

## CORPORATE INNOVATION AND ORGANIZATIONAL PERFORMANCE: THE CASE OF SOMALIA TELECOMMUNICATION INDUSTRY

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### ABSTRACT

*Telecommunication industry in Somalia is unique since there has been no central government from 1990, after the dictatorial regime was defeated, but despite the anarchy that followed, the telecoms sector has developed more. It is highly competitive with at eight mobile networks, which also provide fixed-line and Internet services. Telecommunication industry provide innovation products and application, the most well known innovation is mobile money transfer which had different brand names such EVC (Electronic Voucher Card), a mobile application technology for money transfer, SAHAL and E-Maal. Beside the technological innovation, they developed highly flexible Administration which can work in hostile environment like Somalia.*

*The current study investigates the corporate innovation and organizational performance in telecommunication industry in Somalia, by using cross sectional survey approach, the data was collected from 180 employees from telecommunication companies in Mogadishu in south, Boasaso in West and Hargeysa in North. The data was collected in January 2014 and was analyzed using SPSS version 16.0. The findings indicated that technological innovation ( $\beta=.261$ ,  $t=2.569$ ,  $p=.011$ ), Administrative innovation ( $\beta=.369$ ,  $t=4.252$ ,  $p<.001$ ) and Strategic Innovation ( $\beta=.173$ ,  $t=2.028$ ,  $p<.005$ ) had statistically significant and positive effect on organizational performance. Therefore, it is necessary for telecommunication companies to consider these factors in order to maintain their performance in future.*

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Keywords: Administrative innovation, technological innovative, strategic innovative, organizational performance

### 1. INTRODUCTION

Today, organizations are facing challenges toward how they success. Organization's success not only depends on what organizations currently providing but also depends on how the organizations can make change to improve whatever they are providing. All improvements or changes are under what we call organizational innovation. The term innovation comes from Latin word "innovare" which means "to make something new" (Tid, Bessant *et al* 2001). Innovation seems nowadays one of the most important issues that all organizations are giving special attention. Many studies are relating the increase effort of firms Research and Development may enable the increase of innovation which in turn increasing market share of the organization (e.g., Freeman and Soete, 1997.)

Today's world, organizational innovation has different meaning to different people or different organization. Different organizations focus on different types of organizational innovation. Organizational innovation can be product improvement, new production method, new market, new source of supply or new forms of organization. Generally, organizational innovation is related to competitive advantage of the organization, firm performance, sales growth and success or failure of the organization.

On the other hand, the topic of firm performance is greatly discussed. The way we define firm performance depend on the type of the organization whether its production company or service company. Performance measurement plays a key role in developing, implementing and monitoring a strategic plan. It enables managers to evaluate whether organizational objectives have been achieved, and is further used to develop and compensate managers. It helps managers monitor whether the company is moving in the direction they want it to go (Teeratsirikool.L, Siengthai. S, Badir.Y, 2013).

Therefore, this paper attempts to understand different categories of organizational innovation such as *technical innovation, administrative innovation and strategic innovation*. Also, it attempts to provide how they relate organizational performance. As mentioned earlier, all organizations do not perceive the same meaning and the same importance organizational innovation. Therefore, this paper focuses how telecommunication industries perceive organizational innovation and how the performance of telecommunication industries and organizational innovation can be related. This paper specially focuses those telecommunication companies who are located in Mogadishu-Somali.

## 2. LITERATURE REVIEW

### 2.1 Corporate Innovation

Different researchers are trying to understand the phenomenon of organizational innovation. There is no consensus definition of the term “organizational innovation” and different authors using their own approach (Lam, 2005). The term innovation means coming up novel idea or new idea. According to Linder *et al* (2003) define innovation as “implementing new ideas that create value”. Innovation is what most organizations depends on in today’s business world (Kenter 1999).

Organizational innovation related to develop new product and new process. Process innovation can be the form of material substitution or changing the way of manufacturing with the purpose of cost reduction or quality improvement. On the other hand, product innovation can be the form of changing the product size or shape, it can be the way of introducing new product or improving existing one. Martinez-Rose (1999), found that product innovation and process innovation are interrelated.

