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INNOVATION AND BUSINESS PERFORMANCE IN TELECOMMUNICATION INDUSTRY IN SUB-SAHARAN AFRICAN CONTEXT: CASE OF SOMALIA

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ABSTRACT

This study investigates the relationship between Administrative innovation, technical innovation, and innovation strategy and business performance, taking telecommunication industry in Somalia as case study. The main objectives of this study were to 1) investigate the relationship between administrative innovation and business performance, 2) examine the association between technical innovation and business performance and 3) describe the impact of innovation strategy on business performance. The study is based on 143 target respondents especially officers and directors in telecommunication firms in Somalia. Descriptive and correlation analysis was used. The study found that administrative innovation and technical innovation have significant positive relationships with business performance. Moreover, the study found that nnovation strategy was positively correlated with business performance. Eventually, innovation had a positive correlation with business performance.

Keywords: Administrative Innovation, Technical innovation, Innovation strategy, Business Performance, Telecommunication industry in Mogadishu, Somalia

INTRODUCTION

The term innovation comes from the Latin word "*innovare",* meaning, "to make something new" (Tidd, Bessant & Pavitt, 2001). Indeed, the idea of newness is included in some form in all definitions of innovation (Dharmadasa, 2009). Innovation can be seen the world's major area of competitive advantage to many companies of the same industry in the world. It is important to note that, the word innovation has different meanings.

According to Schumpeter (1934), innovation is widely known as new or improved products, production of techniques, organization of structures, discovery of new markets and the input of new factors. From the above view, we can deduce that innovation is the cornerstone of every business. In addition, innovation itself is a very broad concept and as a result, various classifications of innovation have been developed and applied in the economic field (Cumming, 1998; Gurnet et al., 1997; Johannessen et al., 2001).

In the last decade, organizations have focused on Research and development (R&D) budgets to search for valuable strategies, implement, and utilize them in order to increase competitive advantage, achieve business performance and gain organizational sustainability in the changing environments (Ussahawanitchakit, 2012). These valuable strategies became considerable tools in helping them succeed, survive, and sustain in the competitive markets.

The importance of innovation can be realized on a number of stages. According to mobs (2010), Innovation is important on a number of levels. It is important for nation and region, for economic growth, and for firms for survival and growth. For nations and regions, innovation is an important driver of economic growth and improvement. For firms, there are

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a number of reasons, including survival, growth, and shareholder return. The more the organization bring the market new product and service, the more the organization gets major part of the customers, market share and realize stockholders interest.

Innovation has a considerable impact on corporate performance by producing an improved market position that conveys competitive advantage and superior performance (Walker, 2004). Innovations can actually enhance the firm performance in several aspects. Particularly, four different performance dimensions are employed in the literature to represent firm performance (Narver and Slater, 1990; Barringer and Bluedorn, 1999; Antoncic and Hisrich, 2001; Hornsby et al., 2002; Hagedoorn and Cloodt, 2003; Yilmaz et al., 2005).

Innovative performance can apply then positive effects on firms' production, market, and financial performances in the long-term. However, in the short run, initiated investments and internal resource usages might cause possible losses at first (Gunday et al., nd). Damanpour (1984) emphasized that generally a serious period may pass to observe positive impacts of innovations on firm performance.

In the context of Somalia, telecommunication industry has been considered as one of the most important industry in Somalia's economy. The industry has full contribution in terms of technological innovation, unemployment reduction, and acting as a source of public contribution to the society. Every telecommunication company attempts to popularize its services, renew its products, and make innovations in order to became well known and gain the major part of the market. As contended by Küpper, (2001), Service innovation strategy has been aimed at highlighting any procedures and strategies in improving and enhancing business in terms of new services or patterns of service.

Many telecommunication organizations in Mogadishu brought new services to the market by enhancing their business performance, growth, and innovation strategies to succeed their competitors. The last service innovation was announced at the beginning of this year, at a press conference during the launch of 3G network by HORMUUD Telecom chairman, who said that 'The 3G network would play a pivotal role in the development of Somalia's recovering economy. He said after overcoming many obstacles they were pleased to have succeeded with the company's yet most ambitious project.

