

Non-Technological Food Service Innovation Models: Towards Building Value Creation in Restaurants within Hotels in Nairobi County, Kenya

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Abstract

The food service industry has to continuously innovate; however, concerns have been raised regarding the issue of distinctive and customized innovation models. The study aimed at the general objective to investigate how non-technological food service innovation models create value in restaurants. The specific objective was to establish and explore the relationship between non-technological food service innovation models and value creation. The study used a cross-sectional descriptive survey research design which involved those hotel restaurants in Nairobi County that were registered with the Tourism Regulatory Authority (TRA) as at 2016. Multistage stratified sampling—as well as purposeful and random sampling techniques—were used with a sample size of 385 respondents. Data collection instruments included questionnaires, interview guide, and observation-checklist, achieving a response rate of 82.9%. The coded data was analysed using descriptive and inferential statistical data analytical methods. Hypotheses were tested using multinomial regression, t-test and chi-square. Food service innovation model had no significant relationship with value creation in restaurants (p-value of 0.554). The study concludes that there is a need for a systematic procedure/model for developing non-technological food service innovations. To these end the study proposes a new food service innovation model with new variable such as consultation of professionals. This will enable an innovative organizational culture and lead to significant cost savings in the food service industry, among other benefits.

Keywords: Food service innovation models, value creation, Nairobi County, hotels and restaurants

Introduction

Most food service innovation research has been done in developed countries such as England, Germany, the United States, The Netherlands, and Spain (Heij, 2015; Ottenbacher & Harrington, 2009), with little focus on Africa, including Kenya. These studies assert that similar studies should be done in other regions. A specific research on non-technological food service innovation is therefore of great benefit to the food service industry in Kenya. For innovation to be successful, there is a need for a systematic service development process with new variables (Chen, 2011; Oh, 1999; Oh & Parks, 1997; Ottenbacher & Harrington, 2007). Notwithstanding this, Cooper (2001) indicates that the use of a model increase chances of success but does not guarantee success.

Today's global customers demand deeper emotional experiences and more personalized service. They are attuned to local culture and seek self-discovery and unique experiences with added value not provided by competitors (Frehse, 2005; Goffin & Michael, 2005). In addition, Backman, Klaessan and Oner (2017) posit that due to the current fierce competition, professionals in the hospitality industry must distinguish themselves through innovation and continuous improvement. However, Molose and Ezeuduji (2015) indicate that there are signs that hospitality organisations are unenthusiastic to innovate through organisation learning. This study will contribute to recovery of the contracting Kenyan hospitality industry due to lack of innovation (United Nations World Tourism Organization, 2017; Kenya National Bureau of Statistics, 2015; Kenya National Tourism Blueprint 2030 Overview; Valle & Yobesu, 2009).

Studies in Kenya have focused on approaches to how new service development strategies adopted in the hospitality sector influence competitive advantage (Oduori, 2010; Wambura, 2012). Previous studies have focused on innovation and competitive advantage, but the emerging views focus on value creation (Chaoren & Thawatthatree, 2011). This may explain the innovation knowledge gap in Kenya on the non-technological food service innovations and value creation. A study by Koutroumanis (2011) argues that although technological innovations improve service quality in hotels and restaurants, their cost is prohibitive, leading to laggard adoption. To this end, Parnia, Hosseni and Fen (2013) advocate for research on the relationship between specific dimensions of innovation and restaurant performance. In line with this, there is a need to understand the deeper insight on whether non-technology food service innovation dimensions create value to customers, and to propose an appropriate food service innovation model.

Various researchers have identified different innovation models with wide-ranging steps (Harrington, 2004; Ottenbacher & Harrington, 2007). Consequently, Chen (2011) revealed the need for a viable model which is customized for each country's hospitality industry. Further to this, Heij (2015) asserts that there are queries in the business models which are still largely unanswered. At the same time, there exists no food service innovation model customized for Kenyan restaurants in hotels; in this study, the word "restaurant" implies hotel restaurants even where this is not explicitly stated. Therefore, this study attempts to address this gap. The immediate consequence of food service innovation is prosperity and growth due to the fact that guests' preferences and food service trends change all the time, and services in their life cycle decline and need reengineering or development of new services. The objective of this study was to explore the relationship between non-technological food service innovation models and value creation in restaurants within hotels in Nairobi County, Kenya. The study is based on the following hypothesis:

Ho. There is no significant relationship between non-technological food service innovations model and value creation in restaurants.

Literature review

Overview of non-technological food service innovation

The dynamics in the food service industry are determined by shifting demographics, demanding unique experiences, and other global changes. To retain the market share, there is a need for innovation in food service. In line with this, numerous authors (Camison & Monfort-Mir, 2012; Ivkov, Blesic, Simat, Demirovic, Bozic & Stefanovic, 2016; Lopez-Fernandez, Serrano-Bedia & Gomez-Lopez, 2011) assert that the restaurant sector is not predominantly innovative due to its conservative nature, capital-intensive aspect, and complex multidimensional procedure. These authors all concur that service improvements in business-

like hotels and restaurants are critical in increasing tourist satisfaction at destinations, and have further suggested research in these areas. Due to their service nature, restaurant managers require a varied service innovation approach. Service innovation has been defined by de Jong, Bruins, Dolfsman and Meijard (2003) as comprising new service concept, new client interface, new delivery system, and technological innovation. Due to its importance, service innovation is at the centre of interest for researchers and practitioners, such that in 2015 it was used to rate performing countries in the world (Cornel University INSEAD and WIPO, 2015).

Several authors have indicated that service innovation can be non-technological in nature (Cooper & de Brentani, 1991 cited in Schmidt & Rammer, 2006; Enz, 2012). In the food service innovation aspect, non-technological service innovation is any implementation of a new or significantly-improved idea at the service concept, client interface, and service or delivery system dimensions without the use of technology dimensions (de Jong et al., 2003). Precisely, the new food service concept dimension is any implemented changes in the food service offering—such as new types of restaurant operation (bistro, coffee shop, and themed), restaurant atmosphere (theme, décor, ambience lighting, colour, and temperature), restaurant layout, and table set up. Food service is among the major revenue-producing divisions in a hotel (Shetty & Gopal, 2010) and has the highest number of employees. Notably, the hotel industry is the most important branch of tourism and its competitiveness is dependent on innovation for achieving lower costs and higher product value (Gyuracz-Nemeth, Friedrich & Clarke, 2013; Orifila & Matsson, 2009). Significantly so, tourism is a major source of income, foreign exchange, and employment in Kenya (KNBS, 2015).