Factors that drive organizational innovation are internal and external factors. Internal factors can be motivation, technical background, working experience and innovative ideas of entrepreneurs. On the other hand, external factors of innovation includes: customer requirements, information given by the supplier, market opportunity, availability and accessibility of institutional support, economic incentives, competition and etc. However both internal and external are required (K. N. Krishnaswamy et al, 2010).

Organizational innovation can be categorized into three main categories, i.e *technological innovation, administrative innovation and strategic innovation*.

### 2.2 Organizational performance

Firm Performance is a topic often discussed but rarely defined. One research paper urge that Scholars in the field of performance measurement tend to use the term business performance measurement (BPM) systems without explaining exactly what they mean by it. This lack of clarity creates confusion and comparability issues, and makes it difficult for researchers to build on one on each other’s work (Franco-Santos *et al* 2007)

However one of the most attractive viable definition of firm performance or organizational performance the researcher found is that “*Organizational performance is a measure of how efficiently and effectively managers use available resources to satisfy customers and achieve organizational goals. Organizational performance increases in direct proportion to increases in efficiency and effectiveness* (Mulcahy.A, , Burns.U, )”. Firm performance related to the way that organization manage it activities by following its objectives and keeping its goals.

Firm performance is not limited to one level of the organization, it looks the business as a whole, and it involves assessing the overall business performance, it’s also determines how the business can better reach its goals. Managing firm performance requires the placing strategic and operational objectives. Thus Firm performance can be said to be how effectively and efficiently the organization done and fulfilled its tasks in order to achieve its objectives and then gain the organizations goal. Some researchers urge that appropriate performance measures are supposed to permit organizations to direct their actions towards attaining their strategic objectives (Arthur.S, Abanis.T, Eliab.B, & Sumil.N, 2013).

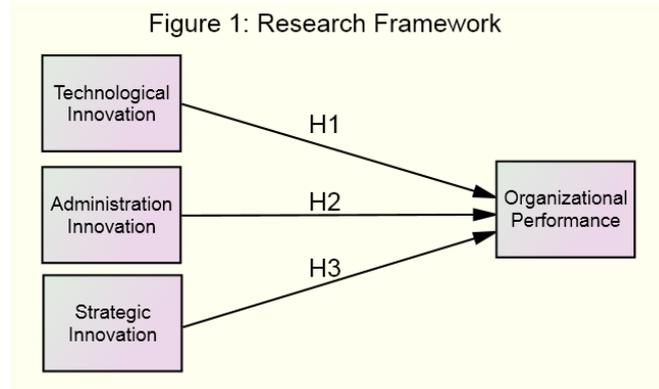
Performance measurement refers to the use of a multi-dimensional set of performance measures which include both financial and non-financial measures; it also includes internal and external measures of performance and it often includes both measures which quantify what has been achieved as well as measures which are used to help predict the future. Performance measurement cannot be done in isolation. Financial performance is generally defined as the use of outcome-based financial indicators that are assumed to reflect the fulfillment of the economic goals of the firm (Abdirizak I & Ali-Yasin.S, 2013)

Non-financial performance measures are often used for performance evaluation. They are especially relevant if the available financial performance measures not completely reflect the manager’s contribution to the firm’s total value (Christian, 2001). An increasing number of companies are adopting measuring customer loyalty, employee satisfaction, and other performance areas that are not financial and will ultimately affect profitability.

## 3. RESEARCH FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The conceptual arguments of previous research converge on the idea that firms benefit from highlighting newness, responsiveness, and a degree of boldness. Extensive discussion of the arguments can be found in Lumpkin and Dess (1996). Indeed, the suggestion was the bases for the interest in studying the current research which investigates the relationship between corporate innovation and organizational performance.

The study examines the impact of corporate innovation element as independent variable consisting of three constructs (technical, administrative and strategic innovation) on organizational performance with two construct financial performance and non-financial performance as the dependent variable (See Figure 1).