Despite the fact that innovation is a perfect aspect in telecommunication sector in Somalia, there is a little understanding of how these innovations affect their business performance. In addition, little integration of innovation and business performance research is found in the country literature. Therefore, the main purpose of this study is to examine the influence of innovation on business performance in telecommunication industry in Mogadishu. Specifically, the study addresses the following objectives:

1. To investigate the relationship between administrative innovation and business performance.
2. To examine the association between technical innovation and business performance.
3. To describe the impact of innovation strategy on business performance.

LITERATURE REVIEW

Meaning of Innovation

Rogers (1998) defined innovation as the application of new ideas to the product, process or any other aspect of a firm's activities. By economic innovation, we refer to novel ideas that have been implemented, producing more financial value than has been invested in creating them (Stevens and Burley, 1997), i.e. financially and commercially successful innovations.

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Rosenberg (1976; 1982), Nelson and winter (1977; 1982) and Dosi (1982) view innovation as a process of improvement which may reside in the form of a problem solving activity (a new method), whereas Pavitt (1984), Tidd et al. (1997) regard it as a process involving commercial use (a new business). Lundavall (1992) defined innovation as "an ongoing process of leaving, searching, and exploring which results in 1- new product 2- new techniques 3- new form of organization 4- new market". Furthermore, Damanpour (1991) defined innovation as the generation, development, and implementation of new ideas or behaviors, which can be a new product or service, a new production process, a new structure or administrative system, or a new program pertaining to organizational members. Similarly, Drucker (1985) defined innovation as the process of equipping in new, improved capabilities or increased utility.

Schumpeter (1934) described different types of innovation as new products, new methods of production, new sources of supply, the exploitation of new markets, and new ways to organize business.

Dibrell, Davis, and Craig (2008) underlined that innovations vary in complexity and can range from minor changes to existing products, processes, or services to breakthrough products, and to processes or services that introduce first-time features or exceptional performance.

According to Drucker (2002), innovation is a specific function of entrepreneurship, the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth.

Though different scholars have put forward different definitions about the term innovation, they all remain unison that it is about the inception of new thing and idea. Previous scholars who contributed to the development of the term innovation majorly emphasized process innovation and novel idea. On the other hand, those scholars who contributed to innovation after the period of 2000 put strongly recommendation on innovation as creating something new, both technology and process innovation.

Dimensions of Innovation

Administrative Innovation

One of the most important elements of organizational innovation is administrative innovation. For its importance, Subramanian and Nilakanta, (1996), administrative innovation refers to a new management system, administrative process, and staff development program. In addition, it occurs in an administrative component and affects a social system of an organization via organizational members and their relationships, including rules, roles, procedures, and structures related to the communication and exchange between organizational members. Administrative innovation possibly promotes work redesign and work systems, skills enhancement, management systems, and changes in incentives (Yamin et al., 1997).

Administrative innovation involves new ways, procedures, new guidelines, strategies, policies and new organizational structure and forms. Successful long-term business plan helps the organization achieving its objectives and deal with the confusion of external environment. Fundamentally, it becomes a key determinant of competitive advantage, corporate performance, firm success, and organizational sustainability in a changing environment.

Likewise, administrative innovation is the innovative operation with respect to planning, organization, personnel, leadership, management, and service (Liao et al., 2008). It influences

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and improves responsibilities, accountability, command lines, and information flows (Armbruster et al., 2008), and enhances the changes of the number of hierarchical levels, the divisional structure of functions, and the separation between line and support functions. It is likely to encourage firms' business operations, competitive advantage and organizational excellence (please provide source here).

Within the case of telecommunication industry in Somalia, there is a little understanding of administrative innovation despite the fact that telecommunication remains a major industry in the country and the researcher intends to find out the reason.

Technical Innovation

Technical innovation is the another component of organizational innovation and it is defined as an adoption of new ideas pertaining to new products or services, and an introduction of new elements in an organization's production process or service operations (Subramanian and Nilakanta, 1996). It occurs in the operating component and affects the technical system of an organization through the equipment and methods of operations used to transform raw materials or information into products or services. Thus, technical innovation is the important driver of explaining competitive advantage, business efficiency, and corporate success. It appears to have a great impact on work productivity, competitive environment, competitive advantage, and overall performance of an organization.

Moreover, technical innovation affects the routines, processes and operations of an organization (Armbruster et al., 2008). It changes and applies new procedures and processes that initiate new products or services within the organization in the volatile markets and environments that influence the speed and flexibility of production and the quality of production.

