



## **PROCESS INNOVATIONS AND THE PERFORMANCE OF FINANCIAL TECHNOLOGY COMPANIES IN KENYA**

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**Abstract:** Process innovations have continued to be the driving force of organizational performance of companies operating globally and locally. However, most of the financial technology companies operating in Kenya have continued to record deteriorating performance due to issues of process innovations. Despite the acknowledged fact that process innovations enhance performance of firms, still financial technology companies operating in developing countries and more especially in Kenya are underperforming. The study adopted descriptive research design to determine the problem under investigation. Target population of this study was the financial technology companies in Kenya. Because the population is small, a census was conducted in this study. A questionnaire was used in the collection of primary data. Validity of the research instrument was determined by using industry experts like lecturers and experienced employees working with financial institutions while reliability of the research instrument was tested using Cronbach's Alpha that stipulates that items of the instrument are deemed to be reliable if they meet the threshold or reliability coefficients of more than 0.7. The Statistical Package of Social Sciences (version 21) was used to process and analyze the data. Data was analyzed using descriptive statistics and inferential statistics. Descriptive statistics such as frequency distributions, percentages, means, modes and standard deviations and frequency tables were used to summarize and relate variables which were attained from the administered questionnaires. Regression analysis was used to establish the effect between variables of the study. The results were presented in tables. The study found that process innovation had a positive and significant effect on the performance of financial technology companies in Kenya. An improvement in process innovation led to the performance of financial technology companies in terms of increased customer satisfaction, increased market share and increased staff satisfaction. It is therefore important for the financial technology companies to continue coming up with process innovations that will then be able to drive their competitive performance.

**Key Words:** Financial Technology, Process Innovation, Organizational Performance

### **Introduction**

Strategic innovations, such as process innovation, are considered a strategic tool that can be used to align the firm's resources and capabilities with opportunities in the external environment in order to enhance survival and long term success of the organization (Adam & Josee, 2014). One of the ways an organization can secure itself from surprises and equally improve on its productivity while staying relevant is through innovations. Ramadani and Gerguri (2011) suggested that strategic innovation is a process that entails development of new products, services, new technological process, new organization or the enhancing of existing products or services, enhancement of technological processes and the existing organization. Innovations are important for an organization to stay relevant. What causes an organization to be successful yesterday may be the cause of its failure today or tomorrow and this is the reason all organizations need to adapt and evolve to meet the changing needs of their clients (Solomon *et al*, 2012).

Organizations adopt different types of innovation as they struggle to outwit their competitors in different ways. These innovation types include, but are not limited to process innovation and product innovation. The focus of this study was on process innovation. Process innovations involve adoption of enhanced or novel technologies that help the firm to meet customer demands while remaining competitive in the business environment. Process innovations can help the organization in the achievement of its key performance indicators that include but not limited to reduced operational costs, improved product quality while meeting the customer demands (Bora & Bulut, 2008).

With increased competition, changing technology, changing consumer needs and influence of globalization, most of the companies operating in the global and local business environment have continued to recognize numerous process innovations as a measure of improving their performance in the turbulent business environment (Shisia *et al*, 2014). Despite the fact that process innovations contribute to enhanced organization productivity, it is noted that majority of companies operating in developing countries in multiple sectors and more especially in Kenya are experiencing deteriorating performance due to issues of process innovations (Ngugi & Karina, 2013). By extension, it is observed that process innovations pursued by majority of organizations are not fully implemented in organizations due to structural and management issues (Hayes, Hunton & Reck, 2010).

Innovation is considered to be a critical requirement for the growth and profitability of organizations. For private sector organizations operating in increasingly competitive market, innovation is often a condition for simple survival. The capability to innovate is evermore viewed as the single most vital factor in developing and supporting competitive advantage (Tidd, 2001). According to Davila, Epstein and Shelton (2009), innovation is a necessary ingredient for sustained success and is an integral part of the business. Much weight has been accorded on building innovative institutions and the management of the innovation progression as necessary elements of institutional survival.

