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# Effect of Product innovation on Financial Performance of Private Manufacturing firms in Kenya.

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## **ABSTRACT**

Product innovation is a process that has more like a usual sensation in the current world of business. It has made many firms to react positively and successfully to new openings and unanticipated stress so as to re-think their superiority edge. One of the captious aspects of product innovation, it focuses on improving revenue growth for the firm to be able to meet its funding objectives. This paper seeks to analyze the impact of product innovation on the financial performance of private manufacturing companies in Kenya. The literature review examines various studies conducted locally and abroad.

**Keywords:** Innovation, financial performance, manufacturing industries, cost of production, and Return on Asset.

### Introduction

Product innovation globally has currently become increasingly relevant due to recent trends such as enormous fragmented competition, stringent markets, and dynamic technologies Muchoki, (2013): citing Wheelwright and Clerk, (1992). The unprecedented number of companies around the world has made a lot of improvement in technical requirements, tools and materials, incorporated software, and other functional characteristics in order to invigorate company performance. This has allowed organizations to fast-track new opportunities and to re-think their superiority edge. Usually, the intended outcomes are impossible to achieve without directing the organization strategy and structure to some changes. In this discourse, innovation is not anymore a choice but a requirement for continuity (Rogovsky et al., 2005). Financial performance variables like cost of production, inflation rates, tax regime and size of company are among the factors within the current business setting that are affecting the performance of private manufacturing firms.

According to disruptive innovation theory (Christensen, 1997), product innovation creates a fresh market and significant proposition thus displacing reputable organizations, goods, and alliances; as a result, a firm deploying a disruptive innovation shall enjoy improved performance. Innovation is important to all organizations but particularly for manufacturing companies. An organization that innovates is bound to grow as well as surprise and delight customers with new, differentiated and relevant benefits Njagi, (2016): citing (Sharma, 2009). Product innovation is the debut of new kind of products to the market, redesigning already well-known goods or make use of improved resources in the production of goods that are already in the market. According to (Kleinsmith, 2001) refers to product innovativeness as a product that acquires a degree of newness. Product innovation refers to a product which is new, at least in some respect if not all, of the market for which the product is being introduced. Innovation is driven by customer and market requirements as well as competition among suppliers in order to satisfy a certain need.

Levinthal, (2001) Technology evolution is key to the innovation of product and services. Innovation does not have to arise from new discoveries but it can be as a result of production processes and organizational changes and a combination of technologies that are already in existence product innovation is key if an organization desires to be differentiated from its competitors, or it can be put across that for firms to be more successful then they must

consistently innovate new products and services. An improvement in product innovation leads to improved revenue growth, Share performance and market capitalization and profitability Drucker, (1985).

The business environment in Kenya has been transforming over time. These transformations include faster execution of economic reforms by the government, economic relaxation, and privatization of state entities thereby increasing competitiveness. In a rapidly changing condition, firms must accommodate new thinking on new external realities and be able to protect against financial loss Siro, (2013). This paper seeks to establish the impact of product innovation on the financial performance of private manufacturing firms in Kenya.

# **Statement of the Problem**

Manufacturing firms adopt innovation to protect themselves from escalating competition. A total of 30 manufacturing firms are struggling to thrive for instances East Africa Portland Cement Company (KAM, 2017). Others have closed down their operation as demonstrated by the latest closure of Sameer Africa (KAM, 2016). If the tendency remains relentless, Kenya's optimism of growing to a middle-income group as anticipated by vision 2030 remains uncertain. It is widely claimed that product innovation is positively correlated with the financial performance of any organization. Spicer & Sadler-Smith, (2006) argue that real attainment and consumption of new information is the cause of elasticity, hence associated with better organizational performance.

Diffusion theory postulates that product innovations result over time from how the innovations are communicated among the participants Njagi,(2016): citing Rogers,(1962) returns from product innovation trickle over a product life cycle. However, according to disruptive innovation theory Christensen, (1997) product innovation creates totally new markets and value propositions thus displacing established market leaders, as a result, a firm deploying a disruptive innovation shall enjoy improved profitability in the short term. Various scholars have performed empirical work including Duguet, (2006) who analyzed French manufacturing firms and found that Research and Development activities foster radical and incremental innovations but only radical innovations increased the firm productivity. Koellinger,(2008) analyzed the connection between people who use the internet, different types of invention and performance at the firm level and

indicated that innovative companies are more probable to grow, nevertheless not automatically profitable.