Then, it definitely promotes the organization to encourage competitive advantage, achieve firm excellence, gain organizational advantage, and enhance corporate performance and business sustainability. Interestingly, technical innovation is the innovation with respect to products, manufacturing and facilities (Liao et al., 2008). It pertains to products, services and production process technology (Damanpour, 1991).

Every organization tries to accomplish its goals through technical innovation, achieve organizational objectives, and increase business performance. More importantly, it is outstandingly related to product and process activities that meet external users, customer requirements, and market needs. It is a critical determinant of driving competitive advantage, organizational effectiveness, and business performance. It represents firms' new products and services for surviving and sustaining in the uncertain business operations. Accordingly, it becomes a significant tool in helping firms achieve competitive advantage, profitability, and performance. Firms with greater technical innovation seem to have more advantage that is competitive in the changing environments.

Innovation Strategy

The literature generally agrees that organizations with formal strategies performed better than those without strategies (O'Regan, Ghobadian, & Gallear, 2005). However, Telecommunication has formal and informal strategies set by company directors to achieve their objectives. According to Hudson *et. al*., (2001), small and medium enterprises (SMEs) typically have informal strategies, largely driven by their chief executive officers (CEOs), compared to large organizations, which generally have separate strategic planning units. Kraus, Reiche, and Reschke (as cited in Terziovski, 2009, P.5) summed up SMEs' perceptions of strategic planning as, "Formal planning is often regarded as limited to large

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enterprises and thus not transferable to the requirements of the fast-moving and flexibly structured SMEs".

An innovation strategy is a strategy that promotes the development and implementation of new products and services (Robbins, 1996). Covey (1993) claims that the origin of creativity and innovation lies in a shared vision and mission which are focused on the future. Furthermore, the vision and mission of creative and innovation organization are also customer and market oriented, focusing on solving customers' problems among other things (CIMA study text, 1996). Judge et al. (1997) describe successful innovation as chaos within guidelines; in other words, top management prescribes a set of strategic goals, but allows personnel great freedom within the context of goal.

Business Performance

Firm performance is debatably the most important construct in management and business research. A wide variety of definitions of firm performance have been proposed in the literature (Barney, 2007), with frequent reference to how efficiently and effectively a firm utilizes its resources in generating economic outcomes. In the business strategy literature, there are two major streams of thought on the determinants of firm performance (Hansen & Wernerfelt, 1989).

Performance measurement can be divided into four phases: design, implementation, use, and maintenance of a performance measurement system (Neely et al., 2000). Neely et al. (2005) define performance measurement as the process of quantifying the efficiency and effectiveness of action. Performance measurement can also be defined quantifying the input, output, or level of activity of an event or process (Radnor & Barnes, 2007).

Conceptual Framework of the Study

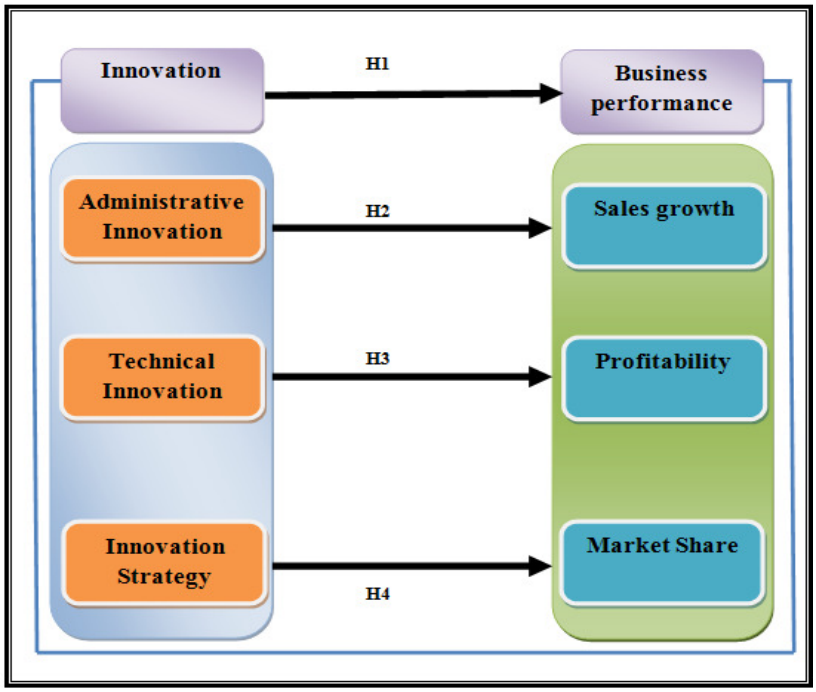

Figure1. Illustrates independent structure of administrative innovation, technical innovation, and innovation strategy and how these relate to business performance. The article focuses only financial performance while other studies including (Terziovski, 2010) focused on business and operational performance.