Non-technological innovation is increasingly getting attention. There are different types of innovation: Radical, incremental, technological, organizational, and marketing. A majority of scholars consider management and marketing as non-technological (Heij, 2015). However, de Jong et al. (2003) argue that in service innovation, there is a thin border line between product and process innovation. Due to this argument, the study chose the dimension of service innovations, as they include all aspects of service (Hertog & Bilderbeek, 1999). However, Heij (2015), suggested some other aspects of non-technological innovation that are under-researched—namely, management, business model, and co-creation with customers. The current study researches on aspects—the management, business model and co creation with customers—although other terms have been used.

Previous studies have been carried out on related research in food service innovation. Palmer and Griswold (2011), in an attempt to identify the predictors of service innovation, argued that small firms use innovation as a defence strategy to counter competitors, reduce costs, and enhance or maintain customer frequency. This was demonstrated by integration broadband router in a restaurant that had a slow credit card transaction speed, which led to reduced phone line costs, and reduced time for programming (Cradlepoint, 2015). Due to the complex nature of services, Mavale and Rautela (2016) claim the scarcity of studies in restaurant services has been due to its heterogeneous, intangible, simultaneous production, consumptive, and perishable nature. Accordingly, this makes measurement studies in services difficult (Enz, 2012). However, service innovations are being introduced in restaurants to improve efficiency.

Service innovation is difficult as most innovation theories were developed from technological analysis in product manufacturing (Andrea, 2012). Services have specific characteristics and their outcome is not tangible, making service innovation difficult to monitor and measure. Andrea (2012) provided significant evidence to show that the principles of service innovation hinged on customers, process focus, and continuous improvements. This brings out the need of finding out its role in enhancing customer satisfaction. This study sought

to fill the gaps by studying non-technological innovation dimensions and their influence on value creation.

Food service is among the major revenue-producing divisions in a hotel (Shetty & Gopal, 2010) and has the highest number of employees. Notably, the hotel industry is the most important branch of tourism. Its competitiveness is dependent on innovation for achieving lower cost and higher product value (Gyuracz-Nemeth, Friedrich & Clarke, 2013; Orifila-Sintes & Matsson, 2009).

Food service innovation studies have tended to focus on: Product, technology, customer behaviour and service innovation features (Cobanoglo, Bilgihan, Nusair & Berezina, 2012; Drejer, 2002; Khan & Khan, 2009; Ottenbacher & Harrington, 2009; Roger, 2008). These studies have not focused on the non-technological service innovation dimensions. Despite this, de Jong et al. (2003) uphold that innovation can occur without technology. In addition, previous studies are mostly in the developed countries and there is little published research (Pikkematt & Peters, cited in Camison & Monfort-Mir, 2012; Victorino, Verma, Plaschka, & Dev, 2005).

A study by Sundbo and Gallouj (1998) claimed that bigger firms innovate more than small ones. However, restaurants and hotels are among the least innovative sectors of tourism and lag behind other service sectors. Due to the dynamics in the industry, restaurants that do not innovate are likely to fail. This is confirmed by Parsa, Gregory, and Terry (2011), who provided significant evidence that the high failure rate of restaurants is due to changing cultural factors such as a healthy conscious menu, design and layout, undifferentiated restaurant concept, high fixed costs, and inability to control costs.

A quantitative and qualitative study on service firms by Garret, Gray, and Matear (2005) showed that top innovators invest their profits in personal skills training and have a culture of innovation. The researcher concluded that an innovation culture predicts firms' performance, thus innovative firms should have a well-articulated and clear vision, and encourage customers and staff to be participants in innovation. This was later contended by Lin and Chou (2009), who argued that the current focus of service innovation is customer needs discovery, which is operational and not strategic. To support this, Khan and Khan (2009) point out that a service provider's innovative services should focus on word of mouth, improve existing service styles, enhance existing service concept, and consider facilities layout and design. The researchers identified a need for a survey on strategic service innovation projects to analyse the precise adoption rate and confirm benefits received.

According to UNWTO (2017), despite unpredictable shocks, tourism sector growth has surpassed global economic growth in the past six years, while KNBS (2015) reported that Kenya hotel bed capacity increased by 8.7%. Bed nights occupied and length of stay however decreased by 4.3% and 9.4%, respectively. Meanwhile, a report by the World Economic Forum (2013, 2015) indicated that the Kenya Tourism and Travel Competitiveness Index (TTCI) improved from 96th in 2013 to 78th in 2015, while that of Spain improved from 4th to first position in 2015. Vila, Enz and Costa (2012) attributed this to the fact that the hotel industry in Spain embarked on a course of innovation from 2004, which led to increased prices and occupancy rates.

Food service innovation models in restaurants

Since service innovation is a recent phenomenon, service innovation models have been evolving (Barras, 1986) from reverse product cycle on the application of technological innovation in the manufacturing industry. From this, the next characteristic-based model identified radical innovation, ameliorative innovation, incremental innovation, ad hoc innovation, recombinative innovation, and formalizing innovation (Gallouj, cited in Chen, 2011; Gallouj, 2002; Gallouj & Weinstein, 1997). In addition, Ottenbacher and Harrington

(2007; 2009) and Harrington (2004, cited in Ottenbacher & Harrington, 2010) have undertaken studies on the service innovation model in restaurants. According to Ottenbacher and Harrington (2007), their semi-structured qualitative study in Germany aimed to compare and contrast the innovation process in new food creation by purposely selecting 12 Michelin starred chefs. Findings suggested a six-step innovation process model used by the chefs: Idea generation, screening, business analysis, concept development, final testing, and commercialization. In contrast, Feltenstein (1986) developed a framework for new menu whose six steps differed slightly from Ottenbacher and Harrington (2007). The steps were: Assemble new product, get new product priorities, generate new product ideas, screen and Select ideas, develop products, plan marketing, and roll out campaigns. The difference between services and products renders it impossible to use a similar model. It is critical, therefore, to develop a specific model for non-technological innovations.

