

**THE EFFECT OF PRODUCT AND PROCESS INNOVATION ON
FINANCIAL PERFORMANCE OF HOTELS AND RESTAURANTS IN
NAIROBI COUNTY**

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DECLARATION

This is my original work and has never been submitted for degree award in any other university.

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DEDICATION

I dedicate this work to James Omondi, Yovellah Laval and Henrikh Tyron for their inspiration

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LIST OF ACRONYMS AND ABBREVIATIONS

CRMS	-	Customer Relationship Management System
GDP	-	Gross Domestic Product
KNBS	-	Kenya National Bureau of Statistics
R&D	-	Research and Development
SMES	-	Small and Medium Enterprises
TV	-	Television

ABSTRACT

The role of hotel and restaurants towards economic growth and development cannot be refuted. Existing literature indicate that both product and process innovations are related to the financial performance of business enterprises. There is a lot of competition in the hotel and restaurant industry in Nairobi which has led to increased product and process innovation activities ranging from marketing, product, pricing and process. Hotels and restaurants have embraced new technologies such electronic ordering, payment, online booking, sales and marketing for convenience and efficiency. Globally, studies have found that innovation is very crucial towards the financial performance of business entities. However, there are limited studies which have focused on the relationship between innovation and financial performance of business enterprises in the Kenyan situation, and that majority of the few studies have focused on other sectors such as telecommunication and not hotels and restaurants. In addition, there is limited literature with regard to the effect of process and product innovation on the financial performance of hotels and restaurants in Nairobi. Therefore, this study sought to establish the effect of product and process innovation on the financial performance, focusing on hotels and restaurants in Nairobi county. The study was guided by resource-based and market-based theories. A descriptive survey and correlation designs were employed. Descriptive design, explained the situation as it was. On the other hand, a correlation design was utilized to understand the nature and direction of the effect of innovation on financial performance. The study targeted all hotels and restaurants in Nairobi, where there are 53 hotels, and 118 restaurants in Nairobi. Both primary and secondary data was used. While secondary data was obtained from World Bank enterprise survey, primary data was collected using questionnaires. Descriptive and regression analyses were used to analyse data. Findings indicate that product and process innovation affect the financial performance of hotels and restaurants positively. In addition, the study has found that firm assets, and firm age, are positively related to financial performance. Furthermore, results for firm size and product diversification were not significant. The study recommended that innovations should be embraced fully in the hotel and restaurant sector.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Studies have paid more attention on the relationship between innovation and financial since the seminal paper by Schumpeter (1934). Schumpeter held that better performance of institutions in the long-run are anchored on persistent innovation. Studies have argued that firms which do not innovate, are at risk of losing their competitive advantage in the global market (Rosenbush et al., 2011; Oke et al., 2013). Innovation encompasses generation of creative ideals to make notable differences on the process and product. Oke et al., (2013) defines innovation as the successful execution of creative strategies within the firm. A strategy refers to a plan or action designed to achieve a long-term advantage for an organization. The capability of an organization to innovate is very important in helping firms to achieve and maintain their competitiveness as well as enhancing profitability (Artz et al., 2010).

There are basically two types on innovation according to Shqipe, Gadaf & Veland (2013). These include: radical and incremental innovation. The later focuses on aspects such as costs, improvement on services, products and processes that are already in existence. While radical innovation focuses on processes, products or services with excellent characteristics. According to literature, there are different dimensions employed to measure the performance of innovations in organizations (Yilmaz et al., 2005). The most commonly used approaches are: financial performance of the firm, market size, and innovative performance.

Various theories have advanced the debate on the determinant and how innovations at firm level affect its financial performance. Key among these is the resource-based theory proposed by Penrose (1959) which argues that competitive advantage of firms emanates from their financial ability and capacity to innovate. This imply that there could be causality relationship between innovation and financial performance. Philip & Kotler (1959) in their marketing-based

theory argue that product and marketing innovation depends on the degree of product or service substitutability and market size.

Empirical literature opines that business enterprise would be very competitive if they engage in production of goods with superior designs or offer exemplary services than those offered by their competitors (D'cruz & Rugman, 1992; Kaplan & Warren, 2007). The current competitive market requires great ideas behind production and hence, it is very difficult to find a player in any industry who does not innovate. Majority of the studies which have paid attention on the link existing between innovation and performance have found positive linkage (Artz et al., 2010; Gunday et al., 2011). In addition, these studies have also observed that profitability is higher among innovating firms than non-innovators. However, the performance of innovation on firm's performance differ from industry to industry, and the nature of such innovations (Gunday et al., 2011).

1.1.1 Product and Process Innovation.

Rainey (2006) defines product innovation as the making of and offering of new products and services, value addition to the already existing products or services based on the emerging technologies. On the other hand, process innovation is the application of new ideas associated with new products or service, new markets or marketing services, new methods of organization, and the reorganization of work place external relations (Christense, 2003).

There are various ways through which innovation in business can be achieved. Key among these include: addition of new products or service or new processes, linking business activities in new ways and changing players in the business enterprise or industry (Amit & Zott, 2012). The nature of innovation a company decides on depends on its aim, resources available to it (financial, technical, human, policies by the government as well as the operating market environment). Nevertheless, it is imperative to engage all departments of an enterprise and all

other stakeholders in the process of innovation. In fact, some great ideas emanate from customers, suppliers and employees. In addition, the process of innovation requires that the business should follow the footsteps of market leaders and their best practices in order to remain relevant and become competitive. Hjalager (2010) classifies innovation into categories such as: product, process, management (involves human resources), and logistics. Other writers like Iorgulescu and Sidonia (2013) have recognized marketing as the other type of innovation in the hotel and restaurant sector which injects novel concepts in the interaction between customers and employees. Hinterhuber, Liozu (2014) have argued that even though innovation pricing could determine firm competitive advantage, limited attention has been accorded to it.

According to Muller (1999) proposed three trends which are dominant in the hotel and restaurant industry. These include identification of firms in the industry as retailers of customer experience, product differentiation, and transformation of knowledge-based system. Unlike other retailers, enterprises in this industry are very particular various respects. These may take many ways of product and process innovation like price-management, management of work force, management of customers satisfaction, safety of food, marketing, architecture and design and ecology (Gunday et al., 2011). Hotels and restaurants are places where people go to eat, socialize, to transact businesses, and sometimes to purchase exceptional experience. Flexibility is very necessary in the provision of outstanding experience in this industry. This implies that restaurant managers must abandon traditional ways and embrace new styles of operation and management so as to cultivate empathy with individual customers. In the restaurant sector, innovation appears to give solution to five key areas: design and atmosphere, food, beverages in terms of portion, size, new ingredients, application of technology such as: online reservations, social media, and responsible businesses (ethics, eco-friendly packages). Sigala and Kyriakidou (2015) observes that is a critical factor for success in a highly competitive market environment.

1.1.2 Financial Performance

Traditionally, hotel and restaurant industry, pay more attention on financial measures despite the fact that these are historical in nature. Other critical measures of business performance include: customer satisfaction, quality assurance, employee developed and the productivity of a firm. These are also key in determining competitiveness and its ability to maintain future profitability (Ayele, 2012). The broad objective of all businesses is to provide highly specialised services so as to thrive and realize their purpose. High performance culture can be developed to enhance an organization climate that is devoted to quality as well as active engagement of human capital and establishment of sustained customer relationships (Gunday et al., 2011). Involvement of the work force which comprises of continuous capacity building, is a key element for the financial success within the hotel and restaurant industry. Such programmes reduce employee turnover and increases the overall staff satisfaction.

The ranking of hotels around the world is based on sustained provision of superior services and their financial performance. The later emphasises on the quality performance and meeting customer requirements and the needs of other stakeholders (Kotler & Keller, 2015). Successful hotels and restaurants have plans and policies characterised with superior quality and specified methods of implementation. Globally, there are different criteria for classifying hotels. However, many countries have classified hotels based on the star system, where the star indicate the luxury. In Kenya, the start system is applied and it includes 5-start, the higher luxury, 4 –star, 3-star, 2-star and 1-star Hotels. These classifications are conducted by the World Organization of Tourism (Mwihaki, 2017). According to the World Organization of Tourism, every country tends to have its own rules and requirements for hotel classification. This imply that there are inconsistencies in hotel classification around the world. The assessment of a hotel is based on service quality and facilities at their disposal.

1.1.3 Product, Process Innovation and Financial Performance

There is evidence on the link between innovation and the performance of an organization. Generally, firms carry out by firms to realize production and marketing objectives which include: improvement of product quality, reduction of production costs, enhancement of marketing share, new market outreach, flexibility in production and enhancement of managerial performance (Iorgulescu & Sidonia, 2013). An integration of both technical and process innovation can lead to firm competitiveness and therefore achievement of financial goals. Gunday et al. (2011) held that, innovation lead to the growth of an organization and profitability. In addition, it enables the firm to get collaborative effect between technical and administrative innovations. Key decisions made by hoteliers like innovation investments, are apparently aimed at firm value addition and creation of profits as the final objective.

