0.121	0.001	Reject
Face –to- face interaction	3.1847	.93920	0.092	0.004	Reject
Mentoring	2.7806	.98913	0.088	0.006	Reject
Organisational Innovativeness:					
Employee strategies					
Recruiting experienced employee	2.9888	.76229	0.111	0.000	Reject
Actively encouraging your employees to seek out improvements and share ideas	3.5041	.77168	0.012	0.699	Accept
Providing or supporting training programs for your Employees	3.2184	.67893	0.029	0.361	Accept
Technology Strategies					
Enhancing your business's technical capabilities	3.2602	.68297	0.062	0.051	Accept
Protecting your business's intellectual property	3.4316	.70633	0.065	0.042	Reject
Participating in the development of industry standards and practices	3.3582	1.19297	0.089	0.006	Reject
Marketing Strategies					
Building relationships with existing clients	3.5010	.77400	0.096	0.003	Reject
Delivering products/services which reduce your clients' costs	3.5786	.74745	0.051	0.112	Accept
Attracting new clients/customers	3.3959	.68873	0.080	0.012	Reject
Knowledge Strategies					
Actively monitoring international best practice	3.7000	.88878	0.057	0.074	Accept
Maintaining a formal system for transferring project learnings into our continuous business processes	3.4388	.72801	0.129	0.001	Reject
Measuring how well our changes have worked	3.4337	.67245	0.086	0.007	Reject
Relationship Strategies					
Rewarding staff for maintaining networking linkages with strategically useful industry participants	3.3847	1.14074	0.026	0.423	Accept
Pursuing partnering on projects	3.3898	.64326	0.062	0.052	Accept
Pursuing alliance projects	3.3367	1.16507	0.110	0.001	Reject

Organisational Culture Practices:					
Power-distance: degree to which power is expected to be equally shared.	3.3735	.72127	0.123	0.001	Reject
Individualism - collectivism, degree to which individuals are encouraged to be integrated into groups.	3.3031	2.02714	0.097	0.002	Reject
Gender differentiation : extent to which gender role differences are maximized or minimized	3.2112	.65909	0.119	0.000	Reject
Corporate Governance:					
Shareholders Right					
Secure ownership registration	3.9908	.79382	0.004	0.897	Accept
Convey or transfer shares	2.1194	1.01924	0.140	0.001	Reject
Obtain relevant information on a timely basis	2.1929	1.06603	0.143	0.001	Reject
Stakeholders in Governance					
Legal and mutually established rights of stakeholders are respected	2.5439	2.57733	0.163	0.001	Reject
Performance-enhancing mechanisms for employee participation are permitted	2.4122	.87495	0.162	0.001	Reject
Stakeholders have a right to access to timely, relevant, and reliable information on governance issues in which they have a right to participate	2.4929	.91573	0.173	0.001	Reject
Transparency and Disclosure					
Disclosure of Financial and operating results	2.3704	.74717	0.162	0.001	Reject
Disclosure of Company objectives	2.6745	.86538	0.146	0.001	Reject
Disclosure of Remuneration policy for board members and executives	2.3765	.70607	0.210	0.001	Reject
The Board of Directors					
The board applies high ethical standards	2.6857	.98050	0.137	0.001	Reject
The board takes into account the interests of other stakeholders	2.6755	.98964	0.112	0.001	Reject
The board is capable of objective independent judgment	2.6786	.97557	0.149	0.001	Reject
Stakeholders Engagement					
Opportunity risk examinations	3.4000	.74899	0.070	0.028	Reject
Stakeholder identification	3.0888	.71841	0.084	0.009	Reject
Setting of targets for stakeholders	3.3684	.80981	0.083	0.009	Reject
Transparency and Measurement					
Information Collection Review	3.2480	.76887	0.098	0.002	Reject
Mapping against Standards	3.4490	.78965	0.070	0.028	Reject
Sample Site Visits	3.3214	.75208	0.011	0.729	Accept
Corporate Social Responsibility					
Provision of Employment opportunities	3.0255	.52938	0.108	0.001	Reject
Infrastructural Development	2.6888	.64562	0.121	0.001	Reject
Human capital development	2.9082	3.13857	0.162	0.001	Reject
Employment Practices					
Training of personnel	2.6602	.89365	0.093	0.004	Reject
Wages/salary induced motivation	2.4592	.71705	0.110	0.001	Reject
Teamwork	2.8306	.83335	0.139	0.001	Reject
Protection of the Environment					
Building designs, construction practices and technologies that are environmentally friendly and sustainable	3.4765	.78316	0.120	0.001	Reject
Effective communication of sustainability and other environmental management issues among contractors, suppliers and other professionals engaged by the organisation	3.1010	.73924	0.119	0.001	Reject
Standardized management systems such as ISO 14001 or Environmental Management Systems (EMS) in your organisation	2.5816	.77793	0.143	0.001	Reject

