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Effect of Strategic Innovation on Competitive Advantage

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Abstract:

The objective of the study was to establish the effect of strategic innovation on competitive advantage and the corresponding hypothesis was formulated and tested. The study targeted 77 employees from Dimension Data, East Africa and 63 of them responded. The study adopted a descriptive research design and data was collected through structured questionnaires and analyzed using descriptive and inferential statistics by the help of SPSS Version 21. Research findings from the test of hypothesis established that strategic innovation had positive effect on competitive advantage in Dimension Data East Africa ICT Company in Nairobi County, Kenya. The study findings supported the Resource-Based View (RBV) Theory and Christensen's Disruptive Theory of Innovation which explain the strategic innovation – competitive advantage link.

Keywords: *Strategic Innovation, Competitive advantage, ICT Company, Christensen's Theory of Disruption, Resource-Based View (RBV) Theory*

1. Introduction

Strategic innovation is considered as the process of creating strategies that result in growth, new products, new services and new business models that completely change a firm's outlook, to focus on value creation for its customers and its stakeholders (Kaplan, 2007). Innovation is part of the strategy implementation process and a direct requisite for specific strategies (Drucker, 2001). Competitive advantage is defined as, when two or more firms compete within the same market, one firm possess a competitive advantage over its rivals when it earns (or has the potential to earn) a persistently higher rate of profit (Grant, 1996). Although empirical studies indicate a link between strategic innovation and competitive advantage, the operationalization of the study variables and the study contexts were different (Azzam & Abou-Moghli, 2012; Kemoli, 2012).

2. Strategic Innovation

A shift in customer preferences coupled by mapping neglected segments by competitors normally presents insightful sources for strategic innovation (Cooper, 2006). Strategic innovation is the key asset and differentiator in global competitiveness, value maximization and overall productivity (Lilly, 2014). Strategic innovation is a strategic tool that enables organizations to align their resources and capabilities with the external opportunities, to enhance their chances of survival and success in the long-term. It considers moving away from the traditional ways of doing business and embracing more creative capabilities and anticipating unexploited opportunities in order to improve revenue growth. The extant study adopted product, process, market and organizational types of strategic innovation.

Product innovation is a challenging process driven by advanced technologies, shifting customer needs, shortened product life-cycles, and increased global competition (Adam, 2014). Process innovation is the implementation of a new or significantly improved production or delivery method and includes significant changes in techniques, equipment and or software (OECD Oslo Manual, 2005). Market innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD Oslo Manual, 2005) and is related to pricing strategies, product packaging design properties, product placement, and promotion activities, which are in line with the Four P's of marketing (Kotler, 1991). An organizational innovation is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations and has a tendency to increase firm performance by reducing administrative and transaction costs, improving workplace satisfaction gaining access to non-tradable assets or reducing costs of suppliers (OECD, 2005).

3. Competitive Advantage

Porter (2000) states that competitive strategy is the search for a favourable competitive position in an industry, the fundamental arena in which competition occurs. Competitive strategies aim to establish a profitable and sustainable position against the forces that determine industry competition. This involves identifying sources of competition in the ever-changing environment, and developing strategies that match organizational capabilities to the changes in the environment (Arasa, 2014). A company attains a competitive

advantage whenever it has an edge over its rivals in securing customers and defending against competitive forces (Thompson & Strickland, 2009).

Sources of competitive advantage include high quality products, superior customer service and achieving lower costs than its rivals. To succeed in building a sustainable competitive advantage, a firm must try to provide what buyers will perceive as superior value. This entails either a good quality product at a low price or a better quality product that is worth paying more for (Porter, 2008). Hayes and Wheelwright (1984) suggest that organizations compete in the marketplace based on competitive priorities: quality, time, cost and flexibility.