Another basic innovation model was outlined in a study by Harrington (2004, cited in Ottenbacher & Harrington, 2010) as follows: Culinary innovation formulation, culinary innovation implementation, evaluation and control, and innovation. Harrington suggested a more organic model incorporating strategic planning, market considerations, food science, and culinary knowledge perspective. Studies on innovation process reveal the use of diverse steps. In the same vein, Ottenbacher and Harrington (2009) studied quick service restaurants in the United States and noted 13 steps, with more emphasis on screening, training, and operational issues. The 13 steps of the innovation process are: Category strategy, idea generation, screening (financial and operational), concept test, second screening (consumer liking), prototypes, third screening (cross functional), concept refinement development, screening (comparison with competitors), test market, final prelaunch screening, launch, and evaluation of performance. This product development had more steps than earlier models and may not be used in service innovation

Significant evidence that human factors in service delivery play an important role in the fine dining innovation is found in Ottenbacher and Gnoth (2005). However, their innovation process does not include professionals like gastronomists, nutritionists, etc. The researcher intended to incorporate these in the proposed food service innovation model. Noorani (2014) claims that innovation can work well if research and development is undertaken—since it accounts for the creation of new knowledge leading to service innovation. The R&D bridges the knowledge owners to filtered innovative results. An overall firm orientation determines the long-term success of an organization since it produces capabilities that spawn innovation (Siguaw, Simpson & Enz, 2006).

Nevertheless, for an organization to be successful in innovation, some researchers recommend a systematic service development process and an innovation model (Chen, 2011; Ottenbacher & Harrington, 2007), while others suggest the need for a framework with new variables (Oh, 1999; Oh & Parks, 1997). On his part, Rodgers (2007) underscores the importance of a research and development laboratory so as to enable the hotel industry to do a proactive innovation which can change current practices. Therefore, it is important to study innovation in different countries and industries to get models and frameworks, and avoid lawsuits related to their regular guests' nutritional disorders (Roger, 2008; Rowley, Baregheh, & Sambrook, 2011; Ottenbacher & Harrington, 2009; Victorino et al., 2005). Therefore, the study proposes that before embarking on an innovation programme, the manager needs to evaluate employee capabilities.

According to a study by Brugh and Georgi (2006), the service innovation process has 15 steps; however, Bessant and Tidd (2007) categorize the model in four stages. In the same vein, Chen (2011) developed a service innovation model that had five interrelated perspectives: New service concept, design, analysis, development, and full launch, in that order. The business

model had three supportive dimensions of process enabler, new client interface, and new delivery system—aspects similar to the model by de Jong et al. (2003). However, the model by Chen (2011) does not consider that innovation can originate from new client interface or new delivery system. Chen (2011) provides significant evidence that successful service innovation needs a viable business model that creates value for its guests and providers. He suggests that although U.S. business leaders and scholars had ignored study of service innovation, recent statistics indicate that services are the dominant force.

Another similar innovation model was developed by Johnson et al. (2000), which was a simplified interactive process model with a four-stage design (setting service strategy and objectives, idea generation and screening, concept development, and testing). This included analysis (business analysis and project authorization), development (service design, system design, marketing programme, personnel training, service testing, and pilot run), and full launch (full-scale launch and post-launch review). However, the model did not consult experts or scholars in academia. Alam and Perry (as cited in Chen, 2011) further advanced this by modifying it into 10 steps: Strategic planning, idea generation, idea screening, business analysis, formation of cross-sectional teams, service design/system, personnel training, service testing and pilot run, test marketing, and commercialization. Again, this did not consider consulting experts and researchers and did not have a monitoring and evaluation component. Grunner and Homburg (as cited in Chen, 2011) divided it into three categories—planning, development, and launch. Similar to previous models, pertinent issues such expert consultation, pre-launching and launching, together with monitoring and evaluation, were significantly absent. The study by Chen (2011) however recognized the four dimensions identified: New service concept, new client interface (innovation in the servuction), new service delivery, and technological innovation (as suggested by Hertog & Bilderbeek, 1999).

The implication here is that innovation models are quite diverse, ranging from four steps to 13 steps. The order of the steps is not consistent, and therefore an assessment of the non-technological food service innovation model is essential for restaurants within the hotels in Nairobi County. In view of this, Rowley et al. (2011) and Kariouchina et al. (2006) support the need to customize innovation and framework methods for the hospitality industry in each country. Further to this, the research recommended that a similar research be done in other restaurant segments, locations, and on the key steps in the innovation process. The current study aims to propose the steps in the non-technological food service innovation model in Nairobi County hotels' table service restaurants (TSR).

Value creation in restaurants

Value creation in restaurants has been identified as a critical component of their services. Panesar and Markest (2008), in a study in Norway, argue that service providers innovate to meet the changing needs of guests and create value. The value could be improved operations, effectiveness, or reduction in cost in support of these changing needs. This is supported by the results of a study by Schmidt and Rammer (2006), which noted that organization innovation reduced costs by 16% and improved quality of service delivery by 51%. However, some scholars (Gallouj & Saron, 2009; Parnia et al., 2013) recognize the difficulty of measuring service innovation performance by a single factor and recommend that it should be measured by non-direct benefits, such as enhanced customer loyalty.

The effect of non-technological innovation models is central in this study, which sought to investigate how innovation model reduced the cost of doing business or enhanced customer satisfaction. The study does not look at the effect of non-technological food service innovation models, but rather how this contributes to value creation in restaurants. Muchoki (2016) showed that a majority of the respondents agreed that offering unique products creates value

for guests but had no impact on income. However, the study did not specify the aspect on unique products. According to Muchoki, most restaurants offer low cost products, which finally reduce overhead cost. The study acknowledged that although restaurants are concerned about other companies imitating their products, it is still not clear whether new products influence customer attention to the products.