influences the level of engagement of stakeholders by the construction firms in Niger Delta. There have been agitations in Niger- Delta, Nigeria, concerning the level of involvement of stakeholders in project implementation by the construction firms. The ability to involve all the stakeholders comprising internal and external stakeholders depends on the availability resources. Furthermore, the result shows that ownership of construction firms significantly influences information collection and review and mapping against standards among the construction firms.

The correlation of ownership of construction firms with corporate social responsibility shows that ownership of construction firms significantly influences the provision of employment opportunities, infrastructural development, and human capital development. The result also indicates that there is a significant correlation between ownership of construction firm and employment practices. This implies that ownership of construction firms significantly influences the level of adoption of employment practices.

This study shows that ownership of construction firms significantly influences the level of adoption of environmental protection practices (building designs, construction practices and technologies that are environmentally friendly and sustainable, P-value = 0.001; effective communication of sustainability and other environmental management issues among contractors, suppliers and other professional engaged by the organisation, P-value = 0.001; and standardised management systems such as ISO 14001 or environmental management system with P-value of 0.001).

Results of Interview

This section consists of the respondents' characteristics, results of Interviewees rating and excerpts from the interviewees' responses to the questions.

Respondents' Characteristics

Table 5 shows that the construction professionals (Project managers, Architects, Builders, Civil Engineers) that were sampled in this study possessed minimum qualification of Higher National Diploma (HND). The analysis showed that 20% possessed HND, 30% possessed B.Sc and 50% possessed M.Sc. Fifty percent (50%) of the respondents are project managers, twenty percent (20%) of the respondents are Architects, ten percent(10) are Builders and twenty percent (20%) are civil engineers. The work experience of the respondents ranged between the intervals of 1-5, 6- 10, 11- 15, 16-20 and above 20 years. Table 5 reveals that more than 50 % of the respondents have work experience above ten (10) years. It therefore implies that the educational qualification and work experience of the respondents are adequate and their responses can be relied on.

Table 5: Respondents' Characteristics

Respondents' Characteristics	Frequency	Percentage (%)
Educational Qualification		
HND	2	20
B.Sc	3	30
M.Sc	5	50
Work Experience		
1-5	-	-
6-10	2	20
11-15	5	50
16-20	2	20
20 Years and above	1	10
Professional Affiliation		
Project manager	5	50
Architect	2	20
Builder	1	10
Civil Engineer	2	20

Below are excerpts from the interviewees' responses on influence of construction firms' ownership on the level of adoption of sustainability practices

Interviewee 1 representing construction firm1 (foreign owned): The interviewee stated that firms' ownership has influence on the level of adoption of sustainability practices. For example, the ownership of the

firm can influence its capacity to adopt sustainability practices.

Interviewee 2 representing firm 2 (foreign): Firm ownership is critical to the level of adoption of sustainability practices. All the firms might not implement sustainability practices at the same level and this can be attributed to whether the firm is foreign owned or locally owned. For example, the foreign owned firms have more resources (financial, and human) than the locally owned firms, and this can also affect the level of adoption of sustainability practices.

Interviewee 3 representing firm 3 (locally owned): The level of adoption of sustainability practices can be influenced by the ownership of the firms. The amount of resources influences the level of firms' commitment to implementation of sustainability practices.