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Summary of the Hypothesis

The following are the hypothesis tested by the researcher in the article:

H1: Administrative innovation is positively related to business performance

H2: Technical innovation is positively related to business performance

H3: Innovation strategy is positively related to business performance

METHODOLOGY

Research Design and Sample Selection

This study employed descriptive and correlation research design. The main aim of descriptive research is to provide an accurate and valid representation of the variables that pertain relevant to the research question. In addition, Descriptive research designs are intended only at providing accurate descriptions of variables relevant to the problem under consideration by describing only. Correlation research design is used to highlight the relationship between variables by showing cause and effect relations or forecasting future events or a result from a variable.

In order to explore the impact of innovations is on the Business performance of Telecommunication firms; samples of 120 questionnaires were distributed. The survey included questions designed to assess firm's Administrative innovation, technical innovation, and innovation strategy. According to Leary (1995), there are distinct advantages in using a questionnaire vs. an interview methodology. Questionnaires are less expensive and easier to administer than personal interviews; they lend themselves to group administration; and they allow confidentiality to be assured.

For the purposes of this study, data was gathered by means of a self-administered questionnaire as a measuring instrument. Self-administered questionnaires allow respondents time to think and use resources (Nolinske, 2008, p.10). The questionnaire was delivered and collected by hand, as it enables to assist the respondents to answer what they want to shed light on.

Measurement of Variables

Administrative innovation is the independent variable of the study and it refers to a new management system, administrative process, and staff development program (Subramanian and Nilakanta, 1996). Five point likert scales was developed to evaluate the level to which firms promote work redesign and work systems, skills enhancement, management systems, and changes in incentives.

Technical innovation is the independent variable of the study and it is defined as an adoption of new ideas pertaining to new products or services, and an introduction of new elements in an organization's production process or service operations (Subramanian and Nilakanta, 1996). Five point likert scale was employed to assess the degree to which firms change and apply new procedures and processes within the organization that influence the speed and flexibility of production and the quality of production.

Innovation strategy is the independent variable of the study and it is defined as setting formal planning and organizing long-term strategies to achieve organizations goals. Five point likert scale was measured the how organization asses future opportunities and threats.

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Business Performance

Business performance construct is based on according to (Terziovski, 2010). Business performance is the dependent variable and it is defined as the result of business process, practice and activities. Five point likert scales was developed to evaluate firms that achieve the level and degree of financial performance, including sales growth, profitability and market share.

Data Analysis Techniques

This section describes the data analysis procedure, after answered questionnaires were returned to the researcher. The Statistical Package for Social Science (SPSS Version 16.0) software was used to process and compute the collected data. Both descriptive statistics such as frequency, mean, and standard deviation, and inferential statistics such Cronbach's Alpha, and Pearson correlation were used for analyzing the data.

Reliability and Validity

The questionnaire were developed from prior research and previously tested for reliability, we did some modification to make more relevant to the purpose of the study and context. Thus the reliability test conducted to determine the internal consistency of the measures used, the below table 1 shows that all variables have Cronbach Alpha values of more than 0.7.which makes all variables accepted , internally consistent and the scale deemed reliable for further analysis.

Table 1.

No.	*Variable*	*N*	*Items*	*Cronbach's Alpha*
1.	Administrative Innovation	143	9	.860
2.	Technical Innovation	143	6	.768
3.	Innovation Strategy	143	5	.767
4.	Firm Performance	143	6	.781
5.	Overall Alpha	143	26	.935

Next step, the variables in the study were validated using Parallel analysis by using Monte Carlo pca, The 26 items of the innovation and business performance were subjected to principal components analysis (PCA) using SPSS version 17. Prior to performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser- Meyer-Olkin value was .86, exceeding the recommended value of .6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) reached statistical significance, supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of four components with eigen values exceeding 1, explaining 38.4%, 6.5%, 5.5%, 5.02%, 4.6%, 3.9% of the variance respectively. An inspection of the screeplot revealed a clear break after the first component. Using Catell's (1966) scree test, it was decided to retain one component showing a number of strong loadings and all variables loading substantially on only one component. The Component 1 contributing 38.432%. To aid in the interpretation of this component, oblimin rotation was performed and shows there is a strong number of loadings of the variables.

