

Product Innovation and Performance of Nonprofit Organizations in Kenya

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Abstract: Product innovation has progressed over the past several decades and from the previous studies it is confirmed to affect performance positively. This study attempts to fill that gap on innovation in humanitarian organizations by addressing the following research objective; to determine the effect of product innovation on Organization Performance of humanitarian organizations in Kenya. The study was anchored on three theories; Porters Generic Strategies; Diffusion Theory of Innovation and Schumpeter Theory of Innovation. The study adopted a descriptive cross sectional research design. The target population was the top and middle managers of humanitarian organizations in Kenya which were selected through random sampling. Data was collected through questionnaire and analyzed through SPSS software. The result of the effect of product innovation on organizational performance indicated a strong positive correlation between the variables with a coefficient of correlations (r) of 0.523. The coefficient of determination (R^2) was 0.273 which indicated that 27.3% of change in organization performance in the humanitarian organization in Kenyan could be attributed to innovation ($P < 0.05$). The study concluded that product innovation is a good predictor of organization performance and hence recommended that; for the humanitarian organizations in Kenya to achieve enhanced organizational performance, they should come up with product based innovation within the organization which should be encouraged and embraced by all so as to achieve increased organizational performance.

Keywords: Product Innovation, Performance, Nonprofit organization.

1. INTRODUCTION

Non-governmental Organizations in Kenya have had to devise innovative means of ensuring donor funds are utilized for the intended purpose using the least cost means. These NGOs endeavor to reach as many people in the community using innovative methods to ensure there is value for money and maximum coverage. The desire to do things differently for better results in a rapidly changing socio-economic environment, shifting demographics, climate change, overpopulation, increase in poverty, unpredictable disease pattern cannot be overstated. Therefore technology or non-technology innovation as well as theme of sustainability plays a very critical role in attaining competitive strategy in the not for profit sector in general (Mukunga, 2011)

1.1 Background of study

Rastogi (1996) outlines that an innovation denotes new and superior methods, procedures and approaches in various areas of management and administration; innovation may also involve interplay of professional skills in the areas of product development, production and marketing. Product development skills involve new concept and insights in the field of design, material and component. Production skills require experience and knowledge in the field of technique emergency operation and processes. Marketing skills involve recognition of customer or consumer needs understanding of emerging trends and shifts and cultivation of customer contacts; innovation signifies organizational growth while entrepreneurship is the basis of innovation.

Neely, Gregory & Platts, (1995) Describes performance measurement as the practice of measuring an activity's effectiveness and efficiency. Zoumbos, Argyropoulou & Koufopoulos, (2008) says that performance is more important when related to other qualification such as marketing or accounting. Bititci & Carrie (1997) argues that the process where the organization influences the business activity, strategy and objectives for positive results is defined as performance.

Tekinus, Demirbag & Tatoglu, (2006) argues that performance quantification is crucial for effective organization management. Outcomes must be measured to obtain process improvement. An organization's success is essentially described by its performance after a period of time. Sharma & Gadenne (2002) affirms that firm performance development calls for any measurement to recognize the quantity and quality which the use of resources of the organization affects the firm performance. Deriving a quantification of the performance of an organization allows for the association of performances in different periods of time. Hrebiniak and Snow (1980) measurement for the concept of performance is a critical as seen by the efforts of some researchers to extend their efforts on the study. However no specific capability to quantify every performance aspect has been suggested to date.

Burges, M (2017) defines not for profit organizations as institutions established under relevant government status whose mandate is to provide various services on charitable programs. These organizations are independently operated but highly regulated through various government laws and acts of relevant laws and regulations. Anheier, K.H (2005) says that the key features of not for profit organizations are trustworthiness, accountability and openness. Not for profit organizations are answerable to the public community, funders, donors, program recipients and the volunteers.

The business environment triggers need for change and innovative responses to match the organization's operations, resources and environment. Innovation can be incremental, radical or disruptive; hence the organization must be accommodative if it is sustaining its operations optimally. Various innovative responses face resistance and obstacles which becomes quite challenging in the organization's operations and performance, effective implementation of the innovative strategy is the only solution to organizational success, (Jones & Hill 1977). Product innovation in the not for profit organizations is still an area that has not been explored conclusively. This study therefore seeks to find out the effect of product innovation on performance of nonprofit organizations in Kenya.

1.2 Research objectives

To determine the effect of product innovation on performance of nonprofit organizations in Kenya

2. LITERATURE REVIEW

The study was anchored on the following 2 theories:-

2.1 Schumpeter Theory of Innovation

Schumpeter (1934) argues that management is able to make an organization profitable if effective innovations are introduced. This theory suggests that the major responsibility of an entrepreneur is to bring in innovation and profit will come in the form of reward for the effort for his performance. A new policy or action that an entrepreneur introduces to increase the demand for his products and lower the general cost of production is called innovation. Thereby saying an innovation can be grouped into two; demand increasing activities such as new quality, new commodity, or new markets. Second is cost reduction activities that is; new efficient machinery, new techniques, innovative methods of organizing industry.