In addition, Noorani (2014) studied the core ingredients of service innovation and their impact on competitive advantage in an online industry, with identified IT and enabled IT as the key elements, followed by HRM and R&D. The paper also reports that customer satisfaction survey can effectively measure service process innovation elements like delivery time, quality, and after sales service. Process innovation enables a firm to have products at low cost and offer enhanced value to customers. The study was a qualitative one and interviews were conducted with the appropriate managers. A study by Sabir, Irfan, Akhtar, Pervez and Rehman (2014) in Pakistan ascertains that the restaurant industry has become the world's most profitable industry. Consequently, restaurant managers should focus on service quality (service delivery), physical design, atmosphere product quality, and price to position customer satisfaction as a marketing strategy. They recommend an in-depth study of other variables that affect customer satisfaction.

Martinez-Ros and Orifila-Sintes (2011) studied hotel dimensions and degree of innovativeness. They claim that once a hotel develops an incremental innovation, it increases chances for radical ones. However, a study by Orifila-Sintes and Matsson (2009) on customer competences found that guest requests increase hotel innovative behaviour. Innovation is a prerequisite of economic development and a strategic choice and option for competitive advantage (Parsa, Self, Njite & King, 2005). In addition, Vila et al. (2012) undertook a survey in Spain of the 27 largest hotel chains aimed at capturing the importance of the innovation process. The researchers demonstrated a general bias towards innovation, which increased profit in F&B department, which is an area considered weakest in business performance.

According to Ottenbacher (2007), the results of a case study in classified hotels in Germany aimed at finding out the different approaches for individual innovation projects identified changes in customer needs and enhanced market performance, while strategic human resource management was found to have a synergetic impact on financial performance. The study recommends similar studies in other countries with a broader sample to understand where in the service encounter value is created. The study also cited that innovation success can be measured using employee involvement, customer relationship enhancement, training and empowerment. The present study therefore measured value creation as enhanced customer satisfaction. A study by Victorino et al. (2005) on the impact of innovation on customer choice in the hotel and leisure industry established that innovation matters when selecting a hotel type in economy hotels rather than upscale ones. The methodology was a web-based data acquisition approach, DCA (discrete choice analysis), which only captured travellers, leaving out other guest types. The study noted that innovation needs to be centred on guest preferences, and also that innovation research needs to be done in a variety of countries like Kenya in order to yield different preference service results.

Research methodology

The methodologies used were both qualitative and quantitative research using semi-structured interviews (Ottenbacher & Harrington, 2007; Ottenbacher & Harrington, 2009), case study (Chen, 2011), survey and face-to-face interviews (Panesar & Markest, 2008), and case analysis approach (Palmer & Griswold, 2011). This study used both qualitative and quantitative methods, which was a combination of a cross-section survey as recommended in the Oslo manual guidelines for service innovation research in developing countries. The manual also

advocates the use of questionnaires and categorizes service innovation into process innovation, market innovation, and organizational innovation (OECD, 2005). The study used conceptual models and theoretical models. The theoretical models were Schumpeter theory (1934), Servuction model (Hoffman & Bateson, 2010), service system model (Gronroos, 2007), innovation pentathlon framework (Goffin & Michael, 2005), and theoretical framework by de Jong et al. (2003). These were used to assess the influence of non-technological food service innovation dimensions in value creation in restaurants.

Research design

The research design adopted was a cross-sectional descriptive survey, which obtains and records facts and captures respondents' data (Bob, 2010; Churchhill, Brown, & Suter, 2010) and at one point in time (Babbie, 2014). Cross-sectional descriptive survey was used to collect information from food and beverage managers, restaurant supervisors, and guests on the influence of non-technological food service innovation on value creation in restaurants within hotels registered with the Tourism Regulatory Authority (TRA) in Nairobi County, Kenya. The design selected was appropriate in that it helped describe the relationship between independent and dependent variables—that is, the relationship between new service concept, new delivery system, new client interface and value creation, as well as non-technological food service innovation model and value creation. The research adopted the use of questionnaires, interview guide, and observation to gather data from the respondents. The researcher identified and labelled variables for use in the study. This was done to facilitate a smooth flow of the study. The independent variables were the non-technological food service innovation dimensions—which are the new service concept, new delivery system, and new client interface. The dependent variable was value creation in restaurants, which was indicated by enhanced customer satisfaction and cost reduction in doing business.

The primary units of analysis for this study was the restaurant management since this is what results obtained from the analysis will relate to (Mugenda & Mugenda, 2003). The study used senior restaurant staff and guests as the unit of observation. To understand how a restaurant is innovative, the restaurants were observed, in terms of innovations in the new service, new delivery system, and new client interface concepts. The observation also entailed an indication of whether the innovations were enhancing customer satisfaction or reducing the cost of doing business. The F&B managers were interviewed, and the restaurant supervisors and guests were given questionnaires. The location of the study was the Nairobi County, chosen because it hosts the highest number of TRA-registered hotels and restaurants (236). Nairobi was chosen since it is the only city county and the political capital of Kenya.

The sample used was 35 TRA-registered hotels and restaurants with at least 30 rooms, from which a sample of 385 was obtained using Cochran sample size formula. Simple random sampling technique was used to select the supervisors and the guests. The study was conducted in 2017, when the food and beverage managers were interviewed from each of the selected restaurants. The respondents were 35 food and beverage/restaurant managers, 64 restaurant supervisors, and 286 guests, totalling 385 respondents. The guest sample was obtained using systematic sampling, where every 5th guest entering the restaurant was selected. Systematic sampling was used since the first guest was randomly selected and every other selected guest is a function of the first guest. This makes all guests randomly selected. (Churchill et al., 2010). The study used methodological triangulation to collect the required data. The researcher designed structured interview guides for the F&B managers, semi-structured questionnaires for supervisors and guests, and an observation checklist. A semi-structured interview guide for the food and beverage managers was developed by the researcher (as used by Jacob, Tintore, Aguilo, Bravo, & Mulet, 2003; Ottenbacher & Harrington, 2009). The study borrowed service

innovation attributes from previous studies (such as Chou, Horng, Liu, Huang & Chung, 2016; Ferasat, 2009; Gyuracz et al., 2013; Ivkov et al., 2016; Ottenbacher, 2007). The attributes were harmonized to form the three non-technological food service innovation dimensions. A five-point Likert scale was used, with 1 denoting strongly disagree, and 5 denoting strongly agree. A three-point semantic differential scale was employed, with 1 denoting enhanced customer satisfaction, 2 no change, and 3 reduced customer satisfaction.