Despite the acknowledged fact that financial technology companies operating in Kenya have significantly contributed to social economic developments, a number of challenges are experienced when it comes to implementation of strategic innovations (Moturi, 2010). With the evolving nature of innovations, financial technology companies in Kenya have continued to experience deteriorating performance due to issues of strategic innovations. Limited studies which have been conducted internationally and locally clearly indicate conceptual and contextual gaps (Mwendwa *et al*, 2016). A study by Matevu and Kerongo (2015) was confined to different variables like internet and mobile banking but not process innovation, which was the independent variable in this study. Further, it was noted that the study focused on commercial banks but not financial technology companies operating in Kenya. Another study by Mwendwa *et al*. (2016) was limited to technological innovations among commercial banks in Meru town. A study by Adhiambo (2014) was limited to product innovation and failed to address process innovation. Ngugi and Karina (2013) study was also limited to innovation strategies on commercial banks. A study by Ghikas (2013) focused on business process outsourcing strategy in Standard Chartered Bank Kenya Limited. Based on the foregoing, this study sought to address the effect of process innovations on performance of financial technology companies in Kenya.

The research hypothesis of the study was:

**H<sub>01</sub>**: Process innovation has no significant effect on the performance of financial technology companies in Kenya.

### **Theoretical Foundation**

The study was anchored on the dynamic capability theory. Dynamic Capability Theory was founded by David Teece (1977). The theory seeks to explain how companies achieve two contradictory imperatives. They must be both stable enough to continue to deliver value in their own distinctive way

and resilient and adaptive enough to shift on a dime when circumstances demand it. Dynamic capability which propels a company into gaining competitive advantage by focusing on the things it does exceptionally well. Developing of the capability is a time-consuming process. Therefore, it might be quicker and cheaper to find a partner who already has certain capability (Hayes, Hunton & Reck, 2010). Dynamic Capability theory argues that a firm has an opportunity to gain competitive advantage by outsourcing non-core activities to firms and individuals who already have the expertise. Dynamic capabilities are unique to each company and rooted in the company's history. They are captures, not just in routines but in the business models that go back decades and are difficult to imitate, otherwise referred to as signature processed (Smit, 2010).

Utterback and Abernathy (2010) concurred that a firm can gain and sustain competitive advantage by accessing its key resources in a way that spans the boundaries of the firm. Competitive advantage can be embedded in a set of relationships across the boundaries of the firms, rather than residing inside an individual firm (Vani & Meenakshi, 2010). Relational theories are important for the study of business process outsourcing, as the clients and the service providers that make relation-specific investments and are able to combine resources in unique ways to generate relational rents, can gain competitive advantage over the business process outsourcing clients and service providers that are unable to do so (Supo, 2015). This theory is applicable in this study based on the notion that financial technology companies should recognize the need for responding to business dynamics for their competitiveness. Adoption of the new approaches in service delivery and continuous improvement of processes will result in enhanced performance.

### **Empirical Literature Review**

Yusufu (2013) established that process innovation is the fundamental driver of organizational efficiency and effectiveness. It emerged that process innovation is the implementation of a new or significantly improved production or delivery method. It entails significant changes in techniques, equipment and information technology. Effective integration of information technology into an organization's business processes has become increasingly crucial to prosperity. The major intent of process innovation is to decrease unit costs of production, increase quality and general product improvement. However, it is noted that the study focused on different variables like technology and leadership.

Moturi (2010) on the other hand established that process innovation was one of the strategic innovation practices that enhanced performance of government ministries. Despite challenges of implementing technology, the IT quality function should focus on broad, cross-functional quality issues that are high priority and critical in nature to resolve. From an IT perspective, the scope should include such areas as application development, networking, databases, data centers and end-user support. From a business perspective, the function's responsibilities should include virtually the entire organization because most business areas will likely have some sort of IT infrastructure or application.

Sullivan and Dooley (2009) aver that process innovation is that act of making changes that contribute to significant improvement in the process of producing the products or services. Critically, process innovation is all about operational activities in order to attain competitive advantage by enhancing the quality of offerings and efficient delivery method than competitors. Dobni (2010) on the other hand concurs that process innovation is considered as the introduction of new management approaches, new production methods and technology to improvise the production and management process. Adhiambo (2014) suggests that process innovation can help the organization to reduce the cost of production, enhance quality features and also reduce distribution costs.