Damanpour (2014) supports the Schumpeter theory of innovation by arguing that Non Profit organizations can introduce innovation in the firm by introducing activities that reduce the overall cost of production and achieving the firm's objective with lesser financial resources. Schumpeter argues that the recurrent practice is completely the result of innovation in the firm, both commercial and industrial. NPOs can change the means, change the industrial organization change the procedures of production and transportation, introduction of a different market, production of a new product, etc. The innovation does not mean invention only but rather it refers to the use of new technology, new approaches and original foundations of energy

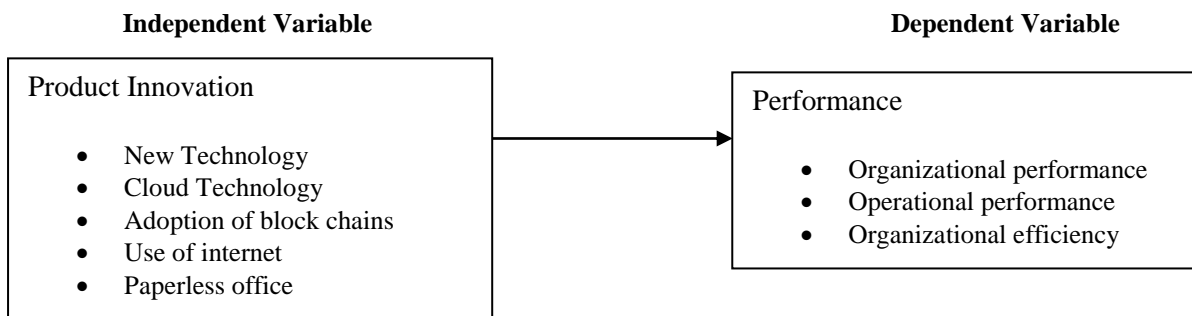
2.2 Diffusion Theory of Innovation

Diffusion theory was developed by Everett Rogers a professor at Boston University. Rogers (2003) says this theory explains at what rate new ideas spread, how and why. He says that the method with which innovation is spread on a given time in a social structure among people in a social setting is the diffusion of innovation. Rogers suggest the following major features that influence the movement of creativity, communication, social structure, innovation, social system and time period. The innovation must be fully embraced for it to sustain itself. As the idea gets embraced a point comes where the innovation will get to a crucial mass of people. Human capital is a big contributor to this process.

Adoption of new ideas as a result of diffusion is gradual with some people adopting the idea as soon as they get to hear of it while some take time to adapt to the idea. Diffusion demonstrates itself in varied ways and is depended to the type innovation-decision and process of adopters. The level, by which a distinct person embraces a new idea, forms the criterion for the adopter classification in innovativeness. The classification of people who the idea is intended for as described by Everett are; innovators, early adopters, early majority, late majority, and laggards. This theory therefore implies that an organization must nature a culture of innovation and entrepreneurship to have all employees understand and appreciate a certain level of responsibility in adopting innovative mindset.

Firms are in constant competition as they try to outdoor each other and emerge the best. Innovation is thus very important for firms in the quest to gain competitive edge. The NPO sector is no different. Donors have preference for Non Profit organizations that have adopted innovation early in their various fields of operations. They are seen as cost effective partners and market leaders in the NPO world. These organizations are likely to gain competitive advantage based on the rate at which they adopt new ideas or products.

2.3 Conceptual Framework



3. METHODOLOGY

This study utilized a cross sectional descriptive research design to explore viable relationships and describe how each factor will fortify matters under study. Descriptive design provided measureable data from a cross section of the chosen population. This study comprised of a selected number of Public Benefit Organizations (both social enterprises and NGOs) located in Kenya with headquarters in Nairobi County selected through random sampling technique. According to a report by the Kenya Projects Organization (2014) there are 330 nonprofit organizations registered to operate in Kenya as at 2014 that have headquarters in Nairobi. The target population was 330 organizations. 50 organizations were randomly selected out of the 330 registered during the study. This gave us a sample coverage of 15%. A questionnaire was constructed which included an innovation measure gotten from (Lin et al. 2010) containing items and an organization performance scale adapted from (Venkatraman, 1989) comprising 3 items for the aim of testing the above specified hypotheses. The questionnaire was designed to have both open ended and closed questions. A five point Likert scale questionnaire was utilized; the Likert scale had a five anchor ratings of strongly agree, agree fairly agree, disagree and strongly disagree. Respondents were senior management cadre members i.e. head of programs and managers. The Statistical Package for Social Sciences (SPSS) was applied for analysis thus generated descriptive frequencies and inferential statistics which were used to develop answers and generalization concerning the population under study.