Product innovation activities result into enhanced commodities/services which could result into an expanded market share and therefore better returns to investment in form of profits. The disruptive theory of innovation proposed by Rogers (1983) argue that new markets and value proposition emanates from product innovation. The theory implies that organizations employing offensive strategies in the introduction of new products are likely to realize high profit levels. Innovation can enhance organization performance by improving the market position and therefore, a competitive advantage.

1.1.4 Hotel and Restaurant Industry in Nairobi County

The hotel and restaurant industry has been eager to take advantage of the thriving tourism industry (Kenya Bureau of Statistics (KNBS), 2014). Tourism is most important sector of the Kenyan economy after agriculture. According to World Travel & Tourism Council (2018) the sector contributed 9.7 percent of the Gross Domestic Product (GDP) in the year 2017 and this was forecasted to rise by 5.5 percent in 2018. Tourism sector performance is partially attributed to the improvement in the hotel and restaurant sector. Hotel and restaurant industry have

received recognition for driving Tourism, exports and generation of employment opportunities to thousands of Kenyans (Letangule and Letting, 2012). This report shows that in the year 2017, the sector provided 1.1 million jobs which was 9 percent of all total jobs generated. In addition, the industry accounted for 3.7 percent of the GDP in 2017.

Key differentiating factors among the hotels or restaurants especially in major towns like Nairobi, Mombasa, and Kisumu include: class, ambiance and quality services. Hotels and restaurants industry in Nairobi experience high competition which is largely explained by many firms which are striving to offer specialized services (Mwihaki, 2017). Despite superior quality services and facilities in the Kenyan hotels, competition over market share in the industry has become extremely high. In addition, the expectations of customer and preferences increase from time to time (Ayele, 2012). Furthermore, business environment in the sector has become so complex to manage due to the demands of the dynamic business environment. Therefore, hotels and restaurants are resorting to drivers of strategic management performance to qualify for the international recognition, certification and star-classification (Kiragu, 2016). Key among these drivers is innovation.

In the last decade, hotel and restaurant industry in Nairobi has witnessed increased innovation activities ranging from marketing, product, pricing and process. Hotels and restaurants have embraced new technologies such electronic ordering, payment, online booking, sales and marketing for convenience and efficiency (Sigala & Kyriakidou, 2015). There has been an increase in the delivery services such as pre-prepared food, packaging and take-aways. Some restaurants and hotels have developed Customer Relationship Management Systems (CRMS) to improve service delivery. Adoption of nature lighting has become a great feature of attraction in the industry. Most guests fear to live in a room where there are no windows inside, and this makes them feel oppressed. Thus, natural lights close in to the concept of

environmental protection is another innovation in the industry adopted to increase customer satisfaction (Ayele, 2012).

Furthermore, there has been introduction of new menus with significantly improved characteristics. Given that most Kenyans like to eat at home based on their perception that home-made foods are healthier, most restaurants in Nairobi are making attractive packages in terms of pricing, quality and marketing in an attempt to change these patterns. For instance, restaurants have in the recent past focused on more specialized menus, which aims at achieving quality products and services as well as speed of service delivery. In addition, an increased need for ethnic and global cookeries has necessitated hotels and restaurants to diversify their menus (Ayele, 2012). Fast growing food chains in Nairobi pursue new ideas with a keen eye on utilizing technology in offering high quality foods but, with locally procured ingredients (Mwihaki, 2017).

1.2 Research Problem

Relationship between product, process innovation and financial performance has been explored in both developing and developed countries. Iorgulescu & Sidonia (2013) argued that innovation arguments quality of goods and services which leads to firm competitiveness and hence better financial position. Gunday et al. (2011) suggested that firms carry out innovations to increase their market share, expand the scope of their activities and improve their profits.

The role of hotel and restaurant industry in Kenya towards economic growth and development is overwhelming. The industry creates jobs to the locals, earns revenue to the government in the form of tax and is also a critical component in the national GDP. There is a lot of competition in the hotel and restaurant industry in Nairobi which has led to increased product and process innovation activities ranging from marketing, product, pricing and process. Hotels

and restaurants have embraced new technologies such electronic ordering, payment, online booking, sales and marketing for convenience and efficiency (Sigala & Kyriakidou, 2015).

Globally, studies have found that innovation is very crucial towards the financial performance of business entities. For instance, Dachs et al. (2015) in their study on SMEs innovation and performance in the European Union, reported a positive relationship. Similarly, Herstad & Brekke (2012) study has established that increased innovation activities in SMEs are very critical towards the development of knowledge-oriented economies and transformation. The study further observed a positive link between SMEs growth and R&D.

Locally, limited studies which have focused on the relationship between innovation and financial performance of business enterprises. Among these studies is the one by Letangule & Letting (2012) who had applied descriptive statistics and regression analysis to a cross-sectional data to examine the effect of innovation of firms operating within the telecommunication industry. The study found that adoption of innovation had an influence on performance of firms to a greater extent. In another study, Mwihaki (2017) argued that market and process innovation management played a critical role towards the performance of SMEs in the hotel sector in Nairobi.

Generally, the role of innovation in enhancing the performance of firms is indisputable because many studies have adduced positive relationship. However, the effect of innovation on firm's performance differs from industry to industry, where innovation does better in some sectors than others. In addition, the nature of innovation; whether incremental or radical, process or product or service has generated mixed findings. Furthermore, most studies in Kenya have focused on other sectors (see Kiragu, 2016; Letangule & Letting, 2012) and not hotel and

restaurant. The most recent study by Mwihaki (2017) on innovation and firm performance, mainly focused on SMEs. In addition, market and process innovations were included and hence, product innovation viewed as key, was left out. Based on this, the study undertakes to investigate how innovation affects financial performance of firms, focusing on hotels and restaurant sector in Nairobi. A research question that this study sought to address was, “what is the effect of product and process innovation on financial performance of hotel and restaurants in Nairobi?”

1.3 Research Objective

To investigate the effect of product and process innovation on financial performance of hotel and restaurant sector in Nairobi.

1.4 Value of the Study

Hotels and restaurants are a crucial component of Kenya’s growth and development. Given that there is limited literature on the relationship between product, process innovation and financial performance hotels and restaurants in Nairobi and Kenya at large, this study seeks to address this challenge. The study will in particular help to provide empirical evidence in support of or against resource-based theory of innovation. The question here is, is there relationship between resources held by hotels and restaurants and amount of innovation?

In addition, findings of the study will help in the formulation and implementation of policies aimed at enhancing their performance both technically and financially. Specifically, the study will generate information on the question, between product and process information, which one has the greatest effect on financial performance of the hotel and restaurant industry. These discoveries are likely to enrich policy framework in the industry and hence, better performance.

Furthermore, findings of this study are likely to generate debate in the academic circles which could lead other similar studies. Moreover, findings and subsequent policy recommendations of the study are likely to be of great benefits to the society in general. This could be in the form of increased innovation, competitiveness and therefore, quality products and services at an affordable price.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviewed literature that is related to the study. Both theoretical and empirical literature is discussed. In addition, the chapter presents determinants of financial performance and conceptual framework as well as overview of literature which outlines research gaps.

2.2 Theoretical Review

A theory was sought to explain the concepts detailing, understanding, predicting phenomena with an aim of extending and even challenging the existing knowledge (Torraco, 2004). There are various theories which have attempted to explain the relationship between innovation and firm profitability. Key among them, and for which this study was anchored on include: resource based, market based and diffusion of innovation theories.

2.2.1 Resource Based Theory

The proponent of this theory, Penrose (1959) argued that firm's competitive advantage emanates from enterprise resources and its capacity for innovation. According to this theory, organizations obtain competitive advantage from their unique bundles of tangible and intangible assets such as human labour, technical know-how, physical and financial assets. Ellul and Yerramilli (2010) observe that firm's resources provide a stable context upon which to innovate. When firms have unique and valuable resources, they are able to realize sustainable competitive advantage normally occurring from innovation activities. Penrose further argues that the presence of various resources and capabilities, has a positive influence on the firm's introduction of new products as well as new processes. Therefore, firm's resources act as an input in the innovation process.

Yang (2011) states that financial resources are among the most critical resources for the firm which can be employed to enlarge its innovation capacity especially through R&D, while lack

of it, may be seen as a barrier towards innovation. knowledge-based resource is another key resource that firms use to develop competitive advantage (Wang et al., 2009). Knowledge facilities provide avenues through which ideas are discovered and exploited as opportunities for introduction of improved products or services by firms for competitive advantage. Knowledge, enables enterprises to predict with a degree of accuracy the nature and potential changes in the market for appropriate strategic actions. Knowledge-based resources comprise of ideas generated by the firm internally, and knowledge obtained by the firm from other sources. Employees with skills and advanced knowledges increases the firm's capability to innovate.

This theory helped the study to understand the relationship between resources held by hotels and restaurants and the innovation activities, and also, how both process and technical innovations relate to the financial performance of the firms. In particular, the resource-based theory aided the study in unpacking how different types of innovation based on the firm's resource base, attract the market and hence, profit generation.