In the local front, Nyawira, (2011) and Njeri, (2010) who studied the connection between the level of technical innovation and financial performance of commercial banks in Kenya decided that technological innovations led to the enhanced performance of commercial banks in Kenya. Kihumba, (2008) did a study on the determinants of financial innovation and its effects on banks performance in Kenya. He established that financial innovation influenced banks performance positively. The available literature works show that there exists a strong correlation between innovations and financial performance of various organizations. However, due to contextual, sector, and managerial changes among the organizations, effects of innovations on financial performance gain from these studies may not be presumed to explain effects of innovations on the financial performance of private manufacturing firms. None of the studies reviewed investigated the effects of product innovations on the financial performance of private manufacturing firms notwithstanding their strategic standing to embrace product innovations. This study is therefore designed to address this scholarly gap.

## The objective of the Study

The main objective of the study will be to examine the effect of product innovation on the financial performance of private manufacturing firms in Kenya.

#### LITERATURE REVIEW

The study will review past and current studies on the effect of product innovation on organizational financial performance.

## **Theoretical Review**

A theory is a methodical explanation of the correlation among phenomena and provides a generalized explanation of an occurrence Dawson, Macfadyen, & Lockyer, (2009). The study will be based on 3 theories namely Diffusion of innovation theory, the transaction Approach theory, and the Schumpeterian Approach theory.

# **Diffusion of Innovation Theory**

Diffusion theory (Rogers, 1962) details how innovation spread, through a market or non-market channels or within an organization. The theory elucidates how, why, and at what rate new thoughts and technology range. The theory posits that diffusion is the process where a new product is communicated to the participants of a particular market set up. The factors that affect new the spread of new ideas are the innovation, modes of communication, the time and the market in which the product is introduced. Diffusion manifest itself in different ways thus affecting product innovation as well as the time taken to adopt the new product either in the organization or by the market (Rogers,1962). The theory asserts that product innovation is not adopted by all individuals at the same time. Once a new product is introduced to the market the organization sales and marketing department is actively involved in marketing the new product this means the customers tend to adopt a new product in a time sequence. This, therefore, implies that the effect of financial performance shall be spread over a period of time. Profits will accrue to the company in the long term rather than in the short term.

# The Transaction Cost Approach Theory

Hicks, (1983), the pioneer of the transaction cost approach theory. He thought that the overriding factor of product innovation is the decrease in transaction cost, and in fact, is the answer to the advance in technology which triggered the transaction cost to reduce. The decrease of transaction cost can fuel financial innovation and progress in financial services. This theory premeditated the financial innovation from the perspective of microscopic economic structural adjustment. It believed that the motive of financial innovation is to reduce the transaction cost. And the theory elucidates from another perspective that the fundamental motive of product innovation is the resolve of earning benefits. This theory argued the motive and the course of product innovation from dissimilar sides, hence this philosophy will be used to establish the product innovation and financial performance from the transaction point of view to see whether its transaction cost derived from product innovation that drives revenue growth, hence the financial performance.

## The Schumpeterian Approach Theory

This approach was advanced by Schumpeter, (1942). In the 1940s the economist Joseph Schumpeter apportioned the key role in economic growth firstly to the disruptive action of

entrepreneurs, and secondly to large corporations, each of which fed a progression of creative destruction by causing constant disturbances in the economic arrangement. The cause of these disturbances was innovation, which fashioned as Schumpeter put it: competition from the new product, the new technology, the new source of supply, the new type of organization, competition which orders a significant cost or superiority advantage and which strikes not at the limits of the profits and the outputs of the existing firms but at their foundations and their very survival. Hence it's important to investigate whether it's the disruptive nature of product innovation that drives economic growth or limit hence this theory will be key to this analysis.

## **Conceptual Framework**

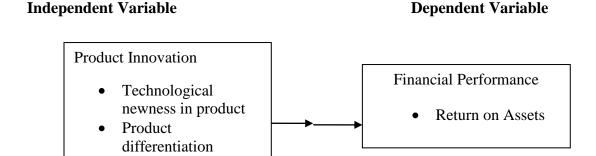


Figure 2.1 Conceptual Framework

The dependent variable in this study will be the financial performance of private firms in Kenya. The independent variable of the study will be Product innovation. The independent variable is measured by the new product, technological newness in product and product differentiation Rosli and Sidek, (2013). Dependent variable to be used is return on assets (ROA). Return on assets measures the efficiency of business in using assets to generate net income.

