



THE RELATIONSHIP BETWEEN PROCESS INNOVATIVE STRATEGIES AND PERFORMANCE OF KENYA TEA DEVELOPMENT AGENCY FACTORIES IN KENYA

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ABSTRACT

Kenya Tea Development Agency's primary role is to collect plucked tea, process and market tea products on behalf of farmers. Despite the crucial role it plays in Kenya's economy, the tea sector still faces various challenges such as high cost of production, fluctuations in the international market and emerging issues such as COVID-19 pandemic. To effectively improve the performance of the tea industry, process innovative strategies are widely acknowledged for improving productivity and competitiveness in the sector. This study examined process innovative strategies and performance of KTDA factories in Kenya. It was premised on Schumpeterian theory of innovation and Discovery theory. A correlational and cross-sectional research design was adopted in this study. The target population was 974 employees from 71 KTDA factories in Kenya. A sample of 283 respondents was drawn from four regions using a stratified sampling method. The main instrument of data collection was a semi-structured questionnaire administered to top, middle, and lower-level employees of KTDA factories in Kenya. The questionnaire was pre-tested to ensure its validity and reliability. An aggregate Cronbach Alpha coefficient of 0.901 was obtained. Multiple linear regression and model was employed to determine the significance of the hypothesis. The findings revealed that process innovative strategies ($\beta = 0.530$, $R = 0.711$, $p < 0.05$), had a positive and significant relationship with performance of KTDA. The study recommended that stakeholders and interested parties in the industry should make policies that goes toward operationalizing process innovative strategies. The study also recommended improving infrastructure in tea processing for improved tea products. The findings might be useful to the industry stakeholders in formulating process innovative strategies that would help improve their fortunes.

Key Words: *Process Innovative Strategies, Organization Performance, Tea Industry*

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INTRODUCTION

Currently, innovative strategies are required to ensure organizations are able to adapt, change and improve despite emerging issues that affect external environment of the business. Currently, the business external environment is faced with COVID-19 pandemic which has led to organization changing the normal production (Hamid, Abdul, Hosna, Waliul and Kamruzzaman, 2020). Majority of the organizations have adopted digitization process to reduce direct contact between employees and reduce spread of the contiguous virus. Therefore, organizations should venture into appropriate technology as well as process innovative strategies to enable them remain competitive.

Process innovative strategies is the use of a new methods of delivery or production which has been greatly improved. The significant changes could be in terms of the equipment/machines, techniques or software used. The effect they have is to reduce the costs used in production or delivery and in turn increase their quality of delivery or product. Process innovative strategies can also be better use of workforce, different ways the information moves, different job description and different materials used as input in the production of goods and services (OECD, 2005). Process innovative strategies are aimed at making the production efficient and effective by improving or changing the way the organization does its work. Suroso and Azis, (2015) confirmed that process innovative strategies are about taking up a new production process that results in a much better delivery method. This also means a great change in the software, techniques used and also the equipment used in production.

These strategies aim at lowering the costs and time involved in the production of a product. This is through efficiency and effectiveness that is gained through improved product quality, less resources used and reduction of time used (Gunday, Ulusoy, Kilic and Alpkan, 2011). El-Kassar and Singh (2019), found that process innovative strategies assisted in improving performance of organization. Similarly, Sintset, Nekoumanesh and Yang (2013), found that

process innovative strategies is a step by step process that requires time and a change in organizational culture to enable organizational perform.

Rosli and Sidek (2013), found that the association between process innovative strategies and organization performance to be positive, in small and medium enterprises. Njeri (2017), found another view in which the study reports that some of the impeding factors in process innovative strategies in small and medium enterprises include the inadequate trained manpower, inadequate finances, lack of adequate research and development. A research conducted in Kenya by Martin and Namusonge (2014), revealed that 75 percent of businesses used a strategy of investing in machineries in the production process even though SMEs found the implementation very expensive and demanding process. In the research, one of the findings was that, process innovative strategies contribute in terms of reduction of costs.

According to Nguyen (2009), the tea industry has involving processes in which huge resources and logistics are required. Due to inflation and interruptions in the supply chain due to the COVID-19 Pandemic, the costs of items supplied to KTDA has continued to increase. To mitigate the interruptions in the supply chains, which have led to cost challenges. KTDA has set its strategic plan (2021-2025) with one of the main objectives being to improve operational efficiency and also reduction of costs. KTDA as an organization are continuously implementing process innovative strategies and this is again scaled down to the different subsidiaries and factories.

Problem Statement

Tea sector in Kenya contributes significantly to the economy, however it faces various challenges. KTDA needs to convince farmers to keep their tea plantation by reducing their costs and increasing their returns. While previous studies provided insights about the tea sector, they showed little guidance on the relationship between process innovative strategies and performance of KTDA

factories in Kenya. Previous research indicated that process innovative strategies can improve the performance of organizations through improvements in revenue, cost cutting, products quality, quantity, market share, customer satisfaction among others. However, little is known regarding the relationship between process innovative strategies and performance of KTDA factories in Kenya. Therefore, this study investigated the relationship between process innovative strategies and the performance of KTDA factories in Kenya.