Ramadani and Gerguri (2011) ascertained that process innovations can result to enhanced partnerships among organizations and customer service delivery. Automated processes are likely to produce better

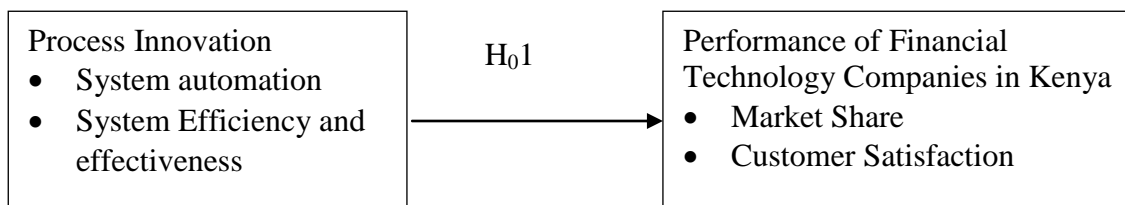
results compared to conventional methods of operation which are bureaucratic in nature. It was concluded that there is positive correlation between process innovation and organizational performance. Organizations cannot achieve competitive edge if they put little effort towards improving production, distribution and procurement processes. However, it was noted that the study was confined to innovation principle but failed to address strategic innovations on performance of technology financial companies.

### Conceptual Framework

The conceptual framework outlined below shows the effect of process innovation on performance of financial technology companies in Kenya. A general conceptualization diagram as shown below illustrates that firm's performance was the dependent variable and process innovation was the independent variable.

#### Independent Variable

#### Dependent Variable



**Figure 1: Conceptual Framework**

As illustrated in Figure 1, it is conceptualized that Financial Technology Companies operating in Kenya are likely to experience significant improvement in their performance by improving and developing new products and services regularly. Automation of process activities will result to enhanced efficiency and effectiveness of service delivery among customers.

### Research Methodology

The study adopted a descriptive survey research design to establish the effect of strategic innovations on the performance of financial technology companies in Kenya. The study targeted the thirty six financial technology companies in Kenya and since the target population is small, the study was a census where all the members of the population were considered. The study relied on primary data, which was collected through semi-structured questionnaires with open and closed-ended questions. Questionnaires were the main instruments of data collection based on the fact that they provide an opportunity to collect data systematically and analyze it for strategic decision making.

The validity of the instrument was determined by seeking opinions of experts in the field of study, especially the researcher's supervisor and industry experts. Cronbach's alpha coefficient was used to test the reliability of the questionnaire. A cronbach's alpha coefficient of 0.7 and above was adequate to confirm the reliability of the instrument (Mertler & Vannatta, 2010). A pilot study was conducted on five Financial Technology companies headquartered in Kampala, Uganda. The study found that the Cronbach's alphas for all the variables were above 0.7. Mean Cronbach's alpha for all the variables was 0.899, which was above the recommended threshold of 0.7.

The data collected was analyzed using descriptive statistics (measures of central tendency and measures of variations). Once the data was collected, the questionnaires were edited for accuracy, consistency and completeness. Data was analyzed using Statistical Package for Social Sciences (SPSS version 21) based on the items of the questionnaires. In particular mean scores, standard deviations, percentages and frequency distribution were used to summarize the responses. Regression analysis was adopted to determine the effect between variables. Simple regression method was conducted at 95%

confidence level and 5% significance level. Results were presented in form of tables. Specifically the regression model was of the form below:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where;

Y=Performance of Financial Technology Companies in Kenya;

$\beta_0$ = Y intercept;

$\beta_1$  = Regression coefficients;

$X_1$ = Process Innovations; and

$\varepsilon$ = Error term

## Results and Discussion

The researcher prepared and sent out 36 questionnaires and out of the 36 questionnaires, 34 questionnaires were completed and returned accounting for 94.45% of the population which is an acceptable response rate.

### Profile of Respondents and Demographic Characteristics

Table 1 below, presents the age of the respondents.

**Table 1: Summary of Respondents Age**

Age bracket	Frequency	Percent
Below 25 years	0	0.0
26-35 Years	13	38.2
36-45 Years	7	20.6
Above 45 Years	14	41.2
<b>Total</b>	<b>34</b>	<b>100.0</b>

From table 4.1 above, 41.2 % were above 45 years of age, 38.2% were between 26 and 35 years of age 20.6% were between 36 and 45 years of age while no participant was below the age of 25 years. These results showed that a majority of the participants were senior in age and this is consistent with the fact that to be in senior management within an organization, it takes some years. .