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FINDINGS AND DISCUSSIONS

Respondents Profile

Table 2. Demographic Characteristics of the respondents

Demographic Characteristics		*Frequency*	*Percent*	*Cumulative Percent*
Gender	Male	121	84.6%	84.6%
	Female	22	15.4%	15.4%
	Total	143	100%	100%
Age	Less Than 25	48	33.6%	33.6%
	26-35	61	42.7%	42.7%
	More then 36	34	23.8%	23.8%
	Total	143	100%	100%
Marital status	Married	101	70.6%	70.6%
	Single	42	29.4%	29.4%
	Total	143	100%	100%
Educational Level	Diploma	29	20.3%	20.3%
	Bachelor	91	63.6%	63.6%
	Master	22	15.4%	15.4%
	PHD	1	.7%	.7%
	Total	143	100%	100%
Experience	1-4 years	62	43.4%	43.4%
	5-9 years	54	37.8%	37.8%
	More than 10 years	27	18.9%	18.9%
	Total	143	100%	100%
Position	Director	17	11.9%	11.9%
	Officer	126	88.1%	88.1%
	Total	143	100%	100%

Source: Primary Data 2013

Participants were asked to indicate their gender by placing a tick next to the relevant option provided (male or female). According to table 2, there are 143 respondents, out of them 121

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were male and 22 were female respondents. In other words, 84.6 % were male respondents and 15.4% were female respondents.

Both married and single respondents are included into the sample. Marital status of respondents is illustrated in the table 2. The table indicates that out of 143 respondents, 101 were married respondents and rests of others are single respondents.

Participants were asked to tick the age category appropriate to them (see table 2 above). The age group of 26 to 35 represents the most number of the respondents in the study and accounts for 42.7% of the whole respondents. While other respondents were included less than 25 (33.6%) and above 36 (23.8%) respectively.

In terms of Qualifications of the respondents, 91 respondents have bachelor degree which represent (63.6%) of total respondents. This certifies that the majority of the respondents are indicated to have attained bachelor degree while 20.3%, 15.4%, 0.7% of respondents have Diploma, Master and PhD certificate respectively.

Also, the largest number of the respondents (62, 43.4%) has Experiences of 1 to 4 years in the organization in which they work. The next group consists of (54, 37.8%) that indicates that they have been 5 to 9 years in the organization while (27 18.9%) have been working more than 9 years.

Organizations Profile

Table 3. Organizational Profile

Demographic Characteristics		*Frequency*	*Percent*	*Cumulative Percent*
Name of the Organization	Hormuud	66	46.2%	46.2%
	Telcom	11	7.7%	7.7%
	Nationlink	53	37.1%	37.1%
	Somafone	13	9.1%	9.1%
	Total	143	100%	100%
Size of the Organization	Medium(50-249 Employees)	14	9.8%	9.8%
	Large (250+ Employees)	129	90.2%	90.2%
	Total	143	100%	100%
Firm Age	Above Ten Years	143	100%	100%
	Total	143	100%	100%

Source: Primary Data 2013

The position of the respondents was grouped in to two categories: directors and officers as presented in table 4.1. Only 17 of them (11.9%) were directors while 126 of them (88.1%) of them were officers.

According to the table 3, 46.2% of the respondents were the staff of HORMUUD telecommunication which means 66 out of 143 employees were from the same organization. Also (53, 37.1%) of the respondents were from NATIONLIK and the other 9.1% and 7.7%

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were from SOMAFONE and TELCOME organizations respectively. In addition, majority of the respondents (90.2%) agreed that organizations are large because their employees are greater than 250. Finally, all organizations existed more than 10 years.

Administrative Innovation

According to administrative innovation, Staff development programs and Organizational structure, majority of the respondents perceive as an essential issue (M=4.17 and M=3.94 respectively). Every organization competes to improve the quality and skills of its staff and changing the structure of the organization in order to increase the profits, shareholders wealth and increase the market share of the organization.