### 3.1 Technological innovation

Many researchers of innovation focused technological innovation (Freeman & Soete 2000). Technological innovation became one of the most important factors of all the different sizes of the organizations are concerned. So, in order the organization stay in the market place they have to adopt the rapid change of the technologies. Technological innovation by definition means, the adoption of new ideas which appropriate to the new product or service, and introduction new element to organization's production process or service operation (Subramanian & Nilakanta, 1996).

Technological innovation is important factor which defines how the organization has competitive advantage, its effectiveness and its overall success. On the other hand, technological innovation seems to have an impact on work productivity, competitive environment, competitive advantage and overall performance of the organization. Technological innovation is something which is unavoidable if the organization wants to stay at the market or enter new market and if they want to gain competitive advantage (Becheikh *et al* 2006).

According to Daneels and Kleinschmidt (2001), in the context of product development argued that, new product development consists of the combination of technology and market. They further argued that, when a firm undertaking new product development they should have technology which is enabling to them to develop new product and serve their customers. Technological innovation for product or process contributes to cost reduction, quality improvement, suitable change in product size which fits customer demand, raw material substitution and new product (K. N. Krishnaswamy *et el* 2010) thus.

**H1: Technological innovation has positive influence on organizational performance**

### 3.2 Administration innovation

Administrative innovation is one of the innovations and it's related to the establishment of a new organizational design that supports better the creation, production and delivery of products and service.

Administrative innovations are commence in the administrative core and tend to be implemented from the top down. They pertain to organizational structure, administrative systems, and human resources (Damanpour, Szabat, and Evan 1989). Administrative innovations involve procedures, rules, roles, and structures that are related to the communication and exchanges among employees, and they are more directly related to organizational management rather than directly to work activities (Jaskyte, 2011).

Administrative innovation is related to the formation of a new or existing organizational design that supports better the creation, production and delivery of products and services. Example of administrative innovation is management by objectives, six-sigma processes, job rotation, staff incentive systems, and telecommuting, from this discussion we assume that.

**H2: Administrative innovation has positive influence on organizational performance**

### 3.3 Strategic innovation

The strategic innovation is a central concern of firms; managers are faced with the challenge of mobilizing the innovative potential of all sorts of employees. As these employees have a capital of tacit knowledge (Polanyi, 1966) about the production process, the work organization and the product design, mobilizing this knowledge can result in workplace Strategic innovations with high returns on investments (Getz & Robinson, 2003). HR managers therefore face the challenge of creating a work environment in which employees can develop and exploit their innovative potential. According to a recent meta-analysis (Hammond *et al.*, 2011), job characteristics are of central importance for employee innovativeness.

Therefore the view of strategic innovation as a process of improvement which may reside in the form of a problem solving activity a new method where same studies cited (Pavitt, 1984), regarding it as a process involving commercial use a new business. However the concept of Strategic innovation combining these in an integrated process of incremental improvement and

turning into commercial use is developed by scholars as cited (Strecker, 2007). The other concept of strategic innovation, used by (Strecker, 2007) is somewhat broader, this is because the concept is concerned with implementation of new technologies and new processes although not necessary both together in all cases. Another term of strategic innovation used in this study will follow the concept that is a process of transforming the telecommunication frontier into the commercialized product/process where strategic innovation in a competitive market thus:

### **H3: Administrative innovation has positive influence on organizational performance**

## **4. METHODOLOGY**

### **4.1 Research Design and Sampling procedure**

This study employed a survey method for data collection because it's a popular and common strategy in business research, because it allows for the collection of large amount of data from sizable population in a highly economical way. The main purpose of this study was to explain the relationship between two variables, corporate innovation dimensions and organizational performance dimensions.

The study employed cross sectional survey approach since it's the dominant method in business research and the questionnaire survey approach sounds most appropriate means to collect data from the telecommunication industry in Somalia

A total of 200 questionnaires were distributed to respondents through personal administered questionnaire. While total of 180 usable questionnaires were collected. The overall response rate was 90%.