Interviewee 4 representing construction firm 4 (locally owned): He revealed that foreign owned and large construction firms adopt sustainability practices more than locally owned and small firms. These firms have the capacity and they can also sustain the implementation of these practices.

Interviewee 5 representing firm 5 (locally owned): Firms ownership influences the level of adoption of sustainability practices. Foreign firms are large firms and they adopt the sustainability practices more than the locally owned construction firms which are small and medium firms. He stated that locally owned firms also adopt the sustainability practices, but the simple truth is that foreign construction firms adopt more.

Interviewee 6 representing construction firm 6 (locally owned): The ownership of construction firms has effects on the level of adoption of sustainability practices. The level of implementation of sustainability practices by foreign firms can be attributed to technical abilities, the amount of financial resources, and human resources. In a nut shell, foreign owned firms have higher capacity and capability to implement sustainability practices than locally owned construction firms.

Interviewee 7 representing firm 7 (locally owned): He noted that the ownership of firms influences the level of adoption of sustainability practices. Those firms that are locally owned might not have the same capacity to adopt sustainability practices at the same level like the foreign owned firms that are even large in size.

Interviewee 8 representing firm 8 (foreign owned): Ownership of the firm contributes to the capacity to adopt sustainability practices by the construction firms. The resources of the firms also vary according to the ownership of the firm. Adoption of sustainability practices requires resources, and one cannot shy away from that. The foreign owned firms have these resources, the money, the man power and so on more than the locally owned construction firms and this will affect their level of adoption of sustainability practices. Also, the foreign firms tend to adhere to some rules and regulations more than their local counter parts and this is also reflected in their level of adoption of sustainability practices.

Interviewee 9 representing firm 9 (foreign owned): The ownership of the firms has effect on the level of adoption of sustainability practices. For example, foreign owned firms implement sustainable practices more than locally owned construction firms. He stated that the level of implementation of sustainable practices among foreign owned construction firms is more than the level of implementation of sustainable practices among locally owned construction firms.

Interviewee 10 representing construction firm 10 (foreign owned): The firms' ownership influences the adoption of sustainability practices because different construction firms would likely not adopt these sustainability practices the same way. Multinational construction firms adopt sustainability practices better than indigenous construction firms.

Discussion of Findings

This study shows that there is a significant correlation between ownership of construction firms and traits of transformational leadership (charismatic leadership-idealised influence). This study also shows that the level of adoption of charismatic leadership- inspirational motivation, intellectual stimulation and individual consideration by the construction firms is influenced by the ownership of the construction firms. The level of adoption of knowledge management practices which include brainstorming, face-to-face interaction, and mentoring among the firms is influenced by the ownership of the firms.

This study shows that ownership of firms influences the capability of the firms to recruit experienced employees. This can be attributed to the fact that it requires a lot of resources to recruit experienced employees and foreign owned firms are at advantage in terms of financial stability than locally owned firms. However, it did not influence the level at which the firms actively encourage their employees to seek out improvements and share ideas and providing r supporting training programmes for their employees.

This study shows that the ownership of construction firms significantly influences the ability of the firms to protect their business's intellectual property, participating in the development of industry standards and practices (building relationships with existing clients and, attract new clients/customers This implies that the ownership of construction firms significantly influenced the ability of the firms to build relationships with existing clients, and attract new clients/customers.

The correlation of ownership of construction firms with knowledge management strategies shows that ownership of firms significantly influenced the level of maintaining a formal system for transferring project learning into our continuous business processes and measuring how well our changes have worked among firms. However, active monitoring international best practice was not influenced by ownership of the firms. It can be inferred that the construction firms operating in Niger Delta, Nigeria are actively monitoring international best practices whether they are indigenous or foreign owned firms. The major concern now is that the firms should also actively implement sustainability practices during their operations in Niger Delta, Nigeria.

This study shows that there is a relationship between the ownership of construction firms and the corporate sustainability practices at the board of directors. It reveals that ownership of construction firms significantly influences the level of application of high ethical standards at the board of directors. It also shows that the ownership of construction firms significantly influences the board of directors in taking into account the interests of other stakeholders and the capability of the board of directors in taking objective independent judgement.