4. FINDINGS AND DISCUSSIONS

The study intended to investigate the impact of Product innovation on organizational performance of NPOs in Kenya.

A total of 100 questionnaires were administered to the selected NPOs in Kenya. 81 were successfully completed by the respondents gives a response rate of 81% of the total questionnaires. To measure Organization Innovation, a set of five statements were formulated. The respondents were asked to indicate the extent of agreement with each of the organization innovation statements. The results are presented in Table 1.

Table 1: Descriptive Statistics- Product Innovation

Product Innovation	1(VS)	2(S)	3(M)	4(L)	5(VL)	Mean	STD
Acquisition of new technology improves Performance	0(0%)	2(2.5%)	13(16.0%)	27(33.3%)	39(48.1%)	4.2716	0.82177
Adoption of cloud technology improves performance of my organization	1(1.2%)	2(2.5%)	14(17.3%)	29(35.8%)	35(43.2%)	4.1728	0.89149

Adoption of block chain improves performance of my organization	1(1.2%)	5(6.2%)	17(21.0%)	38(46.9%)	20(24.7%)	3.8765	0.89976
Adoption of Internet of thing, etc. improves performance of my organization	0(0%)	2(2.5%)	22(27.2%)	36(44.4%)	21(25.9%)	3.9383	0.79602
Adoption of paperless office improves performance of my organization	1(1.2%)	0(0%)	10(12.3%)	27(33.3%)	43(53.1%)	4.3704	0.79757

Note: 1=Very Small, 2=Small, 3=Moderate, 4=Large, 5=Very Large, Mean, S.D. =Standard Deviation

Source: Field Data (2019)

From Table 1, the results revealed that 27(33.3%) and 39(48.1%) of the respondents agreed to a large and vary large extent that acquisition of new technology improved performance. The results also indicated that 29 (35.8%) and 35 (43.2%) agreed to a large and very large extent that adoption of cloud technology improved performance of their organization. The results revealed that 38 (46.9%) agreed to a large extent and 20 (24.7%) also agreed to a very large extent that adoption of block chain improved performance of my organization. 36(44.4%) agreed to a large extent Adoption of Internet of thing,5G internet and artificial intelligence improves performance of their organization. The results also revealed that 27(33.3%) of the respondents agreed to a large extent and 43(53.1%) agreed to a very large extent that adoption of paperless office improved performance of their organization.

Organization Performance

To measure Organization Performance, a set of five statements were formulated. The respondents were asked to indicate the extent of agreement with each of the organization performance statements. The results are presented in Table 2

Table 2: Descriptive Statistics- Organization Performance

Organization Performance	1(VS)	2(S)	3(M)	4(L)	5(VL)	Mean	STD
Adoption of innovative methods allows my organization to be more marketable to donors	0(0%)	0(0%)	7(8.6%)	7(8.6%)	67(82.7%)	4.7407	0.60782
Innovation allows my organization to be more efficient and effective in product management	0(0%)	0(0%)	7(8.6%)	18(22.2%)	56(69.1%)	4.6049	0.64574
Innovation allows my organization to be more financially prudent	0(0%)	0(0%)	6(7.4%)	32(39.5%)	43(53.1%)	4.4568	0.63343
High performing organizations are more environmentally sustainable	0(0%)	0(0%)	10(12.3%)	34(42.0%)	37(45.7%)	4.3333	0.68920
High performing organizations create better competitive advantage	0(0%)	1(1.2%)	8(9.9%)	20(24.7%)	52(64.2%)	4.5185	0.72648
High performing organizations have highly motivated employees	0(0%)	0(0%)	6(7.4%)	21(25.9%)	54(66.7%)	4.5926	0.62805

Note: 1=Very Small, 2=Small, 3=Moderate, 4=Large, 5=Very Large, Mean, S.D. =Standard Deviation

Source: Field Data (2019)

The findings revealed that 7(8.6%) and 67(82.7%) of the respondents agreed to a large and very large extent that adoption of innovative methods allowed their organization to be more marketable to donors. The results further revealed that innovation allowed organizations to be more efficient and effective in product management as shown by 18(22.2%) of the respondents who agreed to a large extent and 56(69.1%) who agreed to a very large extent.