# **Empirical Review**

### **Product Innovation**

Lau, Yam, & Tang, (2010) set out to decide the elusive links between innovation competencies and business performance. The period under review was 2007 to 2009. Experiential data was attained through a survey study of 200 manufacturing firms in the Hong Kong/Pearl River Delta region. Structural equation modeling was engaged to scrutinize the connections between

Technological Innovation Capabilities (TIC's) and various performance indicators. Pearson correlation and regression analysis were employed to examine the relationship between TIC and innovation performance. The results showed that different TICs have different impacts on different performance measures. Firm competency was found to have the most influential impact. The response rate of 17.7% was too low for this study. Koellinger (2008) analyzed the connection between the usage of Internet-based technologies, different types of innovation, and performance at the firm level. The study period was the year 2003, with the objective being to find out how much innovation is enabled by IT, innovations are related to different measures of performance. Statistics for the empirical investigation originated from a sample of 7302 European enterprises. He then applied a regression model to obtain the results. The empirical results showed that Internet-based technologies were a significant enabler of innovation in the year 2003. They also displayed that innovative firms are more probable to grow, but not necessarily likely to be profitable. Besides, it was established that firms that depend on Internet-enabled innovations are at least as likely to grow as firms that rely on non-Internet-related innovations. The study period should have been extended in order to allow for comparison of results among various years.

Alpkan, (2011) carried out a study to discover the effects of the structural, process, product, and marketing innovations on the diverse aspects of firm performance, including innovative, production, market, and financial performances, based on an experiential study covering 184 manufacturing firms in Turkey. The study period was the year 2006 to 2007. Multivariate statistical analyses were conducted in order to confirm the research framework. The findings support the claim by Richard C.M (2010) that innovations performed in manufacturing firms have positive and significant impacts on performance. When objective firm data was well-thought-out, they observed that innovative companies have a higher market share, overall sales, and exports. The findings support the expected theoretical relationship between innovation and performance.

Ferrari, (2010) performed an empirical analysis of the innovation and performance relationship among 4,325 Italian Manufacturing firms during the years 2004 to 2006. The study aimed at explaining the link between innovation and performance. Data was obtained from Unicredit Group Survey, to which linear modeling was used to explain return on assets in relations to

innovation strategies. The outcome revealed a weak but important relationship between return on asset and innovation. The study sample is representative for the purpose of this study; the period under review could be extended so as to explore a longer period.

Pedersen,(2011) carried out an investigation on firms centering on service innovation performs better monetarily than firms not focusing on service innovation. The study made use of a variety of performance measures and by relating the effect of service innovation between manufacturing and service industries. The study supported the suggestion that firms focusing on service innovation have meaningfully higher growth of operating results than firms not focusing on service innovation. Nevertheless, this suggestion is not supported in a matching analysis of 1132 Norwegian companies in the service industries.

Sdiri & Ayadi, (2016) analyzed the influence of innovation undertakings on the performance of the Tunisian service firms. The sample was drawn from 71 Tunisian service firms, having substantial value-added services for the period 2007 to 2009. The study aimed at analyzing the influence of the innovation undertakings on the performance of companies. Data were collected through a questionnaire. Heckman's two-stage econometric model was used in order to identify the contribution of service innovation to enhance the firms' performance. The results showed that innovation has a positive and important effect not only on productivity but on employment growth as well. However, innovation had no effect on the sales' growth. The sample may have been too small given there are numerous service firms. Nyawira, (2011) examined the correlation between the level of technological innovation and financial performance of Kenyan commercial banks. The study covered the years 2001 to 2010, with the objective of establishing the level of innovations and determining the relationship between the two variables. The study gathered both qualitative and quantitative data which wasng content analysis and SPSS version 17. The study established that technological innovation increased bank sales, return on equity and profit increment.

Jeroen & Rochemont (2009) undertook a research study to investigate the effect of open innovation on SME's. The study was undertaken in the Netherlands over a seven-year focus period. Secondary data was obtained from 605 such firms. The census study analyzed the data collected using content analysis. The research study observes that the study elements engage in open innovation practices over the study period. The study also finds no major differences

between services and manufacturing industries. From the study, it was found that mediumsized firms engage more in open innovation than the smaller firms.

Love & Roper (2009) undertook a research study to investigate the effect of innovation ownership on profitability using descriptive design. The research study employed secondary statistics. The secondary statistics were obtained from financial reports over a period of 6 years. The data was analyzed using regression analysis and the conclusion of the study was that product innovation in itself has no effect on the profitability of a firm since there are other factors that affect the same in the manufacturing set up. Youtie & Roper (2008) undertook a study on the effect of product and process innovation on the profitability of manufacturing firms in Georgia, United States of Africa using a survey research design. The study used questionnaires to collect the primary data used. The total population studied consisted of 653 firms out of which a sample of 110 companies was selected. The conclusion of the study was that product innovation matters most for the most profitable manufacturing establishments while process innovation is more widespread among firms with more modest levels of profitability. Corsino (2008) also undertook a research study oef product innovation on firm growth in London. The study used a descriptive research design and secondary data obtained from the said organizations covering a period of 7 years. The population consisted of 524 firms out of which a sample of 45 firms was obtained. Facts were analyzed using regression analysis. The conclusion of the investigation was that incremental innovation increases the performance of producers and affects the firm's ability to sustain its market position.

