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Relationship between Organizational Physical Resources and Firm Performance of Geospatial Firms in Kenya

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ABSTRACT

Purpose: *The purpose of this study is to determine the relationship between organizational physical resources and performance of Geospatial firms in Kenya. This study was anchored on the Resource Dependence theory.*

Methods/materials: *This study adopted the principles of positivism philosophy. A descriptive research design was adopted by the study. The study's target population included 75 Geospatial companies in Kenya. Study adopted a census survey to include all the population in the sample. Both primary and secondary data was used in the study. The primary data was collected using structured questionnaires. Multiple regression analysis was used to test the hypothesis.*

Findings: *The results of showed that organizational physical resources significantly impacted firm performance of geospatial firms in Kenya.*

Conclusion: *The study concludes that organizational physical resources are instrumental in enhancing performance of Geospatial firms in Kenya. Therefore the study recommends of Geospatial firms to invest largely in infrastructure for instance IT software and hardware as well as office space in addition to frequent improvement with advancement and upgrades in technology.*

Keywords: *Organizational Physical Resources, Performance, Geospatial Firms*

1. Introduction

In the new order of business management, performance is playing a vital role more than quantification and accounting (Koufopoulos, Zoumbos & Argyropoulou, 2008). The performance of the firm encompasses multiple activities that help in creating the objectives of the firm, assess and monitor the progress towards the target projected (Kallunki, Laitinen & Silvola, 2011). It helps in adjusting any wrong plans to ensure the required goals or objectives have been accomplished more efficiently as effectively as expected. Henri, (2010) states that it important for each firm to evaluate it determinants of performance for it to be able to understand it is financial status. Thus, The study determinants how organization physical resource affect performance of geo spatial firms

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According to Rigsby and Greco (2005) they considered resources like human, technological, physical, financial, and reputation to be core necessities for an organization to execute its strategy. According to them, for the purpose of enhancing significant differences, executives emphasize on a firms internal resources also construed as the fundamental elements that create the necessary planned packages. Accordingly, the internal resources are the important inputs that are employed in the formation of product and service features that are customer specific and hence enhance organizational performance. The authors contend that resources, capabilities as well as assets whether tangible or intangible are linked either permanently or semi-permanently to the organization. For instance, the organization benefits from the capabilities as well as competencies that are enhanced by the personnel. According to Dubois (2009), they include intangible knowledge, skills, thought patterns, motivation, culture, and networks of the employees in the organization.

Despite the fact that physical resources are barely construed as firm competencies, for the formation of products and services valuable to customers by human competencies, they are an absolute necessity. According to Pitelisand Teece (2010), unavailability of physical resources to accomplish competencies even in the presence of best human capital and capabilities to an organization, it is almost impossible to enhance organizational performance. On the same note, unavailability of core capabilities needed to improve on the products valued by customers for a distinctive advantage even with distinctive physical resources also has adverse effects. As a case study, University of Iowa could not attract key scientists with core competencies needed to make a difference despite having state-of-the-art equipment and a distinctive laser-technology building. Lack of physical resources and bridge funding essential to put together with human competencies accounts for massive failure in new ventures and ideas. It’s difficult for any firm to successfully produce attributes that gives it a sustainable advantage without the compliment of human competencies (knowledge, skills, and capabilities) and the distinctive physical resources. These assets, capabilities and resources are designed to build the attributes viewable by customers.

The resource based view led to the development of the organizational physical resources that is vital to the firm’s value generating activities instead of only ownership of a resource. . Organizational resources should be built upon the core competences. For any firm in geospatial industry to gain superiority in a competitive market it will depend on the firm’s ability to identify, develop, deploy and preserve particular important and unique resources and capabilities that distinguish it from its rivals.