The result shows that ownership of construction firms significantly influences information collection review and mapping against standards. This can be as a result as the level of technology and manpower that the foreign owned firms have, which allows them to have better information review and use such information to map against international best standard. However, there is no significant correlation between ownership of construction firms and sample site visits. For a firm to carry construction activities, there is need for the firm to visit the site and have on-site assessment. Therefore, ownership of a firm does not determine or influence site visit. Ownership of construction firms significantly influences the level of adoption of corporate social responsibilities, these include provision of employment opportunities, infrastructural development, and human capital development. This situation can be attributed to the level of financial capacity, human resources and technical ability of the foreign owned firms. The foreign owned construction firms have better capacity and capability to create job opportunities, infrastructural

development and human capital development that their local counter parts.

The correlation of ownership of construction firms with sustainability practices that protect the environment shows that ownership of construction firms significantly influences the level of adoption of environmental protection practices(building designs, construction practices and technologies that are environmentally friendly and sustainable, effective communication of sustainability and other environmental management issues among contractors, suppliers and other professional engaged by the organisation, and standardised management systems such as ISO 14001 or environmental management system).

This study shows that firms' ownership influences the level adoption of firms' sustainability practices among construction firms in Niger Delta, Nigeria. This study is in consonance with Moohammad *etal* (2014) who studied the influence of firm characteristics on innovation behaviour of construction consultancy services organizations in developing countries. It is also in agreement with Dania *etal* (2013), who concluded that multinational firms have higher organization, awareness and knowledge base of sustainability, capability, capacity to adopt sustainability practices than, indigenous construction firms.

CONCLUSION AND RECOMMENDATIONS

This study assessed the influence of firms' ownership on the level of adoption of sustainability practices in Niger- Delta, Nigeria. The results reveal that foreign owned firms adopted sustainability practices more than the local firms in Niger - Delta, Nigeria. Based on the findings, the study concludes that foreign owned firms adopted sustainability practices more than locally owned construction firms in Niger Delta, Nigeria. The study also concludes that firms' ownership has significant influence on the level of adoption of sustainability practices among the construction firms operating in Niger – Delta, Nigeria. This implies that firms' ownership can be used as control variable in the adoption of sustainability practices among construction firms. This study recommends that locally owned construction firms should improve on their level of adoption of sustainability practices in Niger- Delta, Nigeria.

REFERENCES

Abdullah, A., Bilau, A. A., Enegbuma, W. I., Ajagbe, A. M., Ali, K. N. and Bustani, S. A. (2012), Small and Medium Sized Construction Firms Job Satisfaction and Evaluation in Nigeria. *International Journal of Social Science and Humanity*, 2**(**1): 35-40.

Al-Jamea, M. (2014). Towards Social and Cultural Sustainability in the Designs of Contemporary Saudi Houses. *Int J Sustain Hum Dev*, *2*(1): 35-43.

Amah, E., Daminabo- Weje, M. and Dosunmu, R.(2013). Size and Organizational Effectiveness: Maintaining a Balance.. *Advances in Management and Applied Economics*, 3(5):115-123

AlSanad, S.(2015). Awareness, Drivers, Actions, and Barriers of Sustainable Construction in Kuwait, International Conference on Sustainable Design, Engineering and Construction, Procedia Engineering 118: 969 – 983

Asad, S and Khalfan, M.M.A. (2007). Integration of Sustainability Issues within Construction Processes, *Emirates Journal for Engineering Research,* 12 (2): 11-21.

Babalola, Y.A. (2013). The Effect of Firm Size on Firms' Profitability in Nigeria, *Journal of Economics and Sustainable Development,* 4(5): 90-94.

Bayyurt, N. (2007), İşletmelerde Performans Değerlendirmenin Önemi ve Performans Göstergeleri Arasındaki İlişkiler*, Sosyal Siyaset Konferansları Dergisi,* Sayı 53, 577-592.