### **4.2 Measurement of variables**

#### **4.2.1 Administrative innovation**

Administrative innovation is used as independent variable of the study. According to Subramanian and Nilikanta (1996), they define administrative innovation as a process of developing new management system, new administrative process and staff development programs. In this study, five point liker scales is used in order to evaluate how industrial telecommunication promote work redesign and work system, skill enhancement, management system and change incentives.

#### **4.2.2 Technical innovation**

Technical innovation is an independent variable of the study. Technical innovation can be defined as an adoption of new ideas with the purpose of developing new products or services, and new ways of developing organization's production process or service operations (Subramanian & Nilakanta, 1996). Five point of likert scale was used in order to evaluate the degree to which telecommunication industry apply new procedures and process within the organization in order to influence the speed and flexibility of the production and the quality of production.

#### **4.2.3 Innovation strategy**

Innovation strategy is the independent variable of the study. Innovation strategy means setting formal plan and establishing organization's long-term strategy in order to achieve organization's goals and objectives.

#### **4.2.4 Business Performance**

Business performance is dependent variable of the study. It can be defined as the result of business activities, business process and business practice. Five point likert of scale was developed to assess the level or degree of financial performance of the firm including sales growth of the firm, its profitability and market share of the firm.

### **4.3 Reliability Test**

A reliability test was conducted to assess the internal consist of the items by using Cronbach's alpha. A variable is reliable and internally consistent when the alpha is .70 and above (Hair, Black, Babin, & Anderson, 2010).

All the Cronbach's alpha scores for the variables were greater than .60. The highest alpha was obtained by Strategic innovation ( $\alpha=.846$ ), organizational performance was the afterward variable showing ( $\alpha=.773$ ), Technological innovation and administrative innovation attained the same alpha at ( $\alpha=.735$ ) being the lowest alpha score among variables.

Table 1: Reliability test

Variable	No. items	Cronbach Alpha
Technological Innovation	5	.735
Administrative Innovation	6	.735
Strategic Innovation	9	.846
Organizational performance	6	.773

#### 4.4 Data Analysis techniques

To analyze the data and test the hypotheses, several statistical tools were employed. Statistical Package for Social Science (SPSS) Version 16.0 was used with the following techniques: Cronbach alpha for consistence and reliability of the measurement, descriptive analysis to test the characteristics of the respondents, correlation to test the relationships between variable and multiple regression to analyze the hypothesis.

### 5. DATA ANALYSIS AND RESULT

#### 5.1 Profile of the respondents

As table 2 shows, the male participants is domain in telecommunication industry as usual, male are approximately 87% while female respondents are 12%, majority of the respondents are married 71% and 29% are single. According educational background the bachelor holders are the majority, the degree of three to four years, second was undergraduate Diploma while 28% are post-graduate holder with masters and PhD.

34% of respondents had experience of six to ten years, 47% had less experience between one to five years while 19% had experience more than ten years. According to company size majority telecommunication companies rate medium size with 50 to 249 employees, 52% rate that, second size was large which had more than 250 employees and it was 36%, while small enterprises was the third option of respondents, 12% of respondents said their company are small with one to forty nine employees.

Table2: Characteristics of the Respondents

Characteristics	Classification	Frequency	Percentage
Gender	Male	156	86.7
	Female	24	13.3
Age	25-35	61	33.9
	36-45	77	42.8
	46-Above	42	23.3
Marital Status	Single	53	29.4
	Married	127	70.6
Educational Background	Diploma	36	20.0
	Bachelor	116	64.4
	Post-graduate degree	28	15.6
Experience	1-5 Years	84	46.7
	6-10 Years	62	34.4
	11-Above years	34	18.9
Company Size	Small (1-49 Employees)	22	12.2
	Medium (50-249 employees)	93	51.7
	Large (250+ Employees)	65	36.1

#### 5.2 Descriptive and Correlation Analysis

Descriptive statistics was used to investigate the range of possible values, means and standard deviation of the variables in this study and are presented in Table 3 below. The respondents surveyed score above the overall mean, the most score was organizational performance (Mean=3.86, SD=1.18) they agreed the performance measurement, second was strategic innovation items (Mean=3.85, SD=1.20); third scored mean value of 3.82 and stander deviation of 1.14 it was Technological innovation items and fourth and final dimension scored (Mean=3.80, SD=1.11) and it was Administrative innovation.