The principal researcher also developed an observation checklist in which there was observation of behaviour over a specific period of time in a particular context (Tolmie, Muijis, & McAteer, 2011). The observation checklist was unstructured. Items that were observed included the three non-technological service innovation dimensions of new concept, new delivery system, and new client interface. Any of the items giving the enhancing customer satisfaction or reducing cost of doing business were also noted.

The research instruments were pre-tested in three of the restaurants not in the sample. The instruments were adjusted to address the core issues as per the results. Reliability was tested using Cronbach's alpha, which is a popular method of measuring internal consistency. Reliability was determined using the test-retest method, which involves administering the same instrument twice to a sample of respondents. To ensure content validity of the interview guide and the checklist, space triangulation was adopted and involved collecting data from different hotels located in different places. Further, content validity was verified through expert opinions from supervisors and practitioners. Face validity was achieved when the instruments were subjected to expert analysis and opinions from two external experts, who thoroughly checked the representativeness of the research instrument at face value with a view to ascertaining whether it measured the constructs of the study. Further, the study considered construct validity issues through restricting the instruments to the conceptualization of the variables and ensured that the indicators of each variable were within the same construct. To assess validity of the research instruments, a split-half technique study was done to the instruments.

Research assistants were trained to assist in conducting interviews, dropping and later picking the questionnaires, and filling the observation checklist. Qualitative and quantitative methods of data analysis were employed, since both methods are necessary to explore the full potential of a social and innovation research (Babbie, 2013; OECD, 2005). The data was analysed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics described the basic feature of the data in the study. The qualitative data was sorted in ranges of categories as identified in the research variables. Chi-square test of independence (Oso & Onen, 2009) tested the relationship between non-technological food service innovation model and restaurant value creation. Quantitative data was initially analysed using univariate and bivariate analytical approach.

The researcher obtained a research permit from the National Commission for Science, Technology and Innovation based at the Ministry of Education, through the Graduate School, Kenyatta University. The researcher also sought permission to collect data from hotel and restaurant managers. The respondents were assured of confidentiality and anonymity on information they may give. This was done by ensuring no names were written on the questionnaires and also coding each hotel for anonymity. In addition, the principle of voluntary consent was applied by respondents willingly participating in the research, and the interviews commenced with a full introduction and explanation to the respondents of the purpose of the study, any foreseen risks, benefits and compensation or lack of it.

Results and discussion

Responses and findings

As displayed in Table 1, there was 100% participation by the food and beverage managers, while 87.5% of the supervisors and 71.6% of the guests responded. The observation checklists were done in 31 restaurants, yielding a response rate of 82.9%.

Table 1: Response rate

Instrument	Target	Achieved	%
Interview–for F&B Managers	35	35	100
Supervisors questionnaires	64	60	87.5
Guest questionnaires	286	205	71.6
Total	385	300	77.9
Observation checklist	35	31	88
		Average Response	82.9%

A majority of the supervisors were male, indicating that most of the work required the input of men. Accordingly, results indicate 58.3% of respondents were male, while 41.7% were female. This showed that a majority of the interviewees in the hostels were male, indicating a gender disparity against women. The result contradicts research by Wang (2017), which had more females than males (female 51% and male 48%). Most of the guests (61.5%) were male, while 38.5% were female. This shows that a majority of the guests who visited the hotel were mostly male, in addition to having a majority of the supervisors being male as well. This further depicts that the hotels offered services that were better suited to the male gender than their female counterparts. The findings contend with those of Abdullah and Hamdan (2012), which had males at 45% and females 54%. The implication is that Kenyan restaurants are balanced in that they attract gender at equal level. Many of the supervisors (65%) were married, while 33.3% indicated that they were single and 1.7% said they were widowed. This shows that a majority of the respondents who were working in the restaurants were married people and they tended to offer better customer services by virtue of being responsible as parents. This concurs with a study by Wang (2017), which had 75.8 % married and 24.2% single respondents. From the findings, 34.2% of the guests were single, followed by 61.5% who indicated that they were married, 2.4% who were widowed, 1.9 % who were divorced, and 0.5% who indicated they were separated. This shows that a majority of the guests were married, and this can be explained by the fact that most married people are working. It also implies that hotel restaurants need to introduce products that can attract a single clientele. This also concurs with a study by Abdullah and Hamdan (2012), which had a 52% married and 46% single clientele. Most of the supervisors (49.6%) were aged 25-30 years, followed by 20.5% who were less than 25 years, 22% who were aged between 40 and 50 years, 5.9% who were aged 31-40 years, and 2% who were aged 50 years and above. This shows that most of the supervisors were middle-aged and were in a position to understand modern issues on innovation. This concurs with studies by Singh and Amandeep (2015) and Ivkov et al. (2016), which established that a majority of employees are from 21-40 years at 78% and 78.3%, respectively. A significant proportion of the guests (39%) were aged 25-30 years, followed by 24.3% who were aged 31-40 years, then 16.7% aged below 25 years. Up to 11.7% were above 50 years old, and 8.3% were aged 40-50 years. This shows that most of the guests were 25-40 years old. This opposes a study by Millar and Mayer (2013), who found that a majority of the guests were above 40 years (55%). To realize Vision 2030, Kenyan restaurants need to come up with innovative food service activities so as to expand their market share and attract guests over 40 years.

In terms of education, a majority of the supervisors (56.7%) had a diploma level of education, followed by 31.6% with a degree, and 11.7% with a certificate. Thus, a majority of the supervisors were educated enough to understand the issues being studied. The findings concur with Singh and Amandeep (2017) results that indicated that a majority of employees at 49% had a diploma. The findings however contradict Wang (2017) results, which indicated that a majority of employees at 87.5% had degrees. This clearly shows that the hospitality labour force is getting more educated, unlike previously when a majority of the employees were uneducated. An important implication is that Kenya's hospitality industry should embrace a more educated workforce, and invest more in research and development. The concept of experience as the most critical aspect is being overtaken by global dynamics. Further to this, there is a need for a paradigm shift from considering the hospitality industry in Kenya as a technical skill-based service to a knowledge-based service. The tourism industry has embraced this with the Tourism Research Institute, which is still in its formative stage.