In general, Resources are input based hence competencies are cross-functional and based on process integration. Research on literature review on organizational physical resources done by Enginoglu and Arikan (2016) showed that core competence is at the heart of all competitiveness, they believe that all managers and researchers should have more understanding of a construct that fit them in a greatly competitive business environment. For any firm to remain competitive in the market, managers should ensure knowledge management is managed well. That is why the researcher is interested to determine the relationship between the organizational physical resources and firm performance of the Geospatial industry. Thus, the study hypothesized that:

H_{01}: *An organizational physical resource has no statistical significant relationship with firm performance of Geospatial firms in Kenya.*

1.1. Theoretical Review

The Resource Dependence Theory was developed in the 1970s by Davis and Cobb. This theory is formed on the basis that organizations acquire power when they possess essential resources which are required by other organization. The resource dependency theory builds on the internal environment of a firm being the key driver for its competitive advantage and stresses on the competition in the environment with the resources developed by the firm. Furrer *et al.* (2008) changed the key element of inquiry from the industry structure to Structure-Conduct-Performance (SCP) paradigm and the 5 forces model to firm's internal structure, with capabilities and resources.

The researchers that agree with the resource dependency theory adds to it by claiming that not all resources would be deployed in a firm in order for it to have the competitive advantage but only those strategically useful and important resources and competencies form a source of competitive advantage (Barney, 1991).They make use of the terms like core competencies (Barney 1991; Prahalad & Hamel 1994), distinctive competencies and strategic assets to point to the strategically important resources and competencies that places a firm in a potential competitive edge. A firm's strategic assets can be defined as, the set of difficult to trade and imitate, scarce, specialized and appropriable resources and capabilities that give an organization a competitive advantage. The Distinctive competencies are denoted by the things that gives a business an upper hand to success in a marketplace. According to the theory, resources generally include various organizational processes, capabilities, assets, information and knowledge that contribute to improved efficiency and effectiveness in a firm (Priem & Butler, 2001; Barney, 1991).

The theory explains the importance of organizational resources in enhancing firm performance. According to the theory, strategically important and useful resources should be viewed as sources of competitive advantage and better performance of firms. The term core competencies have been coined under the theory. It argues that distinctive competencies and strategic assets are strategically important resources and competencies, which provide a firm with a potential competitive edge and better performance over competitors. The theory is linked to objective two by discussing organizational physical resources.

2. Empirical Literature

Pitelisand Teece (2010) posits that in order to form features that are of value and meet customer expectations, finances, equipment, plants, and physical are completely essential. Physical resources also include the intellectual property and trade secrets that can be used to create and sustain a point of difference in market advantage. An organization also protects its competitive advantage from being copied by competitors through setting copyrights, patents, and other assets. It also creates a significant part of the resource bundle that contains the uniqueness of capabilities. Waithira, Waiganjo and Njeru (2017) conducted a study to find out the impact that organizational resource portfolio on organizational performance has in tourism government agencies in Kenya. The major aim of the study was to determine what effects that the resource portfolio has on performance of tourism government-owned organizations. In this research, a cross sectional approach was used to determine the effects of resource portfolio on the performance of tourism government agencies. The study was done based on a population of management and non-management staff. A sample size of 420 employees was taken by the researcher using stratified sampling method and at the end of the data collection exercise there was a response rate of 78 per cent. A Questionnaire was designed and used in collecting data from the management and non-management staff which also included collecting secondary data on firm performance of the selected tourism organizations. The data analysis was done over inferential and descriptive statistics. From the study, it was found that resources were very vital and critical to an organization’s performance. It was also evident that some of the most influential resources in tourism public owned agencies and organizations are physical, technological, human, and capabilities. It came out that financial resources were not necessarily influential because its availability was not a guarantee to performance unless there was proper use of it. From this study, it was recommended that the management need to invest heavily on all the resources because they all influence performance of the entities.

Moreover, Kazeem*et al*., (2012) explored the effect of specific knowledge management resources (capabilities) on organizational performance of 245 small size business enterprises. The outcomes of this research showed that there is a direct association existing between a number of knowledge resources and overall organizational performance. However, the study could not confirm a direct association between other knowledge resources such as technology and knowledge conversion and overall organizational performance.

Lawton (2001) established that at least more than half of failed knowledge management initiatives are as result of the failure by firms to pay close attention to their resource deployment procedures. This is quite detrimental to the long run operations of the firm as according to Gold *et al*., (2001), the choice of the resource deployment process is a direct function of the firm’s dynamic capabilities. On the same note, the study indicated that failure to consider a firm’s capabilities prior to execution of any knowledge management program accounts for the problems of ineffective knowledge management. Borrowing from Pitelis and Teece (2010) and other scholars as well, the study will look at organizational resources and firm performance.