Table 4. Administrative Innovation (n=143)

Administrative Innovation	*Mean*	*Std. Deviation*	*Interpretation*	*Rank*
Staff development program can help improve the quality and skills of our staff	4.17	1.021	Agree	1
Organizational structure is a key objective of our administrative process	3.94	1.056	Agree	2
New administrative process has helped the organization to achieve our strategic goals	3.83	1.210	Agree	3
The organization formulates new strategies as part of our administrative innovation	3.64	1.213	Agree	4
Formulating new management system is a part of administrative innovation	3.63	1.197	Agree	5
New rules, procedures, roles can help regulate our organization more efficiently	3.57	1.091	Agree	6
Overall Mean	*3.80*	*1.131*	*Agree*	

Source: Primary Data 2013

According to the above table 4 presented that New administrative process and formulating new strategies were scored highly mean 3.83, 3.64 overall and standard deviation of 1.210 and 1.213 respectively. These results indicate that new administrative and new strategies have facilitated the organization to achieve their strategic goals of telecommunication companies in Somalia.

Finally, the respondents pointed out formulating new management system and new rules, procedures, roles are an important part of administrative innovation Based on their mean 3.63 and 3.57. Overall, the respondents put high value on the importance of administrative innovation (M=3.80, SD= 1.131).

Technical Innovation

According to technical innovation, technical innovation and new product, services and ideas, majority of the respondents recognized as a vital issue (M=3.90 and M=3.88 respectively). Initiating new idea pertaining the organizations activity and brainstorming new product and services have the highest score in terms of mean score.

According to the above table 4.4 presented that Quality of production, Method of operation and the speed of production were scored a mean 3.80, 3.78, 3.74 overall and standard deviation of 1.1.176, 1.214 and 1.029 respectively.

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Table 5. Technical Innovation (n=143)

Technical Innovation	*Mean*	*Std. Deviation*	*Interpretation*	*Rank*
Technical innovation can help us New ideas pertaining organizations production process and service operations	3.90	1.179	Agree	1
New product, services and ideas are key objective of our technical innovation	3.88	1.147	Agree	2
Quality of production is a part of our technical innovation	3.80	1.176	Agree	3
Method of operation is most suitable method for delighting our customers	3.78	1.214	Agree	4
The speed of production process is an important part of our technical innovation	3.74	1.029	Agree	5
Overall Mean	*3.82*	*1.149*	Agree	

Source: Primary Data 2013

Innovation Strategy

According to the table 6 the highest scores registered (4.10 and 4.04) have been given for improved product or service quality and customer satisfaction. The respondents confirmed that the organizations objectives include satisfying customer needs by bringing the market quality product.

Table 6. Innovation Strategy (n=143)

Innovation Strategy	*Mean*	*Std. Deviation*	*Interpretation*	*Rank*
Improving product or service quality is one of our key objectives of innovation strategy	4.10	1.244	Agree	1
Customer satisfaction is part of our innovation strategy	4.04	1.150	Agree	2
Innovation strategy has helped the organization to achieve its strategic goals	3.96	1.093	Agree	3
Improving administrative routines is seen as part of our innovation strategy	3.90	1.143	Agree	4
Internal cooperation is an important part of innovation strategy implementation	3.87	1.146	Agree	5
Formulating innovation strategy increases employee skills	3.83	1.331	Agree	6
Increasing our production volume is an important measure of our process innovation	3.74	1.232	Agree	7
Improving employee commitment, morale, or both is part of our innovation strategy monitoring	3.72	1.286	Agree	8
The organization's vision or mission includes a reference to innovation	3.59	1.410	Agree	9
Overall Mean	*3.86*	*1.226*	Agree	

Source: Primary Data 2013

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Secondly, According to the table above the average scores registered (3.87 and 3.83) have been given for Internal cooperation and Formulating innovation respectively. The respondents established that implementing and formulating new innovation strategy helps the organization to achieve its strategic goals and increases the skills of their employees. Eventually, Improving employee commitment, morale and including a reference of innovation in the organization's vision or mission were scored the middle high (3.72 and 3.59).

Business performance

According to the table 4.6 the highest scores registered (4.01 and 3.99) have been given that innovation increases the customer satisfaction and general profitability of the organization. The overall mean of the respondents indicates that innovation increases overall business performance of the organization.