2.2.2 Marketing Based Theory

This theory was suggested by Philip Kotler (1967) while conducting marketing related studies. It argues that marketing is both a social and management process through which organizations create and offer commodities to others and also individuals or groups get what they require. According the theory, marketing is a critical part of economics and demand is affected not only by price, but also by sales promotion, advertising, and distribution of the commodity. The task of an organization is to determine the needs, wants and preferences of the target market and ensure that the desirable results are achieved more effectively and efficiently than competing firms in a manner that improves the well-being of consumers (Kotler & Keller, 2015).

Marketing theory states that, to be effective in marketing, the value of the goods/services given to the consumers have to be at the centre of the enterprise strategy. Business compete with each

other strategically to differentiate themselves in the market. Successful firms according to this theory, strongly focus on capital development, technological advancement and human resource policy. This is very critical because, the behaviour and characteristics of staff can influence the quality of goods and service being offered. The marketing mix known as the 4 P's of marketing (Price, Promotion, Product and Place) proposed by Jerome McCathy provides a framework upon which firms can come up with the best marketing plan (Wilson, Zeithaml, Bitner & Gremler, 2012). This was an extension to the Philip Kotler theory of marketing.

Boom and Bitner (1981) incorporated in the theory other two important components which are: product and marketing innovations. According to Boom and Bitner, there are several factors which influence the decisions with regard to product and marketing innovation. These are: the degree of substitutability, how many competitors are there in the market, and the size of the market. Promotion of marketing innovations declines with the degree of product substitutability and the number of competitors, but, it increases with the increase in the market size. The size of the market has positive and strong effect on an organization to introduce new innovations in the market and also their efforts in promoting the innovations in the market. (Mikes & Kaplan, 2014). This study used the market-based theory to understand how various components of the market are used by the hotel and restaurants in Kenya to develop competitive advantage. Specifically, the study employed the theory to explain the link between marketing and innovation and how the innovation leads to firm's profitability.

2.2.3 Diffusion of Innovation Theory

Diffusion of innovation theory is attributed to the work of Everett Rodgers (1962). The theory attempts to explain how new ideals or technologies spread. It states that diffusion is that process through which organization innovations are communicated to the public through a social system. In addition, the theory argues that there are four elements which affect the dissemination strategy about innovation. These are: the innovation itself, channels of communication, time and the social system (Rodgers, 1983). According to this theory, there must be wider adoption of innovation for it to be sustained.

Rodgers noted that the characteristics of innovations are very important in determining the manner in which diffusion takes place and the rate at which such diffusions are embraced. With reference from the works of Kunreuther and Pauly (2012), Rogers argue that, it is what potential adopters of diffusion perceive to be characteristics of innovation which is important. Regarding technical innovation, the rate of innovation usage is important for organization growth and development. Rodgers (1995) states that innovation has two components: hardware which comprises of a tool which represents technology as physical object, and a software part which is the information base of the hardware aspect. Innovation has five critical features which influence diffusion: relative advantage, trialability, compatibility, complexity and observability. This theory was found suitable for the study because it helped in understanding how technical and process innovations embraced by hotels and restaurants contribute to their financial performance.

2.3 Determinants of Financial Performance

A part from innovation which have been argued to influence financial performance of business enterprises, there are other determinants which are theoretically anticipated to influence firm financial well-being. This section explain key among these factors which include: production cost, inflation rate, tax and firm size.

2.3.1 Production Costs

Theoretically, the cost of production is a key determinant of firm's financial performance. Production cost comprises of expenses that firms incurs throughout the production process (McGlaphren, 2003). Firms with ability to minimize their costs of production are likely to enjoy high levels of profits, because profits results from the excess of sales over gross revenue. This imply that, the lower the cost of production, the higher the profit. As the organization works towards minimizing production costs in order to enjoy higher profits or high levels of efficiency, it must do so without compromising on the quality of the product or service (Herstad & Brekke, 2012). Variable costs such as raw materials and labour are what the firm should try to minimize because their increase or decline directly impact on the firm profits. Generally, fixed costs are regarded as sunk costs due to the fact that they have no effect on profit maximization or price.

2.3.2 Firm Size

Amaton and Burson (2007) defines firm size as the capability and diversity in the production process. Studies have defined firm size based on different criteria, with the most common ones being firm asset value (Heung & Gu, 2012; Chen, 2011) or the number of full-time employees (World Bank, 2017). Theoretically, the size of the firm is expected to explain the financial well-being of a firm. Large firms are likely to be more profitable because of the advantages of economies of scale they enjoy where, large firms are able to produce at a lower cost as compared to smaller ones. The study thus, hypothesises that medium-sized SMEs in Kenya generate more profits than smaller ones. However, Amaton and Burson (2007) argues that majority of large firms are controlled by managers who more often pursue their-self-interest goals instead of the firm's interest. This means that profit maximization goal of some large firms is replaced by managerial utility function and hence, leading to conflict of interest.

2.3.3 Macro-economic Factors

There are various macro-economic factors which can explain financial performance of the hotel and restaurant industry. Key among them include: inflation, exchange rate, interest and economic growth. Inflation is the general increase in price level over a period of time. Inflation increase the cost of living because of an increase in the prices for commodities. An increase in the price of goods and services reduces consumer purchasing power. Davidson & Weil, 1995) noted that low levels of inflation are economically good for the entire economy but not a negative inflation. On the other hand, high levels of inflation are disastrous to the economy because it alters consumer behaviour. Due to fear of price increase, consumers tend to purchase their need/wants in advance because of an eminent shortage of products which could occur in the market. High inflation could make it difficult for hotels and restaurants to calculate accurate price of goods and services and the returns from investment and thus, undermining firm's confidence (Chen, 2011). In addition, inflation discourages export trade in a country compared to other countries. This reduces the value of both domestic sales and exports and hence, balance of payment deficit. This further show that high inflation can weaken the country's competitive advantage in the international market, and this could also reduce the revenue of firms.

The other factor is the rate of economic growth rate which has implications for hotel and restaurant industry. Increased economic activities and hence economic growth imply a healthy business environment which could positively influence return on assets for hotels. Interest rate on the other hand, means the rate at which hotels and restaurant obtain loans from financial institutions to fund their activities (Harrison et al., 2014). Lower interest rate implies low cost of obtaining credit which could translate into lower cost of production and hence better financial performance. The other key macroeconomic factor that might determine financial

performance of the hotels and restaurants is the exchange rate. For hotels or restaurants which rely on importation of capital goods, products or services, could perform poorly in the case of a depreciated local currency. On the other hand, appreciation of the Kenyan shilling against foreign currencies could reduce the market for the restaurants/hotels targeting tourists because this could be expensive to the visitors.

2.3.4 Tax Rates

Taxation is very important consideration for firms while making investment decisions. Uniform changes in the tax instruments results in heterogenous responses of effective tax rates and therefore, profit-after tax of firms (Downs &Teheranian, 1988). For instance, dividends normally attract high tax rates compared to capital gains. This means that firms which pay dividends, will always reduce the shareholder's value because, there will be need to tax shareholders on such dividends (Poterba, 2001).

2.4 Empirical Review

The rapid advancement in technology brought about by globalization, underscore the need for business enterprises to innovate in order to remain competitive, achieve high growth rates and profitability. Several studies have been conducted to examine the concept of innovation and the growth of business enterprises as well as financial performance in both developing and the developed world.

Dachs *et al.* (2015) in a study on the effects of innovation on Small and Medium Enterprises (SMEs) development, reports that innovation is a critical component of SMEs growth. The study employed a descriptive survey design using a cross-sectional data from 1400 firms spread across all sectors of the economy in the European Union (EU). Since this study was conducted in the EU which has different socio-economic as well as political environment to those of Kenya, findings could vary if the same study is conducted among the Kenyan firms. In addition,

this study is going to focus on all categories of firms within the hotel and restaurant sector, and not just on the SMEs. Therefore, comparison of the effects of innovation on both small and large firms will be made.

Herstad and Brekke (2012) study has established that increased innovation activities in small business enterprises play an important role towards the development of knowledge-oriented economies and transformation Herstad and Brekke in their study on the mode of innovation and regional knowledge diffusion also found that, research and development (R&D) has a positive impact on the growth of SMEs. By employing multi-regression analysis on time series data, this study further noted that besides enhancing the growth of firms, growing enterprises come up with new products and processes as well as business models which lead to their prosperity. Moreover, the study reported that new firms are more likely to come up with radical-market products likely to give them a competitive advantage over the existing ones. However, this study was limited to new establishment, and also, how R&D leads to SMEs growth. In addition, using R&D as a measure of innovation could be problematic since, not all the knowledge generated through R&D are implemented. This study will be conducted on both the new and old firms. Accordingly, the study will measure innovation by investigating on the new products/services and process which are already in place.