Further, 75(92.6%) of the respondents agreed to a large and very large extent that innovation allowed organizations to be more financially prudent. Similarly, majority of the respondents confirmed that high performing organizations were more environmentally sustainable as supported by 34(42.0%) who agreed to a large extent and additional 37(45.7%) who agreed to a very large extent. The results also revealed that 20(24.7%) of the respondents agreed to a large extent and 52(64.2%) also agreed to a very large extent that high performing organizations created better competitive advantage. Lastly, the study findings indicated that high performing organizations had highly motivated employees with 21(25.9%) and 54 (66.7%) of the respondents agreeing to a large and very large extent respectively.

Correlation between product innovation and organization performance

The Pearson correlation analysis was used to investigate the relationship between product innovation and organizational performance of NPOs in Kenya. The study established a coefficient of correlation (r) as 0.523**, P<0.05 at 95.0% confidence level. This shows that there exist a moderate and significant positive relationship between product innovation and organizational performance of NPOs in Kenya. This implies that organizational performance in the Kenyan NPOs increases with an increase in adoption of product innovation and a decrease in adoption of product innovation leads to a decrease in their organizational performance. The results are as shown in Table 3

Table 3: Correlations

Correlations		Product Innovation	Organization Performance
Product Innovation	Pearson Correlation	1	.523**
	Sig. (2-tailed)		.000
	N	81	81
Organization Performance	Pearson Correlation	.523**	1
	Sig. (2-tailed)	.000	
	N	81	81

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

Source: Field Data (2019)

Regression Results of product innovation and organizational performance

Regression analysis was used to tell the amount of variance accounted for by one variable in predicting another variable. Regression analysis was conducted to find the proportion in the dependent variable (Organizational Performance) which can be predicted by the independent variable (Product Innovation). Table 4 shows the analysis results.

Table 4: product innovation and organizational Performance

Model Summary										
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Change Statistics	R Square Change	F Change	df1	df2	Sig. F Change
1	.523 ^a	.273	.264	.60856		.273	29.681	1	79	.000

a. Predictors: (Constant), Product Innovation

Table 5: ANOVA^a

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	10.992	1	10.992	29.681	.000 ^b
Residual	29.257	79	.370		
Total	40.250	80			

a. Dependent Variable: Organization Performance

b. Predictors: (Constant), Product Innovation

Table 5: Coefficients^a

Coefficients ^a					
Unstandardized Coefficients		Standardized Coefficients		T	Sig.
B	Std. Error	Beta			
.617	.263			2.348	.021
.563	.103	.523		5.448	.000

a. Dependent Variable: Organization Performance

Source: Field Data (2019)

The results revealed a coefficient of determination (R^2) of 0.273. This illustrates that product Innovation could explain the 27.3% of the variance in organizational performance in the Kenyan NPOs. The F test gave a value of $(1, 79) = 29.681$, $P < 0.05$, which supports the goodness of fit of the model in explaining the variation in the dependent variable. It also means that product innovation is a useful predictor of organization performance in the Kenyan NPOs. The regression equation to estimate the Organization Performance in the Kenyan NPOs as a result of product innovation was stated as:

$$\text{Organizational Performance} = 0.617 + 0.563 \text{product innovation} + e$$

The findings of this study are in corroboration with findings by Nataya and Sutanto (2018) who conducted a research on the effect of product innovation and service innovation towards marketing performance. From their study, they established that companies that combine product innovation and service innovation together would gain greater revenue growth and profitability.

This was affirmed by Kamakia (2014) who studied the effect of product innovation on performance of commercial banks in Kenya. The findings indicated that profitability increased with product innovation to a very great extent, and that product innovation increased product development; product quality; range of products; sales volume; customer satisfaction, customer loyalty and market share to a great extent

5. CONCLUSIONS

The results of the study established a coefficient of correlation (r) as 0.523**, $P < 0.05$ at 95.0% confidence level and a coefficient of determination (R^2) of 0.273. This illustrates that product innovation could explain the 27.3% of the variance in organizational performance. This shows that there exists a moderate and significant positive relationship between product innovations on organizational performance of NPOs in Kenya. This implies that organizational performance increases with an increase in product innovation and a decrease in product innovation also leads to a decrease in organizational performance.

The conclusions were derived from the findings after testing the hypothesis from the research objectives. As concerns the objective, it was also concluded that there was a positive and significant relationship between product innovation and organizational performance of humanitarian organizations in Kenya. With the application of product innovation, it is clear that organizational performance will increase.

6. RECOMMENDATION

Basing on the first objective, it was concluded that there was a significant and positive relationship between product innovation and organizational performance of humanitarian organizations in Kenya. This implies that with the adoption of product innovation, performance of humanitarian organizations in Kenya goes up. Humanitarian organizations should adopt product innovation such as new effective products in order to achieve effectiveness, sustainability. Humanitarian organizations have a capacity to eliminate waste in their program implementation if they adopt product innovation. Humanitarian organizations have a chance to be competitive in the donor market by adopting product innovation.

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