3. Methodology

This research adopted the principles of positivism. The positivist philosophy as derived from that of natural science is characterized by the testing of hypothesis developed from the existing theory (deductive or theory testing) through measurement of observable social realities(Saunders, Lewis & Thornhill, 2009). This study adopted a descriptive research design.. A descriptive research design is suitable for this study since it will enable the study to establish a causal relationship between the variables and answer the ``what'' question. In this study the sampling frame is the list of all the 95 Geospatial companies in Kenya which will form the unit of analysis. The study used both primary and secondary data. The primary data was collected from the direct responses from the top management of the Geospatial companies through the use of structured questionnaire. In this study Closed- ended or structure questionnaires was adopted to generate statistics in quantitative form for the research. The study will also use secondary data which was obtained from the annual financial statements of the tested companies. Descriptive and inferential statistics was used to analyze the secondary data. Descriptive statistics will include (mean and standard deviation). Inferential statistics on the other hand will include multiple regressions under the panel data framework and Pearson's product moment correlation analysis (Jackson, 2009). Analysis was conducted through with the support of SPSS version 20 software to generate tables, graphs and statistical parameter estimates. The multiple regression model equation displays the independent variables linear regression model against the dependent variable. The

4. Findings

The study accounted for 81.6% valid response rate. According to Sekaran and Bougie (2010), response rate of 30% is acceptable for surveys. Hence forward, response rate of this study is adequate for further analysis.

4.1. Firm Characteristics

Firm characteristics are aspects that are seen as "drivers" to business relations (Eriotis, Vasiliou, & Ventoura-Neokosmidi, 2007). Firm characteristics as accredited by (Dean, Mengüç, & Myers, 2000; Mohd, 2005; Wiklund & Shepherd, 2005) play a role in decreasing agency conflicts and informational gap and therefore essential determinants of firm performance and success. As such it was important to investigated firm characteristics in terms of size, age of the firm and number of employees. Findings are presented in Table 1.

Table 1: Respondents' Profile

		Frequency	Percent
Size of the company(Capital Base)	Less than 5 Million	31	14.9
	5-10 Million	28	13.5
	10-20 million	40	19.2
	Over 20 Million	109	52.4
	Total	208	100
Age of the company	Less than 10 years	116	55.8
	More than 10 years	92	44.2
	Total	208	100
Number of the employees in the company	Less than 500 employees	191	91.8
	More than 500 employees	17	8.2
	Total	**208**	**100**

The study findings demonstrated that most (52.4%) of the companies investigated had a Capital base of over 20 million while few (13.5%) of these companies had a capital base ranging between 5-10 Million. The results also showed that over half (55.8%) of the companies had been running for less than 10 years. Furthermore, almost all (91.8%) of the companies investigated reported to have less than 500 employees.

4.2. Descriptive Results

The study objective was to assess effect organization resources on performance of Geospatial firms in Kenya. Hence, study found it important to do description of organization physical resources using means and standard deviations. According to Rigsby and Greco (2005) they considered resources like human, technological, physical, financial, and reputation to be core necessities for an organization to execute its strategy. The findings are presented in table 2.

Table 2: Organization physical resources

n=208	Mean	Std. Deviation	Skewness	Kurtosis
In general facilities available are enough to cater for strategy implementation	3.75	1.03	-0.59	-0.33
The strategic capabilities regularly evaluates the capacity requirements needed as part of planning process for any new programs services and or activities	3.74	1.26	-0.73	-0.50
There is enough extra space that can be used when need arises	4.39	0.72	-1.22	1.64
There is enough office space	4.37	0.80	-1.10	0.50
Organization has adequate and ready resources of finance	4.21	0.93	-1.24	0.80
Strategic capabilities regularly access inventory and competencies and assets of the organization	4.44	0.83	-1.85	3.66
There is effective financial management policies to enhance resource mobilization	4.45	0.74	-2.25	1.84
There is an investment to improve the organization's IT software and hardware infrastructure	4.49	0.76	-2.29	1.36
Physical Resources	**4.23**	**0.63**	**-1.73**	**1.09**