4. Information Communication Technology (ICT) Sector in Kenya

In Kenya, the ICT Sector is considered a key driver of economic growth. According to an annual joint report by African Development Bank, (2014), UNDP and the Organization for Economic Co-operation Development (OECD) forecasted Kenya's steady economic growth at between 5% to 6% in 2014 and 2015, with the ICT being a key sector. The Communications Authority of Kenya (CAK, 2016) established that there were 39.7 million mobile subscribers compared to 38.3 million subscriptions, in the third quarter between June and August 2016, meaning there was a 3.7 per cent increase in mobile subscriptions in Kenya. The mobile penetration rate increased to 90.0 per cent from 89.2 per cent recorded last quarter. The number of mobile money subscriptions hit 26.3 million while the number of money transfer agents was recorded at 158,727. There were also 227.3 million mobile commerce transactions valued at Kshs. 404.1 billion, for purchased goods and services; while person to person money transfers were valued at Kshs. 429 billion. The CAK has enabled a liberal regulatory environment that has seen increased market competition and improved infrastructure investments resulting in the growth of mobile and internet penetration in Kenya. This has resulted to the creation of 25-technology hubs in Kenya. Kenya is among one of the highest rankings technology hubs in Africa, after South Africa and Egypt (GSMA, 2016).

Another indicator of growth is the annual mobile revenues that grew by 24.5 per cent to stand at Kshs.214.8 billion, whereas mobile investments grew substantially by 62.5 per cent to reach Kshs.52.2 billion (Communications Authority of Kenya, 2016).

Government policies have helped the ICT sector thrive. Some of the notable government interventions are lowering mobile termination rates and issuing unified telecommunication licenses. The national government also launched the Vision 2030 roadmap in 2006, as the blueprint to Kenya's development plan for 2008 to 2030 which uses technology as a key enabler, to achieving these goals. The study targeted Dimension Data East Africa who has leveraged its infrastructure and global footprint to support organizations with rapid deployment of emerging technologies (Nomnganga, 2014; Dimension Data, 2016).

Dimension Data PLC was founded in 1983, by three South African gentlemen. Dimension Data in Kenya started its operations in 2006 when it bought a local Kenyan Information Technology firm ICL Limited from the Sameer Group. Kenya is the headquarter that manages the East Africa operations. Dimension Data has its headquarters in South Africa. Its core business focuses on ICT services and solutions, technical expertise, global service delivery and an entrepreneurial spirit; to drive business enablers for its clients. Dimension Data, is a wholly owned subsidiary of a Japanese telecommunications company called the Nippon Telegraph and Telephone Corporation, NTT Group based in Tokyo, Japan. Dimension and Internet Solutions, formerly Access Kenya are sister companies offering complementary IT services in the East African market. Internet Solutions, formerly Access Kenya is a Pan-African telecom provider to both private and public sector. It has 20-years' experience in offering innovative end-to-end telecommunication solutions to government and corporate organizations.

5. Strategic Innovation and Competitive Advantage

Strategic innovation is as a result of innovative products, re-engineered processes and service delivery and organizational re-designs (Grant, 1996). Strategic innovations ultimately result in superior performance that stems from one or more dimensions of strategy, new industry focus and new product development that creates a whole new market (Walker, 2004). A study on the effect of strategic innovation on the performance of banks listed on the Nairobi Securities Exchange, established that most commercial banks had deviated from industry rules and adopted new and significant customer values through strategic innovation that had been integrated in the corporate strategy (Kemoli, 2012). A study on the innovative strategies of insurance companies found that they adopted strong technology-enabled innovative strategies that secured a competitive advantage and increased shareholder value (Karanja, 2009). A study by Azzam and Abou-Moghli (2012) on the impact of innovation on competitive advantage of banks in Jordan established a significant effect of that innovation on competitive advantage. Researching on the effect of innovation strategies on the performance of Telecommunication firms, Letangule (2012) observed that innovative strategies that were adopted greatly impacted their performance.

6. Methodology

The study adopted a descriptive research design. Primary data was collected from 63 senior and middle level employees of Dimension Data East Africa using a structured questionnaire. A pre-test was done, and based on the pre-test results, the instrument was amended accordingly. Data was analyzed using SPSS version 21 and the results of the analysis were presented using tables. Reliability of the collected data was tested using Cronbach's alpha. Table 1 presents the results of the analysis.

Cronbach's Alpha Based on Standardized Items	No. of Items
.807	4

Table 1: Reliability Statistics

The computed Cronbach's alpha was 0.807 which was above the minimum acceptable level according to Mugenda and Mugenda (2003) who suggested that a research study should have a reliability coefficient of 0.70 or more to imply a high degree of data reliability. This means that the collected data was reliable for analysis. These reliability values are similar to a study carried out on the impact of innovation on realizing competitive advantage in the banking sector in Jordan, which had reliability values of 0.704 to 0.886 of the study constructs, which implied consistent reliability (Azzam Azmi Abou-Moghli, 2012).