Aboagye,(2012) in his study analyzed the correlation and Granger causality between financial innovation and economic growth in Ghana for the period 1963 to 2009. The study adopted a simple endogenous growth and the ARDL co-integration models to aid in establishing both the long run and the short run relations between financial innovations and economic growth in Ghana. The study revealed that financial innovation has a short run positive effect on economic growth. Though, the study also revealed that in the long term, financial innovation is detrimental to economic growth.

Mugo, (2015) undertook a study with an objective to examine the correlation between innovations and performance of Kenya's wine industry using a descriptive research design. The study collected primary data using questionnaires. The population of the census study consisted of five main wine companies in Kenya. Descriptive statistics and a suitable regression

model were used to do the data analysis. The research study found that innovations are indispensable to companies' future growth and sustainability. Wine companies with serious innovations improved their profitability. The study concludes that innovations help an organization in obtaining a clear direction as regards innovation and therefore the efforts of the entire organization are directed to a common innovation goal and this positively impacts on their performance.

Wasike, (2014) conducted a case study of Haco tiger brands in East Africa on the effect of product innovation on performance. Data analysis was done using longitudinal study design and secondary data was collected from annual financial sales report for the year 2009 to 2014. Data was then analyzed using trend analysis. The research study found that product innovation was relevant to the company as it contributed significantly to the sales growth of the company and helped to accelerate total company sales revenue. Product innovation thus influenced the performance of Haco Tiger Brands positively. Oirere (2015) conducted a study on the effect of innovation on the financial performance of SMEs manufacturing enterprises in Nairobi County. Primary data was collected using questionnaires and descriptive research design was used to analyze the data and make conclusions. The target population was 3,582 companies and a sample of 83 firms was selected using simple random sampling. Data was analyzed using regression analysis. The study concluded that innovation has positive effects on financial performance; innovation increases profits for a company; innovation increases the company's market share, it also increases savings for the company and reduces the operating cost of the small and medium manufacturing enterprises.

Njogu (2014) undertook a similar research study aimed at investigating the effect of innovation on the financial performance of SMEs in Nairobi County. The study used a descriptive research design and obtained primary data using questionnaires. The population comprised 1050 firms and a sample of 200 firms was obtained using stratified random sampling. Data obtained was analyzed using descriptive statistics and regression analysis. The study found that there is a positive significant correlation between process innovation and financial performance of SMEs in Nairobi County.

## 2.4 Summary of literature

| Topic, Author and Year                         | Objective                        | Findings and<br>Recommendations     |
|--|----------------------------------|-------------------------------------|
| The effect of product                          | To investigate the effect of     | The study established that          |
| innovation on the financial                    | product innovations on the       | product innovation positively       |
| performance of mobile telephony firms in Kenya | financial performance of mobile  | correlated to returns on assets     |
| Muchoki, E (2013)                              | telephony in Kenya               | among mobile companies in           |
|  |                                  | Kenya.                              |
|  |                                  | The study recommended that for      |
|  |                                  | mobile companies to be highly       |
|  |                                  | competitive, the use of             |
|  |                                  | innovation is the way to go.        |
|  |                                  | Investments in current              |
|  |                                  | technology would go a long way      |
|  |                                  | in helping companies to gain a      |
|  |                                  | competitive advantage               |
| Technological Innovation                       | To determine the elusive links   | The study established that          |
| Capabilities and Firm                          | between innovation abilities and | technological innovation            |
| performance by Richard C.M.                    | business performance.            | capabilities have dissimilar        |
| Yam, William LO, Esther P.Y.                   |                                  | effects on dissimilar               |
| Tang & Antonio, K.W. Lau (2010)                |                                  | performance measures.               |
|  |                                  | Organization competency was         |
|  |                                  | found to have the most              |
|  |                                  | dominant impact.                    |
|  |                                  | The study recommended that          |
|  |                                  | competence in organizing            |
|  |                                  | dissimilar activities among         |
|  |                                  | various sections is critical to the |
|  |                                  | success of a firm.                  |
| The effect of innovation on the                | To evaluate the effect of        | The study established the           |
| financial performance of Small                 | innovation on the financial      | existence of a significant          |
| and Medium Enterprises in                      | performance of SME's in Nairobi  | correlation between innovation      |
| Nairobi County. Njogu T. W                     | County.                          | and financial performance of        |