A large proportion of customer respondents (45.9%) had a postgraduate level of education, 35.1% had a diploma, 15.6% had a degree, and 3.4% had a certificate. The findings agree with Millar and Mayer (2013), who showed that 47% of guests had a degree and above. A majority of the guests were therefore educated enough to understand management issues in the restaurant. Many of the respondents (66.7%) were full-time employees, followed by 11.6% who were casual employees, 10% who were contract employees, 6.7% who were part-time employees, and 5% who were flexible. This depicts that a majority of the employees were full-time employees and thus understood their organizations well since they were present at the workplace most of the time. Almost all of the supervisors (96.7%) indicated the cuisine was local, while the remaining 3.3% indicated it was international; this concurs with a report by Cyton (2016) that indicates that a majority of Kenyan guests are local (87% local delegates, 13% international delegates). To compete in gastronomy, restaurant managers should focus on increasing other innovative new food concepts in order to enhance the new restaurant service concept and raise the profitability margin. An alignment with renowned chefs would help restaurants be more innovative on the new service concept dimension. To this end, chefs in Kenya need to rebrand themselves and acquire the globally-recognized Michelin star rating.

Most of the guest respondents (96.1%) were Kenyans, while 3.9% were citizens from other countries. This shows that the restaurants were mostly attended by Kenyans. This concurs with Cyton (2016) results that indicated that a majority of Kenyan guests were local. This implies that the number of tourists patronizing Kenyan restaurants has declined and domestic tourism is on the rise.

Non-technological food service innovation models

Respondents were requested to indicate activities done when developing non-technological food service innovation in their restaurants. The results appear in Table 2.

Table 2: Stages of non-technological food service innovation model in use

	N	Mini mum	Maxi mum	Mean	Std. Deviation
Initiating the new Idea generation	168	0	1	.74	.438
Screening or establishing financial and operational suitability	203	0	1	.39	.489
Fine tuning the idea, perfecting operation procedure, testing customer acceptability	203	0	1	.55	.499
Compare with competitors and customer liking	203	0	1	.50	.501
Piloting/Test the innovation (new/improvement)	203	0	1	.43	.497
Launching the new improved activity	203	0	1	.48	.501
Post innovation implementation approaches	203	0	1	.51	.501



Valid N (listwise)	168				
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The qualitative results were indicative that idea generation comes from diverse sources, ranging from company policy or strategy, competitors and suppliers to HODs, employees, and guest feedback. In some few restaurants, there exists no procedure. The findings concur with Chen (2011), who noted that the service innovation model should start with idea generation. Therefore, there is a need to give a more focused direction on where ideas can be generated from in order for the new idea to create value.

Results on who does the screening/ business analysis indicate that it is also done by a wide range of people—including board members, general manager, food and beverage manager, manager in charge of review procedure, financial director and controller, and executive chef. Budgets are guided by standard operating procedures (SoPs) and hotel slogan, revenue generation meeting, research and development, and the procurement department. The result concurs with several studies (Johnson et al., 2000; Ottenbacher & Harrington, 2007) which had identified screening as a stage in the innovation model.

Findings for concept development indicate that it is done at head office and uses general manager experience. Also, the management approves, discusses with supervisors and chefs, and trains employees and the marketing team, in addition to oversee food testing. Results indicated that restaurants consult chefs as well as those in finance department, company lawyers, and interior designers. They also check with competitors, dieticians, food bloggers, and industry experts. This concurs with some studies that identified the need for concept development (Chen, 2011; Ottenbacher & Harrington, 2007)

Findings on second screening indicated relevant factors for restaurants as guest comment cards, observing guest behaviour, providing a platform for guests, the marketing team, comparing with competitors, putting ideas to test, and employee briefing. Others indicated they compare with other units and yet others calculate the popularity index. On launching activities, a respondent indicated that, “We just introduce the new innovation”, and another, “There is no ceremony”. In other restaurants, innovations are launched quietly. Some, however, had launching ceremonies. In the post-adoption implementation evaluation, findings indicate that this was done by management meeting, employee monthly meetings, and guest feedback. A respondent indicated, “We evaluate the implemented ideas after six months.” This contradicts Chen (2011), who proposes a systematic and robust framework. These results imply that there is a need for a defined direction of developing the non-technological food service innovation in every organization.

Non-technological food service innovations model and value creation in restaurants

The respondent supervisors and guests were requested to indicate the extent of agreement on service innovations procedure in enhancing customer satisfaction or reducing costs. The findings were as shown in Table 3.

Table 3: Food service innovation model (procedure) and value creation in restaurants

	SA (%)		A (%)		U (%)		D (%)		SD (%)	
	S	C	S	C	S	C	S	C	S	C
Procedure and enhanced satisfaction	63.3	42.4	35	25.4		32.2	1.7			
Innovation procedure used reduce cost of doing business	50	46.8	38.3	41.1	8.3	6.3	3.3			5.9

Source: Field Data (2017)



Up to 63.3% of supervisors and 42.4 % of the guests strongly agreed that the procedure used when introducing new activities in the restaurant enhanced value creation for customers. The disparity (20%) in agreement could be attributed to the fact that the guests were not involved in the innovation procedure. This can also be confirmed by the fact that 32% of guests were not sure whether the procedure enhances customer satisfaction. This contradicts previous findings that emphasize that innovation should be focused on guest needs. A number of the respondents (50% of supervisors, 46% of guests) strongly agreed that the procedure used when introducing new activities in the restaurants reduced the cost of doing business. The disparity on agreement could also be attributed to the fact that guests were not fully aware of the innovation process since they may not be involved.

Hypothesis testing

H₀₃ There is no significant relationship between non-technological food innovations model and value creation in restaurants. To test the third hypothesis, a one-sample t-test was done to show the relationship between the independent variable (non-technological food service innovation models) and the dependent variable (value creation in the restaurant). The chi-square test is shown in Table 4.