Table 2 below presents the gender of the respondents.

**Table 2 Summary of Respondents Gender**

Gender	Frequency	Percent
Male	24	70.6
Female	10	29.4
<b>Total</b>	<b>34</b>	<b>100.0</b>

From the results, 70.6 % of the respondents were male while 29.4% of the respondents were female. This finding is consistent with the current setup where a majority of those in senior management of most companies are male.

Table 3 presents the length of stay in the company by respondents.

**Table 3 Summary of Respondents Stay in Company**

Period	Frequency	Percent
Between 2 and 6 Years	9	26.5
Between 7 and 11 Years	20	58.8
Above 12 Years	5	14.7
<b>Total</b>	<b>34</b>	<b>100.0</b>

From the results, 58.8% of the respondents had stayed for between 7 and 11 years, 26.5 % between 2 and 6 years, 14.7 % above 12 years. This finding shows that the majority of the respondents were senior and had stayed with the companies long enough to make important strategic decisions on behalf of the company.

### Descriptive Statistics on Process Innovations

Table 4 presents the descriptive statistics of responses on process innovations.

**Table 4: Results of descriptive statistics on Process Innovations**

	N	Mean	Mode
My organization's systems are computerized to improve efficiency and effectiveness	34	4.59	5
Employees generate online reports regularly	34	4.44	5
Employees respond to customer queries through online systems	34	4.68	5
Employees serve customers on real time basis without delay	34	4.62	5
All employees are IT literate	34	4.38	5
Meeting are conducted using teleconference	34	4.47	5
Employees are trained on how to interact with systems	34	4.59	5
My organization has reliable processes that exceed customer expectations	34	4.65	5

The statement "Employees respond to customer queries through online systems" had a mean of (M=4.68) and a mode (Mode=5.00). This indicates that the respondents strongly agreed that their respective companies have their employees respond to customer queries through online systems. The statement "My organization has reliable processes that exceed customer expectations" had a mean of (M=4.65) and a mode of (Mode=5.000). These statistics show that the respondents strongly agree that their organizations have reliable processes that exceed their customer expectations. The statement "Employees serve customers on real time basis without delay" had a mean of (M=4.62) and a mode of (Mode=5.00). This clearly indicates that the respondents strongly agree that their employees are generally able to serve their customers on a real time basis without any delays. The statement "My organization's systems are computerized to improve efficiency and effectiveness" had a mean of (M=4.59) and mode of (Mode=5.00) in terms of the respondent feedback. This indicates that majority of the respondents strongly agree that their organizations/ companies have computerized systems meant to improve their efficiency and effectiveness. The statement "Employees are trained on how to interact with systems" had a mean of (M= 4.59) and a mode of (Mode=5.00). The analysis of the responses based on these statistics shows that the respondents strongly agreed that all their employees are trained on how to interact with systems. The statement "Meeting are conducted using teleconference" had a mean of (M= 4.47) and mode (Mode=5.00). The respondents, based on the statistics, strongly agree that most of the company meetings are conducted using teleconference. The statement "Employees generate online reports regularly" had a mean of (M=4.44) and a mode of (Mode=5.00). This indicates that the respondents strongly agreed that their employees generate online reports on a regular basis for consumption within and outside the company. The statement "All

employees are IT literate” had a mean of (M= 4.38) and a mode of (Mode=5.00). These statistics show that the respondents strongly agreed that all their employees are “IT” literate.

### Descriptive Statistics on performance of Financial Technology Companies in Kenya

Table 5 presents descriptive statistics of responses on performance of the information technology companies in Kenya.