Herstad and Sandven (2015) study on the relationship between competencies of the recruits and innovation in firms, reveal two ways through which innovation could affect the growth of firms. The first one is the direct responses coming from the market when the firm introduces a specific innovation which aids in adjusting the incentive of the enterprise capacity revenue maximizing levels, and secondly, indirect effects occurring as a result of learning and knowledge accumulation which might generate other modes of innovation which could either

enhance or reduce the direct market effect. The study which used a simple regression method, found that competencies of the staff directly influence the innovation. In addition, this study did not find innovation as a significant determinant of firm's financial performance. The study had two main limitations. First, the study used total firm assets as a proxy for finance and secondly, its main focus was on the determinants of innovation among firms and not the effect of innovation. This study will focus on the effect of innovation on firms' financial performance, and that both technical and process innovation will be incorporated to measure innovation.

A study by Triguero et al. (2014) investigated the link between innovation and profits in Spanish firms and established that firms with patent rights and skilled workforce were more likely to generate more profits than their counterparts with no patent rights and relatively low skilled workforce. In addition, through their analyses which had employed ordinary least square (OLS) method, the study noted that firms with patents stood a high chance of getting loans from banks. Triguero et al. study measured innovation among firms using patent rights and skilled workforce, for which this study finds a challenge because patents or having skilled manpower might not sufficiently measure innovation. For example, patents could merely represent ideals and on the other hand, being in possession of skilled workforce does not guarantee innovation in the enterprise. The other problem of Triguero *et al.* study is that, it did not control for endogeneity and hence, the estimates could have been biased. This study will check and correct the presence of endogeneity.

In applying R&D as a measure of innovation among small pharmaceutical enterprises in the United States (US), Coad and Rao (2008) study established that R&D had a positive impact on profitability. However, these effects were only found among firms with persistent record of innovation. Similar findings were observed by Damirel and Mazzucato (2012) who also

reported that bigger establishments are likely to experience negative growth as a result of R&D lay-outs. This study hence concluded that R&D does not always influence the growth of firms. In both the studies, expenditure on R&D were used for which this study challenges since, allocation of expenditure does not mean that a project is executed. This study will correct this challenge by actual innovations including process and technical dimensions to measure innovation. In addition, given that Coad and Rao conducted their study using pharmaceutical firms, the dynamics are likely to be different in the hotel and restaurant industry.

In another study for the case of EU countries finds that productivity is very high among firms which innovate (Harrison et al., 2014). This study used survey data from service and manufacturing sectors with the aim of separating enterprises having process or no process innovation. For the case of product innovation, the study found that the demand for older product falls as a result of an increase in the demand for new products. In addition, Harrison *et al.* reported that process innovation did not have any effect on the service sector. The study only focused on the process innovation. However, this study will besides be investigating process innovation, also incorporate technical innovation which could change these results.

Heung and Gu (2012) conducted a study on the effect of innovation on the perception of customers about the design and surroundings on profits in the hotel and restaurant sector. The study established that innovation in the area of surroundings and design is very critical to the development of restaurant sector. In addition, the study reported that innovation on the hotel atmosphere has a positive impact on customer perception. This study employed a descriptive study design on a cross-sectional data set collected from 500 enterprises. Similar findings were observed by Chen (2011) where it was found that quality of the restaurant atmosphere, the price level, and quality of services have positive impact on customer perception about the firm and

hence the profits. Studies by Heung and Gu (2012) and Chen (2011) focused mainly on the process innovation and not technical part of innovation. This focuses on both technical as well as the process aspects on innovation.

In Kenya, there are also various studies which sought to investigate how innovation affects performance of firms. For example, Letangule and Letting (2012) applied descriptive statistics and regression analysis to a cross-sectional data to examine the effect of innovation of firms operating within the telecommunication industry. This study concluded that adoption of various innovation strategies affected the performance of firms to a greater extent. However, the study had several limitations with respect to this study. First, there is no evidence that this study controlled for endogeneity which is a common problem that affects OLS, and therefore, its estimates cannot be relied upon. Secondly, it is not clear from the study on how process and technical innovations were measured, and thirdly, the study focused on the telecommunication industry while this study examines hotel and restaurant industry.

Mwihaki (2017) conducted a Study on the role of innovation management on SMEs Performance focusing of the Hotel sector in Nairobi. Both descriptive and regression analyses were applied to primary data from 100 hotels. The study found that market and process innovation management played a critical role towards the performance of SMEs in the hotel sector in Nairobi. On the other hand, the study observed that management of supplier innovations played no role on hotel performance. However, the way the dependent and independent variables were measured in the study is wanting. Use of Likert scale for measuring variable is a subjective way as opposed to objective and therefore, the results of the study could have been compromised. In another study, Kiragu (2016) found that product innovation was significant and positively related to firm performance among the insurance companies in

Kenya. In addition, in this study which used a descriptive cross-sectional design did not observe any relationship between market innovation and performance. Furthermore, the study showed that process innovation was the most predominant among the companies surveyed.

2.5 Summary of Empirical Review

The reviewed literature indicates that there are a lot of studies which have focused on the effect of innovation among firms and performance. Accordingly, these studies have been carried out in both developing and developed countries and have covered wide range of aspects regarding innovation and performance. For instance, some studies have investigated the effect of innovation management and firm performance, while others have investigated how innovation has affected the general performance of enterprises.

However, despite all these studies, there are some gaps which require further studies. For example, various studies have used expenditures R&D as a measure of innovation. This measure alone might not accurately capture innovation since, allocation of money does not mean that knowledge was generated and/or implemented. Based on this, the study proposes to include the actual innovations such as new products/services, new market to address the challenge. In addition, there are limited studies of this nature in the Kenya situation. Few studies carried out, mainly focused on SMEs in Nairobi. In addition, these studies have paid more attention on market and process innovations and hence leaving out, product innovation viewed as key determinant of financial performance. There was therefore, a need for further investigation.

2.6 Conceptual Framework

A conceptual framework guides the study in understanding channels through which the dependent variable is influenced by independent variables. This is because, it is a representation

of the link between dependent variable and variables which are theorised to explain it. Figure 2.1 shows the conceptual framework for the study.

Independent variables

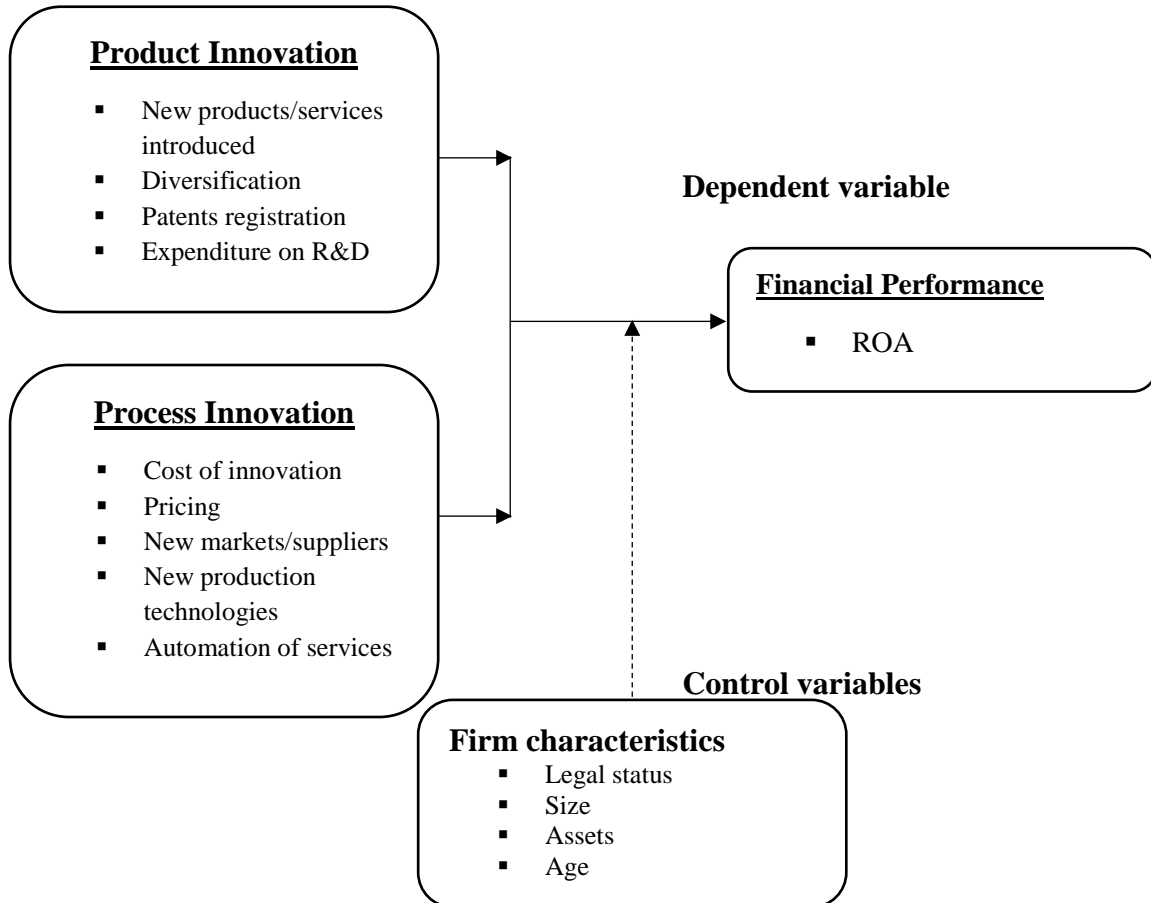


Figure 2.1: Conceptual Framework

The study measured production innovation using indicators as introduction of new products/services with superior qualities and the number of these innovations, patents registered by the firm and the expenditure on R&D as an indicator for new idea generation. The study hypothesises that production innovation leads to improved profitability of the firm. regarding process innovation, the study measured this through cost of production, new pricing strategies, discovery of new markets and suppliers of the raw material, introduction of new production technologies and automation of services. It was expected that introduction of new production technologies could lead to cost efficiency and hence low pricing strategies which in turn leads to more sales and profits.