Objective of the Study

The objective of this study was to analyze the relationship between process innovative strategies and performance of Kenya Tea Development Agency Factories in Kenya.

Literature Review

The study utilized the following theories in developing its literature having found them to be the most relevant; Schumpeterian theory of innovation and Discovery theory. The schumpeterian theory of innovation theory is part of the innovative strategies based models put forward by Joseph Schumpeter a renowned economist of the twentieth century (Schumpeter, 1939). The explanation put forward by Schumpeter about the process of innovation is the same that keeps being applied in modern day and its internationally driven economy (Carayannis and Ziemnowics, 2007). The theory puts forward a variety of reasons for being the reason that there is continuous change in both markets and economy. The changes in the economy in this case is process innovative strategies.

Schumpeter idea of development in terms of the economy is to apply innovative strategies which may include the application of new methods of production, (Schumpeter, 1939). He terms creative destruction as process where organization transformation which is the reason for a shift of an organization economically for example through innovative strategies.

Creative destruction in this theory involves breaking old ways of doing things and creating new mental models which encourages introduction of new products and services (Schumpeter, 1939). Innovative strategies are thus strategies that leaders use to come up touse new processes methods. This theory supposes that the aim of innovative strategies is to create new processes which gives the organization a competitive edge against competitors. Schumpeter concludes that innovative strategies involves coming up with new processing methods(Schumpeter, 1939). Based on Schumpeterian theory, innovative strategies are the foundation for competitiveness and sustained economic growth.

According to discovery theory when there are market or industry imperfections an opportunity to produce new products or services exists (Barney, 1986 and Kirzner, 1997). In Discovery Theory, competitive imperfections are assumed to arise from external factors, such as changes in technology, consumer preferences, pandemics or some other attributes of the context within which an industry or market exists (Kirzner, 1973). According to Shane (2003), changes in political, regulatory, technology, social and demography are some of the things that cause disruption in the competitive equilibrium that is present in the industry or market, thereby making new opportunities for creation of new products, processes, marketing strategies and management methods. The focus on this external factors create opportunities to produce new products or services, processes, marketing strategies and different management methods which leads to important implications.

Discovery theory views innovative strategies as looking to the environment for opportunities to take advantage of to be able to have new products or services, new processes, new marketing methods and new management methods. If awareness of the opportunities was there to everyone, and all had skills required to exploit them then all organization would take advantage of them, however this is not

the case for everyone (Barney, 1986; Schumpeter, 1939).

The significant changes associated with process innovative strategies are in terms of the equipment/machines, techniques, or software used. The effect they have is to reduce the costs used in production or delivery and in turn increase their quality of delivery or product. Process innovative strategies can also be made better by the use of workforce in a different way, the way the information moves, different job description and different materials used as input in the production of goods and services (OECD, 2005). Process innovative strategies are aimed at making the production efficient and effective by improving or changing the way the organization does its work. Suroso and Azis, (2015) confirmed that process innovative strategies are taking up a new production process that results in a much better delivery method. This also means a great change in the software, techniques used, and also the equipment used in production.

Process innovative strategies aim at lowering the costs and time involved in the production of a product. This is through efficiency and effectiveness that is gained through improved product quality, fewer resources used and reduction of time used (Gunday, Ulusoy, Kilic and Alpkan, 2011). Minai and Lucky (2011) found that business process reengineering in process innovative strategies leads to less time used in production thus leading to low costs in the production of a product. This can be achieved through innovative improvement of supply chain management, logistics, improvement in processing technology to ensure effective and efficient production. El-Kassar and Singh, (2019) found that process innovative strategies assisted in improving performance of organization. Similarly, Sintset, Nekoumanesh and Yang (2013) found that process innovative strategies should be step by step process that require time and change in organizational culture to enable organizational performance.

Rosli and Sidek, (2013) found that the association between process innovative strategies and organization performance was positive, this research was done in small and medium enterprises. The same findings were confirmed by Olughor, (2015) in a research that revealed that process innovative strategies were an important feature in financial and market performance. Njeri, (2017) found another view in which she reports that some of the impeding factors in process innovative strategies in small and medium enterprises include the inadequate trained manpower, inadequate finances, lack of adequate research and development. A research conducted in Kenya by Martin and Namusonge, (2014) revealed that 75 percent of businesses found an enormous effort made in investments of current machineries used in the production process one of the strategies used in the production process even thou it was found that SMEs found the implementation very expensive and demanding process. In the research one of the findings was that the contribution made by process innovative strategies was cost reduction.