| (2014)                            |                                  | SME's in Nairobi County.         |
|-----------------------------------|----------------------------------|----------------------------------|
|                                   |                                  | The study recommended that for   |
|                                   |                                  | SME's to remain relevant they    |
|                                   |                                  | have to do technological         |
|                                   |                                  | newness in product/services in   |
|                                   |                                  | order to meet customer needs     |
| The relationship between the      | To examine the correlation       | The study established that       |
| level of Technological Innovation | between the level of             | technological innovation         |
| and the financial performance of  | technological innovation and     | increase bank returns.           |
| Commercial banks in Kenya.        | financial performance of         | The study recommended that for   |
| Nyawira, (2011)                   | commercial banks in Kenya.       | banks to meet their customer     |
|                                   |                                  | needs and remain relevant, they  |
|                                   |                                  | need to use modern               |
|                                   |                                  | technological innovation         |
| The effect of Research and        | To assess the effect of research | The study confirmed that there   |
| Development on the financial      | and development on the           | is a strong positive correlation |
| performance of manufacturing      | financial performance of         | between the financial            |
| companies listed at the NSE.      | manufacturing companies listed   | performance and R& D in the      |
| Mugalisi, P.A ( 2015)             | at the NSE.                      | manufacturing companies.         |
|                                   |                                  | The study recommended that       |
|                                   |                                  | there is a need for the          |
|                                   |                                  | manufacturing firms to invest    |
|                                   |                                  | more in R & D towards the        |
|                                   |                                  | achievement of organizational    |
|                                   |                                  | goals.                           |
| Financial Innovations and         | To analyze the correlation       | Established that financial       |
| Economic growth in Ghana:         | between financial innovation     | innovation positively influences |
| Evidence from Autoregressive      | and Economic growth in Ghana.    | economic growth.                 |
| Distributive lags and Granger     |                                  | The study recommended            |
| Causality Approaches.             |                                  | regulations towards improving    |
| Anthony O. A ( 2012)              |                                  | financial innovations through    |

|  | long-term savings. |
|--|--------------------|
|  |                    |

## Methodology

This study was a library survey, intended to analyze the available literature on how product innovation impact on the financial performance of private manufacturing firms. The appropriateness of this method of study was the ability to review a wide variety of secondary literature that is relevant to the study area. The population of the study comprised of one empirical case: To examine the effect of product innovation on the financial performance of manufacturing firms in Kenya.

Purposive sampling technique was used. This method enabled the researcher to select cases that had the desired information or the required characteristics that were useful in achieving the objective of the study in accordance with the research topic. The search was extended also by Google Scholar and other online Journals.

## **Conclusion and Recommendation**

The achievement of Manufacturing companies in today's vibrant business environment is influenced by how well they are able to successfully implement market innovation types to boost increased sales thus results in high revenues. Nevertheless, based on the empirical review, there are opposite views regarding the effect of product innovation on the financial performance. For instance, Gunday, Gurhan, and Ulnsoy (2009), Kemal and Alpkan (2011) found that innovations executed in manufacturing firms have a positive and significant impact on performance while Richard C.M. Yam (2009) and Tang and Antonio, K.W.Lau (2010) pointed out that technology innovation capabilities have a different impact on different performance measures which have an opposing effect on the performance of the firm.

Likewise, several studies that have assessed the effect of innovation on the company firm performance have produced varied results. Koellinger (2008) established that innovation is not automatically linked to higher profitability; Kariuki (2011), Mugalisi (2015), Njogu (2014) and Muchoki (2013) they established that there is a positive correlation between innovation and firm

performance. In this regard, there is no clear finding regarding the relationship between product innovation as taken in the several study findings underscored in the empirical review and performance. Further research is justified. Additionally, several studies on the relationship between product innovation and performance have been steered in developed nations where technological innovation is advanced. Technological innovation in Kenya is comparatively less technologically advanced. Therefore the innovative theories that have their source in the advanced nations need to be tried in the Kenyan context. Finally, studies were largely based on descriptive research design using the panel data model (Mugo and Mugalisi, 2015; Corsino, 2008; Wasike and Njogu, 2014). There is a need to test the link between product innovation and firm performance using dissimilar models such as the regression and correlation to determine whether they would produce similar or conflicting outcomes.

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