The study introduced firm characteristics as control variables in the study. They are: firm legal status, firm size, age and total assets. These characteristics are hypothesised to explain financial performance of an enterprise. For instance, hotels and restaurants could enjoy benefits associated with economies of scale which could lead to better financial performance. Return on Assets (ROA) was used as a measure of hotel or restaurant financial performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, research methods employed in conducting the study are discussed. These assisted the researcher in responding to the research question. They include: design of study, target population, sample size and sampling techniques, data collection instruments and process, data analysis and description of variables. Finally, a description of how validity and reliability of the data collection instruments were measured is also presented.

3.2 Research Design

A research design is an outline of the study intended to generate answers to the research problem (Orodho, 2009). The study employed both descriptive and correlation analysis designs. A descriptive design explains the situation as it is. On the other hand, a correlation design was utilized to understand the nature and direction of the effect of innovation on financial performance. The purpose here is to help all stakeholders in the hotel and restaurant industry make rational decisions on policies to enhance the performance.

3.3 Target Population

The study targeted all hotels and restaurants in Nairobi. Sampling frames from Kenya Association of Hotelkeepers and Caterers (for hotels), Pubs and Restaurant Association of Kenya (for restaurants) was utilized. According to these sampling frames, there are 53 hotels, and 118 restaurants in Nairobi (see Appendix II). Nairobi was chosen because it the business hub of Kenya with a concentration of many hotels and restaurants than any other town. This concentration has brought about stiff competition in the industry which has made innovation necessary for survival of hotels and restaurants.

3.4 Sample Size and Sampling

A research sample means individuals or objects with observable characteristics selected from the target population for the study (Mugenda & Mugenda, 2003). How many objects or observable units selected to represent the entire population is what is known as sample size. This study selected a sample size based on Yamane (1967) formula:

$n_0 = \frac{N}{1+N(p)^2}$, where, N=size of the target population, n_0 is the sample size and p is the margin of error (assumed to be 5%) at 95% confidence level. In the case, the sample size for the study was give as:

$$n_0 = \frac{171}{1+171(0.05)^2} = 119.79, \text{ approximated as 119 firms.}$$

Given that the population was small, Yamane suggested adjustment of the sample size using a finite population correction formula:

$$n = \frac{n_0}{1+\frac{(n_0-1)}{N}}, \text{ hence, } n = \frac{119}{1+\frac{(119-1)}{171}} = 70.4 \text{ approximated as 70 firms.}$$

Such adjustment provides a sample which gives a proportionately more information for small population than larger ones. Therefore, the study selected a sample size of 70 firms within the hotel and restaurant industry to represent the entire population. Proportional allocation of this sample between hotels and restaurants presented in Table 3.1, was computed using the researcher's formula:

Sample Size = $\frac{n}{N} \times 70$, where; n is the sample size and N is population size.

Table 3.1: Sample Size

Category	Total Number in Category	Sample size	Percentage
Hotels	53	22	31.43
Restaurants	118	48	68.57
Total	171	70	100.00

Source: Computed from Research Data (2018)

In this case, 22 hotels and 48 restaurants were sampled for the study. On the other hand, sampling refers to the scientific technique of drawing a sample that can represent the study population (Kothari, 2004). The study used stratified sampling technique. There was a stratum for hotels and another one for restaurants. This was meant to ensure proportional selection of hotels and restaurants for the study. To ensure proportionate sampling of hotels, stratification based on their classification (stars) will be undertaken. Stratified sampling ensured probability allocation of all the targeted firms. This was meant to overcome the problem of selection bias.

3.5 Data Collection Instruments

Firm-level questionnaire (see Appendix I) was used to collect data from senior management of the hotels and restaurants. The questionnaire was chosen due to its capability to collect data in a structured manner. A questionnaire was also ideal for collecting large volumes of data. This tool was composed of parts A and B. Part A of the questionnaire sought to understand the nature of the firm (hotel or restaurant) and where located, while part B contains questions which sought to answer the research objective. Likert scales was be used to capture qualitative data in the questionnaire. The questionnaire comprised of questions regarding all variables of the study which are based on objectives. The study also collected secondary data especially on

financial aspects for which was difficult to obtain information from the hotels and restaurants. Secondary data was obtained from published information/documents.

3.6 Data Collection Procedure

It is an ethical requirement to obtain a research authorization. A letter from the University of Nairobi served this purpose (see Appendix III). Through a competitive process, the study recruited and trained two research assistant who helped in the distribution and collection of questionnaires. During data collection, greater attention was paid on confidentiality, voluntary participation and anonymity principles. Questionnaires were administrated by the research assistants to ensure high response rate and also that respondents clearly understood questions (Monsen & Horn, 2008). Data was collected between 28th of October 28th and 5th of November.

3.7 Data Analysis

The study employed employ both descriptive and regression analyses. Descriptive statistics such as means, standard deviation and percentages of all variables were considered. On the other hand, Ordinary Least Square (OLS) method was used to estimate the effect of innovation on firm financial performance. With reference to the conceptual framework, the study models the following regression equation:

$$ROA)_i = \alpha_0 + \beta_1(prodinnov)_i + \beta_2(procinnov)_i + \beta_3(fage)_i + \beta_4(fsize)_i + \beta_5(fassets)_i + \beta_6(divers)_i + \varepsilon_i \dots\dots\dots 1)$$

Where,

α_0 – y intercept (constant). β' s =Coefficients to be estimated

ROA = Return of Assets for hotel/restaurant i

$prodinnov$ =is a vector of product innovation which comprises of (new products/services, diversification, patents registration, and expenditure on R&D).

$procinnov$ =vector of process innovation (Cost of innovation, pricing, new markets/suppliers, new production technologies and automation of services).

$fage$ =firm age, $fsize$ =firm size, $fassets$ =firm assets and ε_i =error term

Since OLS is affected by the presence of multicollinearity and spurious regression problems which can lead to biased results, the study conducted the necessary tests to ascertain the validity of the results. The tests are: Variable Inflation Factors (VIF) and Heteroscedasticity for multicollinearity and spurious regression respectively. These challenges were not detected

3.4.1 Variables

Table 1 presents operationalization of variables which the study incorporated.

Table 3.1: Description of Variables

Variable	Description	Measurement
Dependent		
Financial Performance	Financial performance of the hotel/restaurants	ROA
Independent (product innovation)		
Nprod	New products/services	Number of new products/services invented
Ptents	Patens registration	Number of patents registered
R&D	Research and Development	Expenditure on R&D (Kshs.)
Process Innovation		
Cprod	Cost of production	Total production cost (Kshs)
Pstratgy	Pricing strategy	Dummy (1=presence of new pricing policy, 0 otherwise)
Nmakt	New Markets	Number of markets discovered
Nprotech	New production technologies	Number of technologies invented
Autm	Automation	Number of automations
Control variables		
Firm size	Average number of employees for the last 12 months	Ratio (total employees/12). Natural logs will be taken
Firm age (fage)	Years in operation	Number of years
Total assets	Total (Current account Buildings Machinery	Natural logs of Total assets in Kshs.

3.8 Validity and Reliability

Validity in a research refers to a situation where the research questions are able to elicit responses capable of adequately responding to study objectives (Gall, 1996). To ensure this, the researcher sought expert opinion on the questionnaire items from research experts in the department of Finance and Accounting, University of Nairobi. In addition, a pilot study was also be conducted and questions which were found not to have generated valid responses, were reworked and others removed from the questionnaire. On the other hand, reliability of research instrument refers the scenario where a research instrument yields consistent result. The study employed a test-retest method to ensure reliability of the questionnaire. This involved conducting a pilot study on a similar sample twice. However, the sample included in the pilot survey was excluded in the final study.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter details the findings and discussions of the study. The chapter is divided into two sections. The first section discusses descriptive results while the second section presents results and discussion on regression analysis. In addition, the response rate to the questionnaires is also analysed.

4.2 Response Rate

The study had targeted to collect information from 22 hotels and 48 restaurants. The researcher managed to collect data from 15 hotels and 38 restaurants. Summary statistics on the response rate are presented in Table 4.1

Table 4.1: Response Rate

Category	Sample Size	Number collected	Response Rate
Hotels	22	15	68.18
Restaurants	48	38	79.17
Total	70	53	73.67

Source: Research Data (2018)

The results on response rate indicate that a total of 53 firms were interviewed, that is, 15 hotels and 38 restaurants, bringing the response rate to 73.67%. This rate was considered sufficient enough for the research to proceed with data analysis following Reiersen et al. (2008).