Honarpour, Jusoh and Nor, (2012) on total quality management efforts of an organization, they stated that there was a positive effect of process innovative strategies on performance. On cost reduction however, Peters, (2008) argues that not all process innovative strategies lead to savings gotten from a reduction in cost but some innovations make the organization be able to market their products at competitive prices. One can therefore conclude that other process innovative strategy indicators such as better speeds, value addition, flexibility and efficiency in costs positively affects the performance of an organization (Gunday, Ulusoy, Kilic and Alpkan, 2011)

According to Minai and Lucky, (2011) business process reengineering and quality function deployment are what constituents of process innovative strategies. For a supplier to develop products of higher quality and at lower costs it requires them to be efficient and to work on the

productivity of the products continuously. The cost reduction found therein might or might not be passed to customers through the reduction of prices. Thus, process innovative strategy has a benefit for both the supplier and also the consumers. Both the supplier and customers provide standards of quality that can be acquired and maintained. The process innovative strategies may include enterprise engaged consultancy, adoption of supply chain concepts and global reference model (GRM).

In the study different municipalities in Sweden were studied, it investigated how waste management department applied process innovative strategy. In the research qualitative study was used in the four municipalities that were under study, also grounded theories method was applied to investigate the impact process innovative strategies had in waste collection process on the performance of municipalities in Sweden. Under this study, the findings were that, the use of process innovative strategies had a positive implication on the financial and customers' performance of municipalities. It was also discovered that in process innovative strategies step by step process was important for a successful process innovative strategy adaptation rather than the use of a big bang change. There was also a positive relation in municipalities' performance when corporate social responsibility was applied in an organization as a self-regulating mechanism which also contributed to organizations environmental sustainability.

Sintset, Nekoumanesh and Yang, (2013) did qualitative study of Swedish municipalities to examine process innovative strategies impact on the performance of the organization. Majority of European Union programs focuses mainly in ensuring environment sustainable development which require innovative strategies. Process innovative strategies plays a significant role in management of waste to ensure sustainable environment. Qualitative approach was used to

collect data from four Sweden's municipality by using grounded theories method. The results indicated that process innovative strategies had positive influence on financial and customer performances within the municipality. Similarly, Sintset, Nekoumanesh and Yang, (2013) found that process innovative strategies should be step by step process that require time and change in organizational culture to enable organizational performance.

El-Kassar and Singh, (2019) found that process innovative strategies assisted in improving performance of organization. Rosli and Sidek, (2013) researched on SMEs who agreed that process innovative strategies positively affected organization performance. Olughor, (2015) affirmed this finding in a study that revealed that in both market and financial performance process innovative strategies was an important feature. On the other hand, Njeri, (2017) reported that the lack of finance, lack of skilled workforce, inadequate research and development are some of the things that hinder process innovative strategies in SME sector. Martin and Namusonge, (2014) carried out a study in Kenya which revealed that 75 percent of businesses made major investment efforts in purchase of modern machineries as a process innovative strategy, the findings further showed that SMEs found this difficult and expensive for them to cope with. In the study 56 percent agreed that process innovative strategies led to reduction in costs.

Conceptual Framework

In this study the dependent variable was KTDA performance measured by Profitability, Cost Cutting, Customer satisfaction and Products quantity/ quality while Process Innovative strategies is indicated by New Processing Methods, Improved production efficiency, Business Process Re-engineering and Continuous Process Innovative Culture as indicated in figure 1.

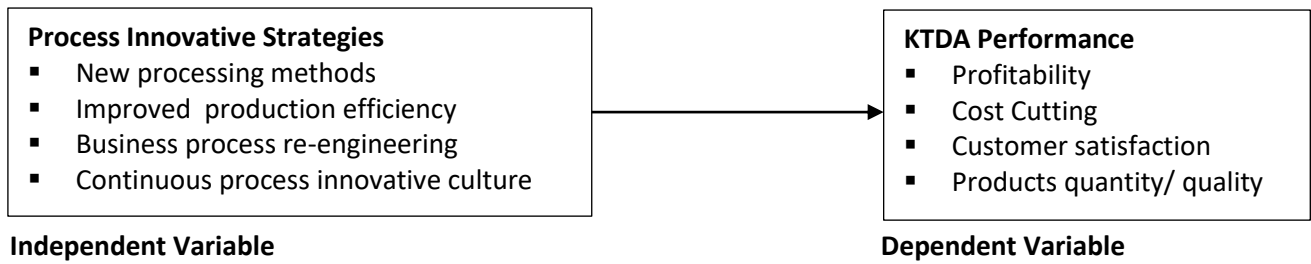


Figure 1: Conceptual Framework

From the literature above, innovative strategies are broadly seen as an essential component of competitiveness, embedded in the processes, within an organization. There is a clear consensus that process innovative strategies are the reason for growth or decay of an organization, but there is a substantial lack of structured evidence concerning this. By identifying the relationships between process innovative strategies and organization performance, the research seeks to find out its effect on the performance of the organization.