Branco, M.C. and Rodrigues, L. (2006). Corporate Social Responsibility and Resource Based Perspectives. *Journal of Business Ethics,* 69: 111-132.

Cheng, B., Ioannou, I. and Serafeim, G. (2011). Corporate Social Responsibility and Access to Finance. HBS Working Paper Series 11-130

Cox, A., Higgins, T., and Speckesser, S. (2009). *Management Practices and Sustainable organisational performance.* Dublin, Ireland: European Company Survey.

Crowther, D. (2000a). *Social and Environmental Accounting.* London: Financial Times Prentice Hall

Dania, A. A, Larsen, G.D. and Yao,R. (2013). Mainstreaming Sustainable Construction: Case Studies of an Indigenous and Multinational Firm in Nigeria, Working Paper Proceedings, Engineering Project Organization Conference Devil's Thumb Ranch, Colorado.

Darnall, N., Henriques, I., and Sadorsky, P. (2010). Adopting Proactive Environmental Strategy: the Influence of Stakeholders and Firm Size. *Journal of Management Studies,* 47(6), 1072-1094

D'Incognito, M., Costantino, N., and Migliaccio, G. C. (2013). *Assessing the Influence of Cultural Issues on the Adoption of Life Cycle Management Tools.* Proceedings of the 19th International CIB World Building Congress. Brisbane: Queensland University of Technology.

Eccles, R. A., Ioannun, I. and Serafeim, G. (2012). *The Impact of Corporate Sustainability on Organisational Processes and Performance.* The National Bureau of Economic Research, Working Paper, No 17950.

Egbu, C.O. and Robinson, H.S. (2005). Construction as a Knowledge-Based Industry. In C.J. Anumba, C.O. Egbu and P.M. Carrillo, eds.

Emmitt, S. and Gorse, C. (2003).*Construction Communication.*Oxford: Blackwell Publishing.

Epstein, M. J. (2008). *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental and Economic Impacts*: Berrett-Koehler Publishers.

Foo, L.M. (2007). Stakeholder Engagement in Emerging Economies: Considering the Strategic Benefits of Stakeholder Engagement in a Cross-cultural and Geopolitical Context. *Corporate Governance*, 7(4): 379-387.

Freeman, R. E., Harrison, J. S., and Wicks, A. C. (2007). *Managing for Stakeholders: Survival, Reputation, and Success.* New Haven, CT, Yale University Press, United States.

Groves, R. M. (2006). Non Response Rates and Non Response Bias in Household Surveys. Public Opinion Quarterly, 70(5):646-675.

Halil, H.M. and Hasan, Q.O. (2012). The Effect of Financial Leverage on Corporate Performance of Some Selected Companies in Nigeria. *Canadian Social Science*, 8(1): 85 - 91.

Hillman, A. J. and Keim, G. D. (2001). Shareholder Value, Stakeholder Management, and Social Issues: What's the Bottom Line? *Strategic Management Journal*, 22(2): 125-139.

Hofenk, D. Pennings, J.M.E. and Trujillo-Barrera ,A. (2014). Understanding Producers' Motives for Adopting Sustainable Practices: The Role of Expected Rewards, Risk Perception, and Risk Tolerance, Selected Paper prepared for presentation at the Agricultural & Applied Economics Association's 2014 AAEA Annual Meeting, Minneapolis, MN, July 27-29, 2014.

Hofler, D. (2010). Contigency Approach to Management. *Journal of Business Research,* 63(7): 763- 771

Inkoom, E. E. (2013). *Sustainability Adoption in Construction Organizations – An Institutional and Strategic Choice Perspective,* A Thesis Submitted for the Degree of Master of Science (Building) Department of Building National University of Singapore

Ite, A. E., Ibok, U. J., Ite, M.U., and Petters, S.W. (2013). Petroleum Exploration and Production: Past and Present Environmental Issues in the Nigeria's Niger Delta. *American Journal of Environmental Protection,* 1(4): 78-90

Jones, M. and Saad, M., (2003). *Managing Innovation in Construction.* London, Thomas Telford.