Based on the results it was deduced that there is an investment to improve the organization's IT software and hardware infrastructure (Mean= 4.49, SD= 0.76) moreover, there is effective financial management policies to enhance resource mobilization (Mean=4.45, SD=0.74). Further, the Strategic capabilities regularly access inventory and competencies and assets of the organization (Mean=4.44, SD=0.83). The survey results also indicated that there is enough extra space that can be used when need arises (Mean= 4.39, SD= 0.72) in addition to this, there is enough office space (Mean=4.37, SD= 0.80)

According to the study findings, it was also deduced that the organization has adequate and ready resources of finance (Mean= 4.21, SD=0.93), however, evidence revealed that in general facilities available are moderately enough to cater for strategy implementation

(Mean= 3.75, SD=1.03), likewise the strategic capabilities regularly evaluates the capacity requirements needed as part of planning process for any new programs services and or activities(Mean= 3,74, SD=1.03).

In general, Moreover, Physical Resources scored a mean of 4.23 0 with standard deviation of .63 showing that there were available physicals resources in Geospatial firms in Kenya. The values of skewness and kurtosis for all the statements with regard to Organization physical resources were generated as displayed in Table 4.3. Based on the results, values of skewness and kurtosis were within the acceptable values of < 3 for skewness and value of < 10 for kurtosis (Kline, 2005, 2011) respectively. This means that the responses with respect to the Organization physical resources in this study followed a normal distribution

Performance is defined as the actual output or result of an organization as measured against its intended outputs. The performance of the firm encompasses multiple activities that help in creating the objectives of the firm, assess and monitor the progress towards the target projected (Kallunki, Laitinen & Silvola, 2011). It helps in adjusting any wrong plans to ensure the required goals or objectives have been accomplished more efficiently as effectively as expected. Thus given the views of the managers regarding he performance of the firms and hence establish the existence of any gaps that would require corrective measures. The findings regarding this were presented in Table 3.

Table 3: Firm Performance

n=208	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
Growth in profits in relation to your expectations	3.97	1.03	-1.44	2.22
Growth in profit level in relation to your Competitors	4.30	0.75	-0.62	-0.75
Growth in sales in relation to your expectations	4.37	0.67	-0.98	2.00
Growth in sales in relation to your competitors	4.37	0.65	-0.52	-0.66
growth in return on equity in relation to your expectations	4.50	0.56	-1.19	2.44
growth in return on asset in relation to your expectations	4.40	0.58	-0.49	0.22
increase in customers satisfaction index in relation to your competitor	4.46	0.65	-1.43	1.40
increase in customers loyalty in relation to your competitor	4.63	0.60	-1.94	1.98
increase in research and development in relation to your competitor	4.69	0.60	-2.31	1.23
increase in number of employee in relation to your expectation	4.76	0.57	-2.28	3.92
Firm Performance	**4.443**	**0.455**	**-1.302**	**3.924**

Findings in Table 4.16 revealed that in relation to the expectation of Geospatial firms, they were highly performing growth in return on equity (M=4.50 0, SD=.56), growth in return on asset(M=4.40, SD=0.58) , increase in number of employee (M=4.76, SD=0.57) and

Growth in sales(M=4.37, SD=0.67). in relations to Geospatial firms competitor, managers showed that there was increase in increase in customers satisfaction (M=4.46, SD=0.65), customers loyalty (M4.63 , SD=0.60) and increase in research and development (M=4.69, SD=0.60). In general, while there is increase in sales when compared to expectations by majority of the firms, there is less growth when compared to competitors which in this case points to gaps especially in supply chain processes. However, majority of the firms performed better in terms of growth in profits in relation to their competitors compared to their expectations. In terms of market size, majority of the firms were not performing better compared to their competitors. There are also gaps identified in terms of improved efficiency, customer satisfaction and loyalty and ability to develop new products. The overall mean response was 4.44 (std. dev. = 0.455) that indicated overall agreement with the statements regarding firm performance

4.3. Testing of Hypotheses

The sections below present the results for effects of organizational physical resources on financial performance Geospatial firms. Results in Table 4.26 showed that physical resources predicts 63 percent variations in financial performance Geospatial firms (R^2 = .63). The ANOVA model showed model fitness for effect of organizational physical resources on financial performance was statistically significant (F = 350.209, ρ=.000). Thus, the model was fit to predict financial performance using physical resources.