Table 4: Chi Square Test

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.351 ^a	1	.554		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.649	1	.420		
Fisher's Exact Test				1.000	.725
Linear-by-Linear Association	.345	1	.557		
N of Valid Cases	60				

Source: SPSS Data (2017)

The chi-square from Table 4 shows that the p-value (0.554) is greater than the significance level (0.05). Therefore, we accept the null hypothesis, thus concluding that there is no significant relationship between food service innovation model and value creation in Nairobi County restaurants. This was conclusive from the fact that the non-technological food service innovation models were quite diverse and not systematic. This contradicts Chen (2011) and brings about the observation that innovation requires a systematic model. Significantly, Ottenbacher and Harrington (2009) note that new product development process for the QSR uses a structured approach to enhance customer satisfaction and reduce risk of failures. It is important that a restaurant should have a systematic innovation model that creates value in the restaurant. The implication in this response is that restaurants are developing non-technological food service innovations in unstructured ways, which end up only having incremental innovation. A more structured way is therefore necessary so as to help food service come up with non-technological innovations which are original and add value to customers. In addition, the model will have new variables as recommended by Chen, 2011; Oh, 1999; Oh & Parks, 1997; and Ottenbacher and Harrington, 2007). With this new model, it is anticipated that the model used will enhance value creation.

Proposed food service innovation model

This study aimed to propose a non-technological food service innovation which is structured, all-inclusive, and creates value in restaurants. Based on the respondents' views, observations, innovation literature, and synthesis of previous models (Ottenbacher & Harrington, 2009; Feltenstein, cited in Ottenbacher & Harrington, 2009; Harrington, 2004; Ivkov et al., 2016; Rogers, 2007), the author proposes an improved 12-step non-technological food service innovation model, as shown in Figure 1.

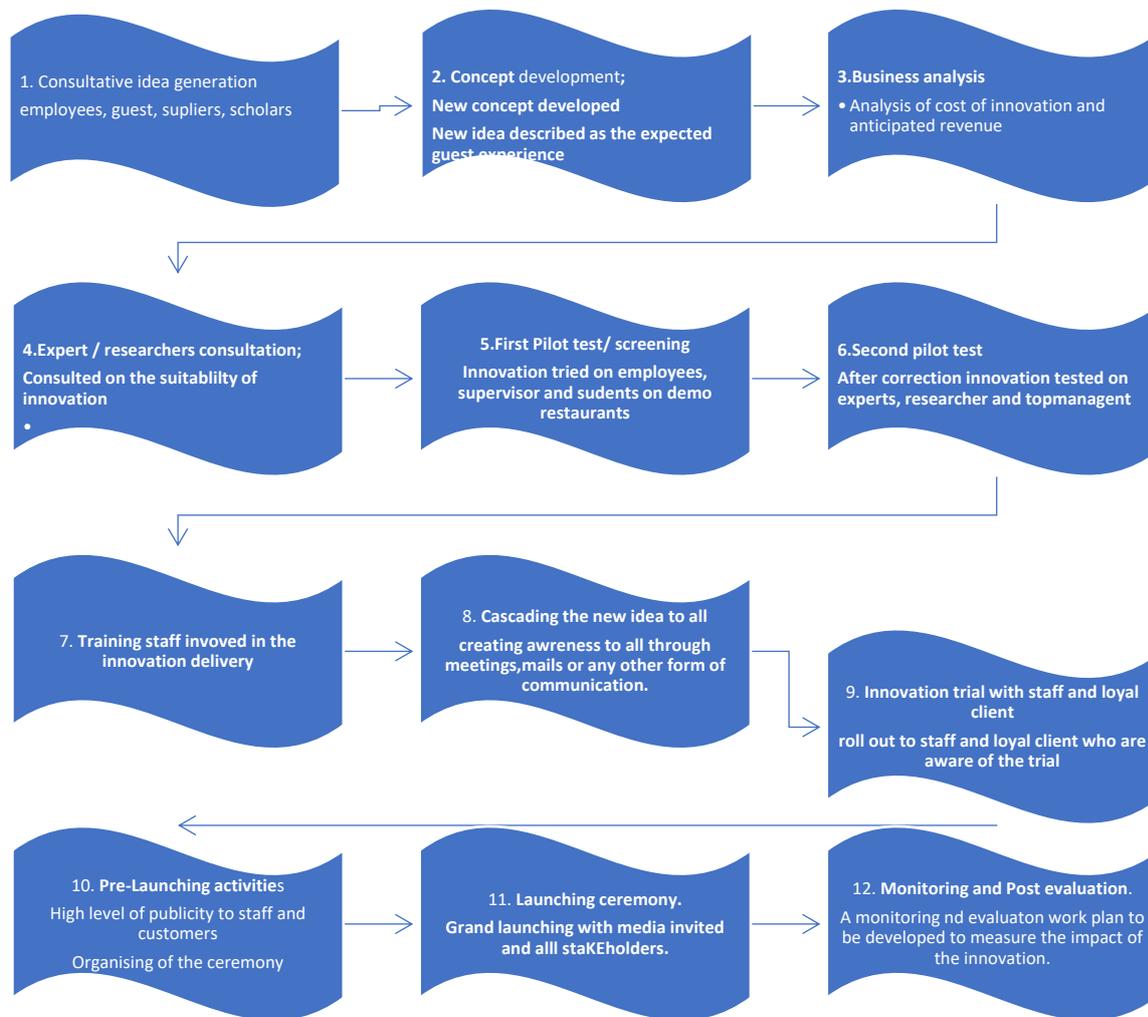


Figure 1: Non-Technological Food service Innovation Model

The key steps of this model, as shown in Figure 1, are as follows:

- 1. Consultative idea generation:** Idea generation need not be confined to the top management, but should include consultation that taps from employees' creativity, guest comments, management/ marketing team, researchers or market demand, and from the service team. Ideas can also come from partners or alliances such as suppliers, researchers and scholars, the wine industry, renowned chefs or celebrities, and nutritionists. The idea should be based on a company's strategic vision, slogan, business plan, and policy. Ideas should be radical, singular, and not easy to imitate. Competitors' ideas should be modified so that it is not a copy-and-paste affair. The ideas should have been developed at departmental or other consultative meetings. The ideas are then

forwarded to management for them to either modify or choose the best and most suitable idea.