Kadafa, A. A. (2012). Environmental Impacts of Oil Exploration and Exploitation in the Niger Delta of Nigeria, *Global Journal of*

Science Frontier Research Environment and Earth Sciences, 12(3): 19-28.

Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard: Measures that Drive Performance. *Harvard Business Review, 70*(1), 71-79.

Linnenluecke, M. K., and Griffiths, A. (2010). Corporate Sustainability and Organisational Culture. *Journal of world business,* 45(4): 357-366.

Moohammad, A. Y., Yusof Nor'Aini, Y.N. and Kamal, E.M.(2014). Influences of Firm Size, Age and Sector on Innovation Behaviour of Construction Consultancy Services Organizations in Developing Countries, *Business Management Dynamics* 4(4): 01-09

OECD. (2005). *Guidelines for Collecting and Interpreting Technological Innovation Data.* Oslo Manual, OECD, Paris.

Pulselli, R. M, Simoncini, E., Pulselli, F.M. and Bastianoni, S.(2007). Energy Analysis of Building Manufacturing, Maintenance and Use: Building Indices to Evaluate Housing Sustainability. *Energy and Buildings*, 2007. 39(5): 620-628.

Quintas, P. (2005). *The Nature and Dimensions of Knowledge Management*. Oxford Blackwell Publishing, 10-28.

Reddy, B.V. and Jagadish, K.S.(2003). *Embodied energy of common and alternative building materials and technologies.* Energy and Buildings, 35(2): p. 129-137.

Royal Institute of Chartered Surveyors (2007).*Surveying sustainability: a short guide for the property professional*, Royal Institute of Chartered Surveyors.: London.

Shaheen, S. and Malik, Q.A. (2012). The Impact of Capital Intensity, Size of Firm and Profitability on Debt Financing in Textile Industry of Pakistan, *Interdisciplinary Journal of Contemporary Research in Business*, 3(10): 1061-1066.

Sharma, S. (2002). *Research in Corporate Sustainability: What really matters*. Edward Elgar, Cheltenham.

Shefer, D. and Frankel A. (2005) R&D, Firm size and Innovation: An empirical analysis*, Technovation,* 25(1): 25-32.

Sommerville, J. and Craig, N. (2006). *Implementing IT in Construction*. Oxford, Taylor and Francis.

Son, H., Kim, C. Chong, W.K. and Chou, J.S.(2011). Implementing Sustainable Development in the Construction Industry: constructors' perspectives in the US and Korea. *Sustainable Development*, 19(5): 337-347.

Trong Tuan, L. (2012). Behind Knowledge Transfer. *Management Decision,* 50(3): 459-478.

Urem, B., Alcorta, L. and An, T. (2007).*The Innovativeness of Foreign Firms in China, Working Paper Series*,United Nations University Maastricht Economic and social Research and Training Centre on Innovation and Technology, Maastricht, The Netherlands.

Wang, W., Zmeureanu,R., and Rivar, H.(2005). *Applying multi-objective genetic algorithms in green building design optimization.* Building and Environment, 40(11): p. 1512-1525.

WCED, *Our Common Future*, (1987). World Commission on Environment and Development: Oxford University Press. Oxford, UK.

Widen, K. (2003). *Encouraging Innovation through New Approaches to Procurement*. Oxford, Blackwell science, 143-51.

Wong, L., and Avery, G. C. (2009). Transforming Organisations towards Sustainable Practices. *International Journal of the Interdisciplinary Social Sciences,* 4(1): 397-408.

World Business Council for Sustainable Development (WBCSD), (2002). Sustainable Development Reporting Striking the Balance.

Yalabik, Z.Y., Chen, S.J., Lawler, J. and Kim, K. (2008). 'High-Performance Work System and Organisational Turnover in East and Southeast Asian Countries', *Industrial Relations: A Journal of Economy and Society*, 47(1): 145–52.

Yamane, T. (1967). *Statistics: An Introductory Analysis*, 2nd Ed., New York: Harper and Row.

Yudelson., J. (2008). *The Green Building Revolution*, Washington , London , Island Press.