4.3 Descriptive Statistics

This section presents various descriptive statistics with regard to the variable of the study. First, the study examines the legal status of the hotels and restaurants surveyed. Table 4.2 presents summary of this statistics.

Table 1 .2: Firms Legal Status

Legal Status	Frequency	Percentage (%)
Sole ownership	5	9.43
Partnership	12	22.64
Public Company	4	7.55
Private company	32	60.38
Others	0	0.00
Total	53	100.00

Source: Research Data (2018)

Statistics on the legal status indicate that most of the hotels and restaurants, 32 (60.38%) are private companies. This was followed by partnerships at 12 representing 22.64%. In addition, there 5 sole proprietorships representing 9.43% and 4 public companies. These findings imply that the hotel and restaurant are in the hands on majorly, a private company affair.

Next, the study had enquired in the last three years, whether the hotel/restaurant had made any product innovations. Table 4.3 presents summary statistics

Table 4.3: Product Innovations

Innovation	Frequency	Percentage (%)
Yes	53	100.00
No	0	0.00
Total	53	100.00

Source: Research Data (2018)

Findings indicate that all the 53 firms which were surveyed had improved or invented new products for the last three years. On the question of what kind of product innovations, the study has learned that the hotel and restaurant industry in Nairobi has witnessed various innovations interns on products they offer to their customers. To start with, findings indicate that most of

the hotels have emphasised on the design of hotels especially rooms for the guests, in terms of their size and the level of comfort that they can offer. In connection to that, hotel staffs are under instruction to ensure that hotel rooms are extremely neat. In addition, most hotels and restaurants have decorated guest rooms with elegant equipment, and also ensured that lighting systems, curtains and arrangement of entertainment are tailored to the guest's preferences.

The study has also discovered that most hotels and restaurants have made tremendous improvement on both the interior and exterior architecture of their premises for the purposes of creating value in their business in order to attract more customers. Another area of product innovation is that of food and beverages. Findings show that most hotels and restaurants have improved their menu and recipes to create more values for their customers. Most hoteliers have come up with cuisines which suits customers of all types in terms of age, gender, ethnicity, race and nationality. This is in recognition that food and beverages are a critical factor which many guests identify the hotel/restaurant with. Therefore, many restaurants and hotels in Nairobi have leveraged on this to create value for customers in terms of quality.

Next, the study sought to find out if the hotel/restaurant had made any innovations on their processes or operational methodologies. Table 4.4 shows summary statistics.

Table 4.4: Process Innovations

Innovation	Frequency	Percentage (%)
Yes	53	100.00
No	0	0.00
Total	53	100.00

Source: Research Data (2018)

Just like product innovation, findings indicate that all the 53 firms which were sampled for the study had engaged in process innovation. Further, the study conducted exploration on the nature of process innovation conducted in these firms. The study has established that most

hotels especially, 4 star and above had leveraged on technology to make checking in much easier, as their customers can now make inquiries and book the rooms and other facilities online. In addition, the study has discovered that majority of the hotels and restaurants have made improvement on the in-room hardware such as phone activated keys, to the ability to use a tablet to manage temperatures in the rooms, with the aim of better customer experience.

Furthermore, the study reports that most of the hotels and restaurants have installed Wi-Fi in their facilities including conference and guest rooms, and guests enjoy this service free of charge. Moreover, process innovation in terms of information flow has been emphasized in many hotels and restaurants. This has been necessitated by the busy schedule of the guest where the hotels now provide all the information on their websites to make it easy for potential customers book their suites from a single window. The study has also revealed that some hoteliers manage their supply chain relationships with travel agents, courier services, and tourism for convenience of the guests. Another, process innovation feature that has prominently come out of this study is the promotional activities, where, majority of the hotels and restaurants have embraced new ways of communicating with their customers. In addition, they have also partnered with tourism and travel agents in order to promote their co-brand values.

Next, the study presents summary of various statistics in Table 4.5.

Table 4.5: Summary Statistics

Variable	Obs	Min	Max	Mean	Std. Dev.
ROA	53	20.19	531.23	19.54	77.84
fsize	53	2.1	20.6	13.43	6.74
prodinnov	53	3	11	3.68	3.26
procsinnov	53	1	10	4.96	2.59
fage	53	2	110	21.74	20.50
fassets	53	0.45	59.50	5.62	12.80
totalsales	53	8.19	90.00	5.30	13.40

Source: Research Data (2018)

With regard to the size of the firms, findings of the study show that the mean number of employees in the Nairobi's hotel and restaurants was approximately 13 with a maximum of 20.6 a standard deviation of 6.74. On age of these firms, the average number of years that they had at the time of this survey was 21.74 with a standard deviation of 20.50 and a maximum of 110. This imply that most of these hotels and restaurants had been in operation long enough to understand the dynamics of the industry. Concerning product innovation, the study has found that the mean of products innovated was 3.68 with a maximum of 11 and a minimum of 3 innovations. On process innovation, the study has found a mean of 4.96 with the standard deviation of 3.26 and a minimum of 10.

With regard to total assets of these firms, the mean was 5.62 billion Kshs, with a maximum of 59.50 billion Kshs., with a standard deviation of 12.80 billion Kshs. According to Table 4.5, the mean annual total sales was 5.30 billion Kshs. With a standard deviation of 13.40 billion Kshs, and a maximum of 90.00 billion kshs. Finally, the study has revealed that, the maximum

ROA of the hotels and restaurants in Nairobi was 531.23 with a mean of 19.54 and a standard deviation of 77.84. This shows that the ROA in the hotel industry in Nairobi has been very impressive.

4.4 Regression Analysis

The purpose of the study was to estimate the effect of product and process innovation in hotels and restaurants in Nairobi county, Kenya. The study measured product innovation by the numbers of products/ services innovated, while process innovation was measured by new processes such as methods of production invented. While in the last section, the study has presented an analysis of the descriptive results, in this section, the study conducts a regression analysis with the help of Ordinary Least Squares (OLS) method.

OLS was conducted to measure both the nature of the effect, whether negative or positive and if that effect is significant or not. When running OLS, the assumption is that the coefficients of independent variables are not zero and therefore, any p-value that is less than 0.10, 0.05 and 0.001 leads to confirmation of this assumption. If so, the variable is said to be significant.

version 14 to do these analyses. To ensure the validity of the estimates, the study carried out post regression, multicollinearity test.

4.4.1 Multi-collinearity Test

The aim of this test is to find out if explanatory variables are autocorrelated or not. If autocorrelated, this could invalidate the estimates and hence lead to wrong results and inferences. This test is conducted by the use of Variance Inflation Factors (VIF). Based on this test, VIF that is more than 10 and $1/VIF$ that is less than 0.1, indicate the presence of autocorrelation. Summary results of multicollinearity test are presented in Table 4.6.

Table 4.6: Variable Inflation Factors

Variable	VIF	1/VIF
fsize	1.17	0.852030
fage	1.13	0.886516
procinnov	1.11	0.901980
fassests	1.09	0.917303
prodinnov	1.08	0.929606
Mean VIF	1.12	

Source: Research Data (2018)

According to these results, the study concludes that there was no multicollinearity in the regression. This because, all VIF are less than 10 while all 1/VIF are greater than 0. 1. Therefore, the study concluded that the model did not suffer from endogeneity challenge, and thus, the estimates are unbiased.

Another problem which affects OLS is the issue of non-constant variations in the characteristics of a variable. However, this challenge is overcome by OLS using robust standard errors. Therefore, a regression was run with robust standard error option. Having been satisfied that autocorrelation and non-constant variances were not a problem to the results, the study presents Table 4.7 OLS estimates.

Table 4.7: Estimated Results

ROA	Coef.	Robust Std. Err.	t	P>t	[95% Conf. Interval]
prodinnov	.0167962	.0058687	2.86	0.006	.004976 .0286164
procsinnov	.8668781	1.316693	0.66	0.514	-1.785078 3.518835
divers	1.325903	.823754	1.61	0.114	-.3332226 2.985029
fage	.5452621	.2854932	1.91	0.063	-.0297508 1.120275
fassests	27.95818	13.97521	2.00	0.051	-.1893376 56.10569
firmsize	.0228023	.0173924	1.31	0.196	-.0122278 .0578323
_cons	-3.500225	.9709277	-3.61	0.001	-5.455773 -1.544676
Number of Observations	53				
Prob > F	0.000				
R-squared	0.4132				

Source: Research Data (2018)

4.5 Correlation Coefficients

These coefficients indicate the presence or absence of correlation among independent variables. Table 4.8 indicates this.

Table 4.8: Correlation Coefficients

	ROA	prodinnov	procsinnov	divers	fage	fassests	fsize
ROA	1.0000						
prodinnov	-0.1295	1.0000					
procsinnov	0.1629	0.0941	1.0000				
divers	0.2745	0.1430	0.2159	1.0000			
fage	0.1647	-0.1021	-0.0591	0.2490	1.0000		
fassests	-0.1071	0.0467	0.0462	-0.0735	-0.1079	1.0000	
fsize	0.1950	0.0554	0.2240	0.3433	0.1948	-0.1160	1.0000

Source: Research Data (2018)

With regard to correlation, the coefficients of the independent variables indicate its absence. This is because, the coefficients are less than 0.5.