Table 7. Business Performance (n=143)

Business Performance	*Mean*	*Std. Deviation*	*Interpretation*	*Rank*
Innovation increases the customer satisfaction of the organization	4.01	1.211	Agree	1
Innovation increases the general profitability of the organization	3.99	1.249	Agree	2
Innovation increases the Growth rate of annual sales revenue	3.91	1.184	Agree	3
Innovation increases the market share of the organization	3.91	1.154	Agree	4
Innovation increases return on sales of the organization	3.68	1.334	Agree	5
Innovation increases cash flows excluding investment of the organization	3.58	1.151	Agree	6
Overall Mean	*3.85*	*1.214*	Agree	

Source: Primary Data 2013

Secondly, According to the table 7, the average scores registered (3.91 and 3.91) have been given for Growth rate of annual sales revenue and the market share of the organization respectively. The respondents agreed that introducing new technologies expands the market share of the organization and increases the growth rate of annual sales revenue. Eventually, Innovation increases return on sales and cash flows of the organization were scored the middle low (3.68 and 3.58).

Relationship between Administrative Innovations, Technical Innovations, Innovation Strategy and Business Performance

Table 8 shows the results of correlation analysis of the relationships among administrative innovation, technical innovation, innovation strategy, and business performance. Hence, administrative innovation has a significant positive relationship with business performance ($r=0.694$ and $p<0.01$). Besides, it promotes Staff development programs, Organizational structure, new administrative process and formulating new strategies. It includes formulating new management system and new rules, procedures, roles in order to achieve organizations objectives. Then, firms with greater administrative innovation tend to achieve higher growth rate, increase return on sales and market share, gain better bright future of the organization,

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and promote higher business performance. Hence, administrative innovation explicitly has a positive correlation with business performance. Thus, hypothesis 1 was accepted. In addition, technical innovation has an important positive association with business performance (r= 0.702, and p < 0.01). Accordingly, technical innovation becomes a significant driver of determining Business performance. According to (Subramanian and Nilakanta, 1996), this study adopts technical innovation as new ideas pertaining to new products or services, and an introduction of new elements in an organization's production process or service operations. Thus, technical innovation becomes a significant tool in helping firms achieve profitability and business performance. Firms with greater technical innovation seem to have a higher business performance. Hence, technical innovation explicitly has a positive correlation on business performance. Thus, hypothesis 2 was supported.

Table 8. Relationship between Administrative innovations, technical innovations, innovation strategy and Business Performance (n=143)

Correlations

		Administrative Innovation	*Technical Innovation*	*Innovation Strategy*	*Business Performance*
Administrative Innovation	Pearson Correlation	1	.807**	.719**	.694**
	Sig. (2-tailed)		.000	.000	.000
	N	143	135	140	140
Technical Innovation	Pearson Correlation	.807**	1	.794**	.702**
	Sig. (2-tailed)	.000		.000	.000
	N	135	135	133	133
Innovation Strategy	Pearson Correlation	.719**	.794**	1	.651**
	Sig. (2-tailed)	.000	.000		.000
	N	140	133	140	139
Business Performance	Pearson Correlation	.694**	.702**	.651**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	140	133	139	140

** Correlation is significant at the 0.01 level (2-tailed).

Moreover, Innovation strategy has a significant positive relationship with business performance (r=0.651 and p<0.01). Besides, it promotes improved product or service quality, customer satisfaction, internal cooperation and Formulating innovation strategies. It includes Improving employee commitment, morale in order to become production and achieve goals of the organization. Then, firms with greater innovation strategy tend to achieve higher business performance. Hence, innovation strategy explicitly has a positive correlation on business performance. Thus, Hypothesis 3 was accepted.

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DISCUSSION OF THE RESULTS

The study found that there is a positive correlation between administrative innovation and business performance. The association between the two variables showed a high statistically significant result (r=0.694, p<.0001). This means in order to increase business performance, the management of the organization should take into account the innovativeness of their action. In addition, the study found that technical innovation has positive correlation with business performance. The result indicates that r= 0.702, p<0.01. Finally, the analysis focuses on the relationship between innovation strategy and business performance. The study found a positive correlation exists between innovation strategy and business performance with r= 0.651 and p<0.01.

CONCLUSION

The objectives of this study were to investigate the relationship between innovation and business performance in telecommunication industry in Somalia. Consistent with the findings, the results found considerable evidence of the relationship between these variables. With the results of the study, administrative innovation has a significant positive relationship with business performance and technical innovation has an important positive association with business performance. Finally, the study found positive correlation of innovation strategy and business performance.

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