Table 4Regression results for Effect of Physical Resources on Financial Performance

	Unstandardized Coefficients		Standardized Coefficients			
	B	**Std. Error**	**Beta**	**t**	**Sig.**	**Pearson Correlation**
(Constant)	1.543	0.137		11.254	1.543	
physical resources	0.683	0.036	0.793	18.714	0.000	**.793****
Model Summary						
R	0.793					
R Square	0.63					
Adjusted R Square	0.628					
Std. Error of the Estimate	0.447					
ANOVA						
F	350.209					
Sig.	.000					

a Dependent Variable: firm performance

Hypothesis 2 (H_{o2}) stated that there is an organizational physical resource has no statistical significant relationship with firm performance of Geospatial firms in Kenya. However, research findings showed that physical resources had coefficients of estimate which was significant basing on β_2= 0.793 (p-value = 0.000 which was less than α = 0.05) hence the null hypothesis was rejected. This indicated that for each unit increase in physical resources programs, there was 0.793 units increase in financial performance. Furthermore, the effect of physical resources programs was stated by the t-test value = 18.714 which implied that the standard error associated with the parameter was less than the effect of the parameter. Based on the above results the study derived the following simple linear regression model as shown below.

$$Y = 1.543 + 0.793X_2 + \varepsilon$$

The model shows that increase of physical resources programs by a unit increase financial performance by 0.793 units.

The findings agrees that King, (2007, the resource-based approach of the firm speculates that particular resources in the firm's possession and control hold the probability of initiating competitive edge, consequently resulting in improved firm performance. Indeed the results of this review advance this argument.

In accordance with the study findings it was reviewed that Geospatial firms in Kenya set aside investments to improve the organization's IT software and hardware infrastructure back up the argument presented by Hitt, et al (2001) that resources are essential to firm performance.

The study findings also echo assertions by Khandekar and Sharma (2005) that there is a positive and significant correlation between firm performance and resource capacity. Indeed firms that capitalize on their resource capacity are better placed to acquire and benefit from optimum performance. It is thus imperative for firms to put more emphasis on distinguishing and capitalizing on their resources so as to counter competition and strengthen performance. The results of this research demonstrated that there is effective financial management to enhance resource mobilization in Geospatial firms in Kenya, these outcomes iterate conclusions made by Meutia & Ismail (2012), asserting that the cornerstone of a firm's success, profitability and continued competitive advantage would ordinarily be demonstrated in its resource base.

5. Conclusions

The review investigated the relationship between organizational physical resources and firm performance. The results revealed that a significant and positive effect in the relationship between organizational physical resources and firm performance. This indicates that adequate organizational physical resource positively impact the performance of Geospatial firms in Kenya. Investing in Organizational Physical Resources sets firms up to innovate and improve their products so as to remain competitive within the market. While not all resources available can bring about competitive advantage, when employed strategically, firms can significant benefits from having the right resources at their disposal.

Furthermore, organizational physical resources are instrumental in the implementation of strategic plans aimed at strengthening and advancing the firms performance in the long haul since it is not possible to effect development plans as well as contingency plans. Organizational physical resources are an embodiment of a firm's worth through infrastructure and assets. Through effective financial management policies, firms are able to strengthen and bolster resource mobilization which is key in the general operation and running of the organization besides developmental activities that expand the organization.

6. Recommendation

It is equally important to note that a firm's organizational physical resources particularly intangible resources are unique to the organization and as such ensures that the firm averts duplication of products and services. By and large they set the organization apart as competitive in the market. Indeed the organizational resources available to the firm act as the foundation upon which profitability and firm effectiveness as well as sustained competitive advantage are built on. It is therefore essential for an organization to invest largely in infrastructure for instance IT software and hardware as well as office space in addition to frequent improvement with advancement and upgrades in technology. Further, an organization should maintain an updated record of its assets, properties and amenities for regular planning and streamline implementation of the firm's goals and objectives. Last but not least a firm's success is contingent on its capacity to capitalize on its resource base so as to acquire and benefit from optimum performance.

Because the study only focused on the geospatial firms in Kenya, the researcher therefore recommends a replication of the study in other entities like manufacturing, production sector as well as other service industries in order to establish the relatable trends in regards to organizational core competences and firm performance of geospatial firms in Kenya. Finally, the researcher further recommends future studies to adopt other research designs (e.g. experimental, causal or descriptive research designs) in studying issues strategic determinants of sustainable competitive advantage.

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