4.6 Discussion of Findings

Findings on fitness, indicates that the OLS model was well fitted. This is show by the overall p-value of the model (Prob > F) which is 0.000. This imply that the study accepted the null hypothesis which states that the coefficients of independent variables are different from zero. On the other hand, the R-squared estimate indicate that the independent variables strongly explain the ROA (dependent variable). A value of 0.4132 imply that change in any of the explanatory variables (prodinnov, procinnov, fage, fsize, divers, and fassets) lead to 41.32% change in ROA. The estimated equation 1 is now presented as:

$$ROA)_i = -3.500225 + 0.0167962(prodinnov)_i + .8668781(procinnov)_i + 0.081578(fage)_i + 0.0228023(fsize)_i + 27.95818(fassets)_i + 1.325903(divers)_i \dots\dots\dots$$

According to these results, product innovation is positively related to financial performance of the hotels and restaurants as measured by ROA. In addition, the coefficient of this variable is also significant at 0.05 or 5% confidence level given that its P-value is 0.006. Furthermore, the size of the coefficient of product innovation show that any unit change in product innovation, leads to 1.68 increase in the firm financial performance. With regard to process innovation, the study has also established a positive relationship with the financial performance of hotels and restaurants. However, process innovation coefficient was not found significant. Furthermore, the study has observed that process innovation, though not significant, its impact on ROA is greater than that of product innovation. This is because, any change in a unit of process innovation leads to 88.68% increase in financial performance.

These findings show that both product and process innovation affect the financial performance of the hotel and restaurant industry positively. Indeed, innovations are meant to add value to the products and services, which in-turn leads to attraction of more customers and hence more sales. Some firms also embrace innovations with the purpose of reducing the costs of operations, and therefore more efficiency and profits. These results have been supported by several other studies. For instance, Dachs *et al.* (2015), Herstad and Sandven (2015) studies have argued that that innovation creates a competitive advantage for an enterprise which leads to generation of more income. Similar findings have been noted by Triguero et al. (2014).

Concerning other factors which affect ROA, the study has established that product or service diversification is positively related to the financial performance of the hotels and restaurants in Nairobi. However, this variable is not significant, given that its P-value is 0.114. In terms of the impact, the estimated coefficient shows that a unit change in product or service diversification leads to 132.59% change in ROA. These results imply that diversification has a very big effect on the financial performance of firms in the hotel and restaurant industry in Nairobi. Diversification could explain financial performance of the firms in two ways. First,

provision of variety of products or services could increase the income of the hotel/restaurant and secondly, diversification can also act as a risk control strategy, where if one product/service does not sell due to market conditions, the firm can still survive using other products or services.

An examination into the effect of firm size on ROA, has also revealed that there is a positive relationship. However, this variable was not significant given its P-value of 0.196. In addition, the size of its coefficient (0.0228) indicate that a unit change in the size of the firm as measured by the numbers of full-time employees could lead to 2.28% increase in the firm financial performance. These findings imply that any addition permanent employee in the hotel and restaurant industry will explain ROA upwards, meaning that productivity of employees in this industry is very high. Similar results have been noted by World Bank (2017) paper which argues that, large firms are likely to be more profitable because of the advantages of economies of scale they enjoy where, large firms are able to produce at a lower cost as compared to smaller ones. Similar arguments were advanced by Amaton and Burson (2007).

With regard assets, the study has established a positive relationship with the financial performance. In addition, this relationship was found significant at 10% level of confidence. This imply that the more the assets a hotel or restaurant has, the better its financial performance. Assets are used to make work easier. In addition, organization can use assets to sure loans from financial institutions to expand their business. Finally, the study has found that age of the hotel or restaurant is positively related to ROA. This variable was is also significant at 10% confidence level given the p-value of 0.063. This imply that older firms could have a better financial performance that their younger counterparts. Hotels and restaurants with many years of existence could be characterised with more assets, more experience, and a well-established network which gives them a competitive advantage over young hotels and restaurants.

CHAPTER FIVE: SUMMARY, CONCUSSION AND RECOMMENDATION

5.1 Introduction

This study had sought to investigate the effects of product and process innovation on the financial performance of hotels and restaurants in the county government of Nairobi. This chapter presents summary of the findings, conclusion and recommendations. In addition, the chapter suggests other areas of research and gives the limitations as well.

5.2 Summary

The aim of this study was to determine the effect of product and process innovation on financial performance in the hotel and restaurant industry in the county government of Nairobi. In this study, product innovation was measured by the number of new products innovated or improved, while process innovation was measured by the number of new methods or technologies developed or adopted to better the operations of the hotel or restaurant. On the other hand, finance performance was measured by the return on assets (ROA). In addition, the study incorporated other variables as control variables which could also influence the performance of the hotels and restaurants. These includes: the size of the firm, the number of years the firm has been operating, the value of assets held by the firm, and diversification of firm products and services. The study used both secondary and primary data. Secondary data was obtained from the World Bank Enterprise Survey data, and other publications, while primary data was collected using a questionnaire (see Appendix I).

Both descriptive and regression analysis with the aid of OLS method was used to estimate the results. For descriptive, means, standard deviations, minimum, maximum values percentages and frequencies were considered. On the other hand, regression analysis aimed at generating the direction of the relationship between innovation and ROA, and at the same time, giving an

indication of whether the results were significant or not. To ensure validity of the results, the OLS controlled for heteroscedastic which is a major problem. In addition, the multicollinearity test was conducted to check for the presence of autocorrelation, which was found absent. Thus, the results of the study can be relied upon.

Turning to the results, the study has learned that product innovation is positive and significantly related to financial performance of the hotels and restaurants. This means that any increase in product innovation, leads to a positive change in the performance of the firm in terms of profitability and return on assets. Similarly, the results indicate that process innovation is positive but not significantly related to financial performance of the hotels and restaurants. These findings have been backed by several other studies. For instance, Dachs *et al.* (2015) reported that innovation is a critical component of the growth of business enterprises. On their part, Herstad and Brekke (2012) observed that increased innovation activities in small business enterprises play an important role towards the development of knowledge-oriented economies and transformation. Still on the effect of innovation on firm performance, Triguero *et al.* (2014) noted that innovation is a critical component of the key component of firm profitability since it generates value in the goods and services, which then attracts more clients/customers.

Regarding other independent variables, the study has found that diversification of firm products or services was positive but not significantly related to financial performance in the hotel and restaurant industry. This implies that relying on variety of products or services could create a regular stream of income as opposed to dependence on fewer or one product.

The study has also found that the size of the firm affects its financial performance positively. However, these results were also found significant. These findings imply that employment of additional staff members in the hotel and restaurant industry would lead to better financial performance. Existing literature has adduced similar findings. For instance, Amaton and

Burson (2007) noted that, the size of the firm is anticipated to explain the financial well-being of a firm positively. With regard assets, the study has established a positive relationship with the financial performance. The more the assets a hotel or restaurant has, the better its financial performance. Finally, the study has found that age of the hotel or restaurant is positively related to ROA. This imply that older firms could have a better financial performance that their younger counterparts.

5.3 Conclusion

This study investigated the effect of product and process innovation of the financial performance of hotels and restaurants. Several conclusions can be made from the findings and summaries. First, both product and process innovation affect the financial performance of the hotels and restaurants positively. This means that innovation plays a critical role towards the growth and development of the hotel industry. Through innovations, firms establish their positions in the market by creating unique technologies, products and services.

There are two major ways through which innovation could affect the growth of firms. The first one is the direct responses coming from the market when the firm introduces a specific innovation which aids in adjusting the incentive of the enterprise capacity revenue maximizing levels, and secondly, indirect effects occurring as a result of learning and knowledge accumulation which might generate other modes of innovation which could either enhance or reduce the direct market effect. Some innovations are geared towards minimization of production costs. Firms with ability to minimize their costs of production are likely to enjoy high levels of profits, because profits results from the excess of sales over gross revenue. This imply that, the lower the cost of production, the higher the profit.

Secondly, the study concludes that the assets of the hotels and restaurant affects its financial performance positively. Large firms are likely to be more profitable because of the advantages of economies of scale they enjoy where, as a result of more asset base.

Thirdly, the study concludes that the age of a firm determines financial performance of hotels and restaurants positively. Finally, the study concludes that the size a hotel or restaurant, and diversification , has positive but insignificant effect on the financial performance in the hotel and restaurant industry.

5.4 Recommendation

Hotel and restaurants play a very critical in the economy of Nairobi and Kenya in general. Findings indicate that product and process innovation affect financial performance in hotels and restaurants. Therefore, this study recommends hotels and restaurants to embrace innovation fully. Firms need to invest in research and development to develop better technologies, products and processes that could lead to improved financial performance. This will in turn lead to more creativity and innovativeness in the industry which is likely to improve the performance of the hotels and restaurants technically and financially. In addition, innovation could position the enterprise strategically in the market through better technology and offering of unique products and services.