METHODOLOGY

The study adopted correlational as well as cross-sectional survey research design, correlation is associated with not only testing the hypothesis but utilizing inferential statistics comprising of correlation analysis (Saunders, Lewis, & Thornhill, 2011). In this study the location of interest was KTDA factories in Kenya spread in 14 Counties. These consisted of 71 factories. The target population was 974 employees from top level employees, middle level employees and lower level employees of KTDA managed factories. The main instrument of data collection was a semi-structured

questionnaire administered to top, middle, and lower-level employees of KTDA factories in Kenya. The questionnaire was pre-tested to ensure its validity and reliability. An aggregate Cronbach Alpha coefficient of 0.901 was obtained which was above the threshold of 0.7. Data collected was screened, coded, entered, and analyzed using inferential statistics where multiple linear regression was employed to determine the significance of the hypothesis.

Process Innovative Strategies and Performance of KTDA factories in Kenya

H₀: There is no significant relationship between process innovative strategies and performance of Kenya Tea Development Agency Factories in Kenya.

A simple regression model was used to examine the relationship between process innovative strategies and performance of Kenya Tea Development Agency Factories in Kenya. This model was given as;

$$Y = \beta_0 + \beta_1 X_1 + e \dots \dots \dots \text{Model}$$

Y = Performance, β_0 = Constant Term, β_2 = Beta coefficients, X_2 = Process innovative strategies ϵ = Error term. This results were summaries in Table 1.

Table 1: Process Innovative Strategies and Performance

Model	N	Unstandardized Coefficients		Std. Error	Standardized Coefficients Beta	t	Sig.
		B					
(Constant)		2.131		.136		15.686	.000
1 Process Innovative Strategies	283	.530		.031	.711	16.968	.000

a. Dependent Variable: Organizational Performance

R =0.711

R² =0.506

F= 287.9

p<0.05

Source: Research Data, (2022)

The finding indicated that there existed a strong positive relationship between process innovative strategies and organizational performance ($R=0.711$). The R^2 is the coefficient of determination which indicated that the explanatory power of independent variable was 0.506. This means that a variation of 50.6% performance of KTDA was associated to process innovative strategies while other factors contributed 49.4% ($R^2 =0.506$). The findings further, indicated that β coefficient of 0.530 which implies that every unit increase of process innovative strategies contributes 0.530 increase in organizational performance. The results showed that the influence of process innovative strategies on performance of KTDA factories in Kenya was significant ($F=287.9$, $p<0.05$). The null hypothesis that there is no significant relationship between process innovative strategies and performance of Kenya Tea Development Agency Factories in Kenya was rejected. Hence, process innovative strategies had strong positive relationship with the performance of KTDA.

Rosli and Sidek (2013), similarly found that process innovation positively affected organization performance. Current study found that process innovative strategies did affect directly the performance of organizations. Minai and Lucky (2011), process innovative strategies was achieved through continuous improvement of product development which concurs with current study. The study also pointed the adoption of supply chain concepts which was important in ensuring logistics management in the organization.

CONCLUSIONS AND RECOMMENDATIONS

The objective analyzed the relationship between process innovative strategies and performance of Kenya Tea Development Agency Factories in Kenya. According to the results KTDA factories had operations that used process statistical data to optimize effectiveness, quality and efficiency of tea processing. The factories have also reduced cost and improved on time through adaptation of emerging technologies. There is also an extensive

improvement in efficiency in collection of green leaf based on logistic innovativeness which allows prompt delivery of tea. Due to improvement in scheduled routines and ability to manage high capacity of green leaves in the factory, the factories have improved production time. Modern technology has enabled the factories to enhance on transparency in weighting and improve the turnaround time for deliveries and processing time of green tea from sourcing the tea from farmers to processing.

The findings revealed that process innovative strategies had positive statistical relationship with performance KTDA factories. Therefore, process innovative strategies enhanced the performance of organization.

The objective concluded that process innovative strategies had positive statistical relationship with performance of KTDA factories in Kenya. The factories utilized statistical data in optimizing the control to ensure that there was quality, effectiveness and efficient tea processing. Technology was also adopted in logistic management in improving turnaround time, weighing technology, prompt delivery and processing of green tea. Time production was achieved through innovation in management of production routines and improvement of processing time.

The study recommended that new production line should be increased for specialized tea besides the black tea. Since, there is efficiency in terms of logistic turnaround time and product innovation available. Using existing infrastructure in processing, tea products can be differentiated and hence improve the market through product differentiation.

Suggestion for Further Studies

The study also suggested that since the research was limited in scope, a larger sample with a bigger population can be used for confirmatory analysis and validation.

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