7. Results and Analysis

The study used descriptive and inferential statistics to analyze data from the questionnaires. Simple linear regression analysis was used to establish the effect of the independent variable on the dependent variable. The value of R-squared shows the amount of variation in the dependent variable caused by the independent variable. The unstandardized coefficient shows the amount of change in the dependent variable attributable to the amount of change in the predictor variable. The F-statistics measure the goodness of fit of the model. The statistical significance of the hypothesized relationship was interpreted based on R^2 , F, t, β and p values. The regression model used was: $Y = \beta_0 + \beta_1 X_1 + \epsilon$, where Y= Organizational performance; β_0 = Intercept; β_1 =Coefficients; X_1 =Strategic change and ϵ =Error term.

7.1. Study Response Rate

Out of the 77 questionnaires distributed to the respondents had, 63 questionnaires were returned fully completed resulting to a response rate of 80% which was excellent to undertake data analysis. A response rate of 50% - 60% is considered sufficient, while a rate of 61-70% is good and a rate above 70% is considered excellent (Mugenda & Mugenda, 2003).

7.2. Demographic Profile of the Respondents

The study sought to determine the age and gender of the respondents. Table 2 presents the results of the analysis.

Gender	Frequency	Percent
Male	44	69.84
Female	19	30.16
Age	Frequency	Percent
Below 25 years	5	7.9%
25 - 30 years	24	38.1%
31 - 35 years	13	20.6%
36 - 40 years	3	4.8%
41 - 45 years	10	15.9%
46 - 50 years	7	11.1%
Above 51 years	1	1.6%
Total	63	100

Table 2: Demographics of the Respondents

As indicated in Table 2, the number of the male respondents were more than that of the female respondents, where the male respondents were 44 (69.8%), while the female respondents stood at 19(30.2%) This indicated that the ICT sector in Nairobi was male dominated as they were more than two-thirds representation in employment. The survey also established that 5(7.9%) of the respondents were aged below 25 years, 24 (38.1%) were aged between 25-30 years, those aged 31-35 years were 13(20.6%), and respondents aged between 36-40, 41-45 and 46-50 were 3(4.8%), 10(15.9%) and 7(11.1%) respectively.

The respondents aged above 51 years were 1(1.6%). This demonstrates that a higher number of respondents were between the 25-30-years age bracket which is considered the youth or millennials.

7.3 Test of the Hypothesis

The study sought to establish the effect of strategic innovation on competitive advantage. The results of the regression analysis are shown Table 3.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.547 ^a	.299	.288	.97708

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.843	1	24.843	26.023	.000 ^b
	Residual	58.236	61	.955		
	Total	83.079	62			

Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.696	.355		4.773	.000
	strategic innovation	.530	.104	.547	5.101	.000

Dependent Variable: competitive advantage

Predictors: (Constant), strategic innovation

Table 3: Effect of Strategic Innovation on Competitive Advantage

8. Discussion

Table 3 indicates that $R = 0.547$ which implies that there was significant correlation between strategic innovation and competitive advantage. The R-square was 0.299 which implies that 29.9% variation in the dependent variable was explained by the independent variable. 70.1% is explained by other factors which are not part of this study. The ANOVA results indicate that the significance value of 0.00 is less than 0.05, ($F=26.023 < 0.05$ at 0.000) thus, the model is statistically significant in predicting the effect of strategic innovation on competitive advantage.

The unstandardized coefficient illustrates the effect of the independent variable and the dependent variable. The results show that the unstandardized coefficient B was 0.530 which implies that a unit increase of strategic innovation resulted in 0.530 increase in competitive advantage. The findings of this study agree with those of a study carried out by Kemoli (2012) who established a positive and significant effect of strategic innovation on competitive advantage.

9. Conclusion

The study sought to establish the effects of strategic innovation on competitive advantage in two ICT companies in Nairobi County. The study was conducted through a descriptive research design. The study adopted both descriptive and inferential statistics to analyze the data. The study tested and confirmed the hypothesis that strategic innovations have a significant and positive effect on competitive advantage. The implication is that organizations that embrace strategic innovation stand a chance to experience improvement in their performance.

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