**Table 5: Results of descriptive statistics on performance of the information technology companies**

	N	Mean	Mode
Customers are highly satisfied	34	4.82	5
Costs of operation have reduced significantly	34	4.79	5
Employee motivation has increased	34	4.88	5
Customer numbers have increased	34	4.94	5
Company market share higher than others	34	4.65	5

From table 5 above, the statement “Customer numbers have increased” had the highest mean scores (M=4.94). This means that respondents agreed that customer numbers have increased in the recent past. The statement had a mode of (Mode=5) meaning that the respondents strongly agreed that their customer numbers had increased. The statement “Employee motivation has increased” had a mean of (M=4.88) meaning the respondents agreed that the employee motivation had been increasing. The statement had a mode of (Mode=5.00) meaning that the respondents strongly agreed their employee motivation had increased. The statement “Customers are highly satisfied” had a mean response of (M=4.82) meaning that the respondents strongly agreed that their companies’ customers were highly satisfied. The mode of (Mode=5.00) confirms the fact of agreement by the respondents. The statement “Costs of operation have reduced significantly” had a mean of (M=4.79) meaning respondents strongly agreed that their cost of operation had significantly reduced. The statements had a mode of (Mode=5.00) meaning that the respondents strongly agreed that their cost of operation had reduced significantly. The statement “Company market share higher than others” had a mean of (M=4.65) and a mode of (Mode=5.00). These statistics show that the respondents strongly agree that they have a higher market share compared to their competitors.

### Hypothesis Testing

Regression analysis is used to establish the effect between process innovation and performance of financial technology companies in Kenya and also explains the power of each of the name them in accounting for the variations in the dependent variable. Regression analysis was conducted between process innovation and the performance of financial technology companies.

**H<sub>0</sub>1:** Process innovation has no significant effect on the performance of financial technology companies in Kenya

**Table 6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.513 <sup>a</sup>	.623	.332	.26432

a. Predictor: (Constant), Process Innovation

From the model summary in table 6, the R<sup>2</sup> was found to be 0.623. This suggests that process innovation explained 62% change in the performance of the financial technology companies in Kenya.

The remaining 38% suggest that there are other factors that explained the variation of performance of the financial technology companies that are not process innovation.

**Table 7: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig
		B	Std. Error	Beta		
1	(Constant)	2.433	.399		6.122	.000
	Process Innovation	.143	.111	.377	1.311	.021

a. Dependent Variable: Organizational Performance

The standardized beta coefficients ( $\beta = 0.377$ ,  $p = 0.021$ ) indicate that process innovation strategies are significant predictors of performance of financial technology companies in Kenya. This implies that an increase in process innovation leads to a 37.7 percent increase in performance of financial technology companies in Kenya.

Thus, hypothesis one which states that process innovation has no effect on the performance of financial technology companies in Kenya was rejected and the alternative hypothesis that states that process innovation has an effect on the performance of financial technology companies in Kenya is accepted.

## Conclusions

The objective of the study was to establish the effect of process innovation on the performance of financial technology companies in Kenya. Process innovation is a key determinant of organization performance. The improved performance can be seen in the form of increased customer satisfaction, increased market share and increased staff satisfaction. The regression results supported the fact that there is a positive relationship between the implementation of process innovation and the performance of financial technology companies in Kenya. It is therefore important for the financial technology companies to continue coming up with process innovations that will then be able to drive their competitive performance.

## Recommendations

Financial technology companies in Kenya should consider process innovation strategies as key strategic initiatives in the industry. Being a service industry, the impact of process initiatives on performance is significant. As the companies continue to grow and as the industry matures, process innovations take greater meaning as such improvements see a greater than normal increase in performance as the companies implement the process innovations.

There is need for financial technology companies to embrace and implement a Business Change Management department or division. This department and its leadership will be charged with handling all process innovations and championing the same from initiation until implementation. Such a team will also need to be cross-functional. In addition, financial technology companies should come up with a standards bureau that will handle all standards related implications of the changes that the companies will be making. This will ensure that the processes can be reviewed and be approved by an internal standards body other than what the Central Bank of Kenya (CBK) does.

## Areas for Future Research

The study provided great insights into the effect of process innovations on the performance of financial technology companies in Kenya. An in-depth study on the effect of the market innovations on the performance of financial technology companies is recommended. It's also recommended that the study can be extended to the Eastern African market to see the impact of the process innovations on the



performance of financial technology companies in the region. Future studies can also use other research instruments such as interviews, focus groups discussions and collection of secondary data in order to glean further insights that can help financial technology companies adopt process innovations in a bid to drive performance.

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