Bivariate correlation was conducted to examine the interrelationships between corporate innovation and organizational performance. As shown in table (3), the dependent variable in this study (organizational performance) is considerably and positively correlated with three independent variables, namely Technological innovation ( $r=.688$ ,  $p=.000$ ), Administrative Innovation ( $r=.678$ ,  $p=.000$ ) and Strategic Innovation ( $r=.628$ ,  $p=.000$ )., Moreover, there were significant correlations among the independent variables. For instance, Technological Innovation was substantially and highly correlated with Administrative

Innovation ( $r=.793$ ,  $p=.000$ ), and Strategic Innovation ( $r=.783$ ,  $p=.000$ ). Whereas this Strategic Innovation had also moderate relationship with Administrative Innovation ( $r=.267$ ,  $p=.000$ ).

**Table 3: correlation between corporate innovation and organizational performance**

Variable	Mean	Std. Deviation	1	2	3	4
Technological Innovation	3.82	1.14	1			
Administrative Innovation	3.80	1.11	.793	1		
Strategic Innovation	3.85	1.20	.783	.689	1	
organizational performance	3.86	1.18	.688	.678	.628	1

### 5.3 Hypothesis Test

**Table 4** shows the results of the hierarchic regression equation testing the influence of the corporate innovativeness on the organizational performance. The result indicates that the three variables cumulatively explained 54% of the observed variation in organizational performance. The result indicated that technological, Administrative, and Strategic innovation flow significantly influenced organizational performance. The regression coefficient in the table 4 indicated that among these independent variables, Administrative innovation was the most important influencing on the organizational performance ( $\beta = .369$ ), followed Technological innovation ( $\beta = .261$ ) then Strategic innovation ( $\beta = .173$ ). However the three independent variables have positive significant effect on organizational performance therefore we accept all hypotheses (H1, H2 and H3). The rigorousness of multicollinearity measured with variance inflation factor (VIF) values that ranged between 1 to 1.734. indicated no multicollinearity between independent variables (Gujarati, 1995; Albayrak, 2008)

**Table 4: corporate innovativeness on the organizational Performance**

Predictors	B	T	Sig	Collinearity statistics	
				Tolerance	VIF
Technological innovation	.261	2.569	.011	.780	1.283
Administration innovation	.369	4.252	.000	.867	1.153
Strategic innovation	.173	2.028	.044	.837	1.195

$R=.612$ ,  $R^2=.375$ ,  $R^2$  adjusted= .355,  $p<.005$ .

## 6. DISCUSSION AND CONCLUSION

The main objective of the study was to investigate the relationship between corporate innovation and organizational performance in telecommunication industry in Somali; data was collected from 180 respondents from the main telecommunication companies in Mogadishu in January 2014, the study developed three hypotheses to test the effect of corporate innovation dimensions on organizational performance.

As shown in table 4 above the findings from hierarchical regression between corporate innovation dimensions (Technology, Administrative and strategic innovation) and organizational performance. The corporate innovation dimension cumulatively contributed 37% of the variance in organizational performance; the table further illustrated positive and significance relationship with three dimensions of corporate innovation (IV) and organizational performance.

The findings of this study confirms that there is positive and significant relationship between corporate innovation and organizational performance, then three hypothesis of this study was accepted, These findings are consistent with the literature on innovation and firm performance (Abdi, a. m., & Ali, A. Y. S. ,2013. Therrien et al., 2011; Gunday et al., 2011).

These findings have some implications for managers. Since the Telecommunication industry are among the most competitive sectors of the world economy and Sub-Saharan African context it can be derived from this study that firms should put special emphasis on Administrative, strategic and technological innovations, as these types of innovation are found to be important instruments for achieving sustainable performance.

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