In addition, the study has found that assets of the hotels and restaurants was positively related to financial performance of firms. Thus, this study recommends that hotels and restaurants need to encourage accumulation which could not only ensure a steady stream of income, but generation of more income as well. Producing or offering many products is also a risk management strategy. This is because, when one service or product performs badly in the market, the firm can rely on the revenues from other products or services to survive.

Furthermore, the study has revealed that the size of a hotel or restaurant affected financial performance. Based on this, the study recommends that hotels and restaurant should invest heavily in expansion in order to enjoy the benefits of operating on a large scale. Key among these benefits, is the economies of scale. Economies of scale come in many forms such as discounts offered on large purchases, having a bargaining power in the market as a result of a big market share.

5.5 Limitations of the Study

This study was limited on hotels and restaurants in Nairobi. This means that its findings may not applicable in other regions of Kenya due to different socioeconomic characteristics. A cross county evidence is basically necessary for this kind of studies, because, it increases validity of the results and therefore, a wider application.

In addition, certain unobserved characteristics like the management and leadership styles were not captured in the study. These could also determine financial performance of hotels and restaurants. If these aspects were included in the study, maybe the results could be different.

Furthermore, this study incorporated secondary data for which it was not clear whether its collection was well structured and randomised. Lack of randomization in data collection yield selection bias which affects validity of the findings. Thus, if that was the case, the validity of this study's results could be questioned.

5.6 Suggestion for Further Studies

Even though the study finds that product and process innovation lead to better financial performance of the hotels and restaurants in Nairobi, it would be much better for another investigation where a wider geographical area could be considered.

There are several factors which this study left out due to lack of better measures. These includes leadership and management styles which are very critical determinant of financial performance of firms. A further study with inclusion of such factors is necessary.

Since it was not clear as to whether the secondary data used in this study was randomly collected, it will be better to conduct another research which will employ primary data that is collected in a well-structured and randomized manner. This could probably yield better results by overcoming the problem of section bias that maybe this study could have suffered from.

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Appendix I: Hotel and Restaurant Questionnaire

Part A

Name of Hotel/Restaurant.....

Location.....

Part B: Personal and Business Information

1. Designation of the respondent.....
2. Legal status of the hotel/restaurant
 - a) Sole proprietor
 - b) Partnership
 - c) Public company
 - d) Private company
 - e) Others (specify).....
3. How many years have you been in this hotel/restaurant?
 Less than a year 2. 1-5 years 3. 5-10 years 4. >10 years
4. How many years has this hotel/restaurant been in operation?.....
5. Could you tick the following with respect to areas of your operations?
 Food/dining
 Bar/soft drinks
 Accommodation
 Others (specify)
6. Provide the following information regarding the performance of this hotel/restaurant

Year	No of permanent employees	Sales in Kshs	Capital	Assets (total) in Kshs.	Net income (Kshs)	Expenditure of R&D (kshs)	Cost of production
2015							
2016							
2017							

7. a) In the last three years, has the hotel/restaurant invented any new products?
 1. Yes 2. No
- b) if the answer in (a) is yes, how many products has the hotel/restaurant invented in the last three years?
- c) Could you list product innovations that this hotel/restaurant has invented in the last three years.....
8. a) In the last three years, has the hotel/restaurant invented any new technologies?
 1 Yes 2. No

b) if the answer in (a) is yes, how many innovations has the hotel/restaurant invented in the last three years?

c) Could you list these technological innovations that this hotel/restaurant has invented in the last three years.....

Thank you

Appendix II: Hotels and Restaurants in Nairobi

Hotels

680 Hotel
Weston Hotel
Windsor Golf Hotel & Country Club
67 Airport Hotel
Best Western Premier
Boma International Hospitality College
Clarion Hotel
Crowne Plaza
Park Inn Radisson
Eka Hotel
Enashipai Resort & Spa
Fairview Hotel
Golden Tulip Hotel
Hemmingways Nairobi
Hill Park Hotel
Hilton Nairobi
Hotel Intercontinental Nairobi
Hotel Royal Orchid Azure Nairobi
International Hotel & Tourism Institute
Jacaranda Hotel Nairobi
Karen Blixen Coffee Garden & Cottages
Karen Country Club
Kenyatta International Conference Center
Laico Regency Hotel
Leisure and Travel Guides - EA
Maanzoni Lodge
Muthaiga Country Club

Nairobi Safari Club
Nairobi Serena Hotel
Naivasha Kongoni Lodge
NAS Airport Services
Ole Dume Serviced Apartments
Ole Sereni Hotel
Panari Hotel Nairobi
Parklands Sports Club
Pride Inn Lantana
PrideInn Hotel Rhapta
PrideInn Hotel Westlands
PrideInn Lanatana Suites
Radisson Blu Hotel
Red Court
Safari Park Hotel & Casino
Sankara Nairobi
Sarova Panafric
Southern Sun Mayfair
Sovereign Suites
The Boma Nairobi
The Fairmont Norfolk Hotel
The Sarova Stanley
The Tamarind Group
Tin Tin Restaurant
Tribe - The Village Market hotel
Utalii Hotel
Villa Rosa Kempinski

Restaurants

La Salumeria Restaurant
Tamarind Restaurant
Yejoka Garden
Abyssinia Restaurant
Habesha Ethiopian Restaurant
Carnivore Restaurant
Experience Seven Seafood & Grill
Ranalo Foods Ltd
Amaica The Restaurant
Campia Ethiopian Restaurant
Pool Deck Restaurant - The Sarova Stanley
La Palanka Nairobi
Bridges Organic Health Restaurant
Mama Ashanti
Makutano Grill
Blanco's Lounge & Grill
Max Land
Table 49, The Cbd Bistrot

Oasis Restaurant - Southern Sun
Hot Dishes Restaurant
Visa Place
Rayan Hotel & Restaurant
Pitcher & Butch
Didi's Restaurant
Tin Tin Restaurant
Motherland Restaurant
Dass Restaurant
Arabian Cuisine
Kengeles Lavington Green
Buffet Park
Waka Waka
The Gazebo Restaurant
Bonds Garden Restaurant
Njuguna's Place
Degrees Bar Restaurant and Lounge
Coco J Restaurant
Black Parrot Restaurant
Sabrina's Ethiopian Restaurant

Zapata Restaurant
 Tupelo Italian Restaurant
 Shade Restaurant Ltd
 The Smart Village Bar & Restaurant
 Lawino's Kitchen -Authentic African
 The Fairmont Norfolk Hotel
 Soko Restaurants
 The Brew Bistro & lounge
 Nairobi Java House
 Mukutan Garden Cafe
 About Thyme Restaurant
 Palacina Restaurant
 Pwani Pool Restaurant
 The Terrace Restaurant
 The River Cafe
 Corner Affair Bistro
 Baraka Restaurant
 Rolfs Place
 Jiko Restaurant
 Avanti Mega
 Makuti Bar
 Al Pasha Coffee Lounge & Bar
 Mambo Italia
 Lucca Restauant
 Saffron Restaurant
 Taste of China
 Ginza Japanese Restaurant
 For You Chinese Restaurant
 Mister Wok Chinese Restaurant
 Panda Chinese Restaurant Ltd
 China Plate Restaurant
 Bangkok Chinese Restaurant Ltd
 Spring Garden
 Xi'an Chinese Returant
 Hong Kong Restaurants
 China Jiansu Restaurant
 Ro Ro Restauant
 Kowloon Garden Chinese Restaurant
 Furusato Japanese Restaurant (Asiana K.
 Ltd)
 Pampa Group of Restaurants - Pampa
 Churrascaria
 Fogo Gaucho

Mediterraneo Ristorante Pizzeria
 Osteria Del Chianti
 Trattoria Restaurants
 Casablanca Bar Restaurant
 Moniko's Restaurant
 L'Arena Pizzeria
 Zafferano Italian Restaurant
 Vineyard Restaurant & Wine Bar
 La Dolce Vita (Ristorante Pizzeria)
 Rendezvous Restaurant
 La Prugna Doro
 Open House Restaurant Ltd
 Darbar e Tandoor Indian Restaurant
 Ashiana Vegetarian Restaurant
 Peppers Restaurant Ltd
 Bukhara Restaurants
 Legends Restaurant
 Anghiti Restaurant
 Saravanaa Bhavan
 Khazana Restaurant
 Mughal Restaurant
 Clay Oven Restaurant
 Haveli Restaurant
 Royal Kitchen
 Karibu Hotel
 Canton Malaysian Chinese Restaurant,
 Mister Works
 Nargis Restaurant
 Originelle Restaurant
 Sierra Brasserie
 Chowpaty Pure Veg. Restaurant & Cafe
 Tajiri
 Pulcinella Ltd (Pomodoro)
 Talisman Ltd
 Spice Roots
 Mystique Gardens
 Nargis Restaurant
 Chowpaty Restaurant
 Sizzling SpicesRestaurant

Source: Association of Hotelkeepers and Caterers (for hotels), Pubs and Restaurant Association of Kenya (for restaurants)