2. **Concept development:** This involves constituting the service innovation activity. In this step, the new service dimension is described, as well as the expected guest experience. The concept is clearly outlined. The boundaries in this should be within the company innovation policy. This step also needs close consultation with all the main stakeholders.
3. **Business analysis:** This involves the cost of innovation to be incurred in the whole process. This should be compared with the anticipated revenue. A financial analysis by the financial controller and the general manager must determine the feasibility of the innovation.
4. **Expert/ researchers consultation:** Hospitality experts, scholars, and researchers should be consulted to assess the suitability of the innovation. Ivkov et al. (2016) recommended that restaurants should be conversant with global trends on innovation in published research and scientific papers. Rodgers (2007) revealed that lack of research laboratories and scientific expertise deters innovation. A majority of respondents did not consider this important; instead, they suggested benchmarking in developed countries such as Dubai, which ends up with imitation.
5. **First pilot test/ screening:** The service innovation may be tried out by employees and supervisors in the organization. It can also be tested in university/ colleges demo restaurants. The employees and researchers should give feedback on the new proposed idea, process, or concept.
6. **Second pilot test:** After the correction and modification arising from the first pilot test, another pilot test should be done by experts, researchers and top management of the restaurant. This should be done with both the old respondents and new ones to compare feedback.
7. **Training staff:** Assuming the innovation is acceptable, all staff involved in its delivery should be thoroughly trained on the new idea.
8. **Cascading:** This involves creating awareness to all staff about the innovation. This includes staff not involved in the implementation. This can be achieved through meetings, mail, or any other forms of communication.
9. **Innovation trial:** The innovation may be rolled out to members of staff first and then to loyal clients who are aware that it is a trial. Their feedback should be incorporated in the innovation.
10. **Pre-launch activities:** This consists of promotion of the launching day and organizing for the ceremony.
11. **Launching ceremony:** The grand launching ceremony. This should have high publicity so that there is innovation implementation awareness and acceptance by restaurant staff and customers. The media and all stakeholders who participated in the innovation should be invited on the launching day.
12. **Monitoring and post-evaluation:** The restaurant management to develop a monitoring and evaluation programme for the innovation, which also entails measuring the impact of the innovation.

The proposed model has incorporated a suggestion of including frontline employees in idea generation (Ottenbacher & Gnoth, 2005; Harrington, 2004 cited in Ottenbacher & Harrington, 2010). The model has also included researchers, which may make all hotels start research and development departments as practised in China (Cornel University, INSEAD, & WIPO, 2015). The implication of these is that the food service industry should use a systematic innovation model and should incorporate research and development in its operation. The model also

suggests a close collaboration between the food service industry and scholars or academia in order to generate innovation.

Conclusion

Innovation has been identified as a mechanism and strategy that can restructure the management of the tourism industry. General findings indicate that the food service industry, which is one of the fastest growing sectors, can contribute heavily to economic development. The study therefore concludes that the non-technological food service innovation model used in Nairobi County restaurants is not effective in value creation. This is indicated by unstructured, unsystematic procedures. In some restaurants, it did not exist. There is therefore a need for a systematic procedure for developing non-technological food service innovations. The proposed 12-step innovation model can be tested to find out its suitability in harmonizing this process and enhancing value creation. Based on the findings, the study recommends that the Kenya government, through the Ministry of Tourism, should push for a component of non-technological food service innovation to be introduced in the country innovation policy and blueprint. Specifically, the policy should put greater emphasis on new service concept and non-technological service innovation dimensions in light of its efficacy in being novel, singular, and difficult to imitate. Further to this, the Tourism Ministry should insist on all hotels having an innovation policy. It should also consider, through the TRA, including non-technological service innovation as a criterion when classifying hotels and restaurants—and also as a strategy to revamp the industry. This can be promoted by having a hotel innovation ranking index that focuses on ranking non-technological innovations clearly recognized; this can give Kenyan restaurants and destinations uniqueness.

A research and development (R&D) department and embracing of a strategic management needs to be entrenched in all hotels and restaurants, as this will boost innovation creation and implementation. This will also enable hotels to partner with universities and other organizations that can help in creating, implementing, and monitoring innovations that create value. The Kenya Institute of Curriculum Development and the Commission of University Education should consider inclusion of service innovation as an area of study in hospitality courses up to PhD level. This will enable graduates to help the industry embrace an innovative organizational culture.

Hotel managers should introduce non-technological service innovation in their management strategy and strictly use it as a performance-based management criterion. Hotel managers should aim at radical or disruptive innovations, since they are not easy to imitate, focus on customer experience, and differentiate an organization. Restaurant managers should focus on having restaurant atmosphere, restaurant management, and new equipment innovations become more prevalent, since these greatly enhance customer satisfaction. Also, in a bid to reduce the cost of doing business, restaurant managers should develop innovations in restaurant atmosphere, restaurant management, and food service system as these greatly reduce the cost of doing business. Human resource managers should aim at empowering employees with creativity and innovation skills as well as decision making skills. There is also a need to consider the level of education, as a highly educated workforce is likely to be innovative. This will also encourage employees to be creative and innovative, and consequently have an innovation culture in the workplace. In addition, the industry needs to have more uniqueness and creativity, such as through collaborating with renowned local chefs and celebrities to give restaurants uniqueness. Towards this, there is a need to classify chefs in the East African Community, much like Michelin stars, to boost innovation and competitiveness in restaurants. Hotels and restaurants should attempt to align their non-technological innovation models with the proposed non-technological service innovation model.

Industry practitioners can use the information availed by this study to start being more innovative in food service without using technology. Together with the tourism ministry, industry practitioners can use the proposed non-technological innovation model to come up with new innovations. The study findings, moreover, contribute to the body of knowledge in non-technological food service innovation using the three dimensions. This makes them important to scholars and researchers of non-technological service innovations.

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