

## Effect of Food Safety and Management Commitment on Customer Choice of Dining Destination in Kenya

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### Abstract

This finding challenges the existing view of the glass ceiling and how women should be attempting to shatter it. The purpose of this study was to determine the effects of food safety and moderating effect of management commitment on customer choice of dining destination in Kenya. A cross-sectional research design was used which involved both descriptive and inferential statistic. The study used complete enumeration method to select 27, 4 and 5 Hotels in Kenya. 1080 respondents Managers head chefs and guests were sampled. Guests were sampled based on bed occupancy calculated at 49%. Managers and chefs were Purposively sampled while simple random sampling was used to select the guests. Questionnaires and interview schedules were used to collect data. The hypotheses were tested at 5% level of significance the result indicated that food safety, monitoring and surveillance systems had a significant relationship in determining destination choice (p-values 0.005 and 0.044). For the indirect effects regression analysis, top management commitment was found to have a moderating influence on the relationship between food safety and customer destination choice (p-value = 0.004). The predictor variable explained only 55.4% of the total variations in the choice of dining destinations ( $R^2 = 0.554$ ). Based on these findings, this study recommends that although this study provided unique insights into the link between food safety, monitoring and top management commitment, its conceptual and empirical setting had a number of limitations. This can be used as a source of future study.

**Keywords:** Food safety, monitoring, management commitment, customer, dining destination

### Introduction

Safety relates to consumers' risk perception of inadvertently consuming harmful substances forming part of their food (Griffith, Livesey & Clayton, 2010). Consumers are fearful of consuming poisonous chemical substances, microbiological and physical contaminants which come in contact with food making it unsafe for consumption. The presence of perceived risk can negatively impact consumers' food choice decisions and result in reduced consumption patterns (Griffith et al., 2010). This means therefore that safety is influenced by the trust of producers and methods of production.

In today's world, consumers have become more demanding, critical, and more fragmented in their food choices and food purchase decisions and are largely influenced by

quality and safety (Shaharudin, Ismail, Mansor, Elias, Jalil & Omar, 2011). According to Miles and Shevlin (2001), consumers could be exposed to a number of food hazards associated with their food choice decisions and consumption behaviours. Fortunately, consumers especially in the developed world, are aware of these risks and have become more discriminative with their food product choices (Rohr, Lu'ddecke, Drusch, Muller & Alvensleben, 2005).

As a globalized sector, the Hospitality industry's inter-destination competition is very high and this phenomenon is caused by amongst other things, food safety which hotels find themselves to favourably compete internationally. This in turn results in increased international competition not only between destinations but also between Hotel establishments. Additionally, management commitment in ensuring food safety is a key component in the success within this inter-destination competition (Thiong'o, 2007). Mburu and Paulos (2010) observed that one of the factors that influence consumers to choose dining destination among competition is on the basis of food safety. Ohiokpehai (2003), Omemu and Aderoju (2008) confirms that few studies undertaken on food quality and safety in Africa focused mainly on food handling by street vendors and did not adequately seek to understand how consumers perceived food safety.

According to Meena, Thakur, and Chakrabarti (2011), all food producers are responsible for ensuring food safety. Therefore, they should pay attention to the safety of raw materials used in the production process. The most important tools in ensuring a high quality of raw materials is to ensure that products are free from hazards in the production facility. An adopted approach to food safety should cover the entire supply chain, starting with suppliers (Trafialek and Kolanowski, 2014). Additionally, food safety is so important that consumers are even willing to pay a premium over the normal price as long as they have a guarantee about the safety and quality of the food they purchased (Ortega, Wang, Olynk, Wu & Bai, 2012). Hong, Zhou, Li and Lau (2020), argues that with globalization, food safety chain has become increasingly complex. This aggravates the uncertainty and information asymmetry in the supply chain and makes monitoring of food safety more difficult (Validi, Bhattacharya & Byrne, 2014; Darkow, 2015).

Nevertheless, Kenya is still at its infancy stage with various challenges such as lack of transparency and self-discipline in food handling, unwillingness to cooperate between raw material suppliers. Besides, a lack of monitoring and detection system which makes it difficult to regulate the industry (Zhang, Hui, Xu, Pu, Yu & Zheng, 2015; Chen, Wang & Song, 2015). Responsibility for food safety control in Kenya is shared between different agencies or ministries. The roles and responsibilities of these government ministries may be quite different and duplication of responsibility and coordination of surveillance activities are common (Ahuya, Okeyo & Peacock, 2005). While safety management systems have gained widespread attention, their effectiveness is questionable. Some studies confirm that the implementation of these standards is beneficial for the firms (Wu & Liu, 2010; Marin & Ruiz-Olalla, 2011) while other studies doubt it (Morris, 2011).

Organizations that value food safety and quality rely on management and forward-thinking managers to manage people, processes, and priorities simultaneously. In addition to this, certification agencies are requiring food businesses to obtain evidence of management commitment within their established Hazard Analysis and Critical Control Point (HACCP) systems. Over the years, strong management commitment, or the lack thereof, has proven to directly impact the effectiveness of a food safety and quality system. With more food establishments aligning themselves globally, there is a growing need for leadership to demonstrate their commitment to food safety and quality (Rouvière & Caswell, 2012). Against this competitive background dining destination manager need to be committed to effecting food safety through proper surveillance, monitoring and enforcement of hygiene processes.

## **Review of literature**

In developed countries, research on food safety social co-regulation focuses primarily on new technology and microbial risk, while opportunistic behaviour—the main cause of food safety crisis in developing countries such as Kenya is seldom explored. With different regulatory systems, developing countries should identify their own ways to promote social co-regulation of food safety according to their distinct market and institutional conditions (Chen et al., 2015; Wu, Xu, Yao, Liu & Shi, 2010). Liu and Niyongira (2017) revealed that consumers with a higher level of education were less likely to buy products from food manufacturers with safety issues.

### ***Microbial laboratory assessment***

Microbial assessment scheme tool involves the systematic analysis of microbial counts to assess the microbial performance of an effective food safety management system (FSMS). This includes identification of critical sampling locations, the selection of microbiological parameters, the assessment of sampling frequency, the selection of sampling method, method of analysis and finally data processing and interpretation (Jacxsens, Uyttendaele, Devlieghere, Rovira, Gomez & Luning, 2011). Microbial safety level data is then derived indicating which microorganisms and to what extent they contribute to microbiological safety for specific food items. Low numbers of microorganisms and small variations in microbial counts indicate an effective FSMS (Jacxsens et al., 2011). When this method is used as a control measure, it provides an assurance and distinct insight in possible causes of insufficient or insufficient performance of the FSMS declaring food safe or unsafe (Jacxsens et al., 2011).

### ***Food safety standards in Kenya***

Food safety standards applied in Kenya can be categorized as either mandatory or voluntary according to (Will & Guenther, 2007). Mandatory standards are set by Governments in the form of regulations, which include technical requirements such as testing, certification and, labelling which are enforced by liability rules of non-compliance. Voluntary standards are set through formal coordinated approaches of key stakeholders in the supply chain. Will and Guenther (2007), Aloui and Kenny (2005) stated that voluntary standards are not legally mandatory but some (ISO 9000 standards for quality management) have become *de-facto* mandatory standards. They are required when producers want to compete in international markets.

### ***Food safety assurance systems in Kenya***

Food safety is the most important feature of food quality; hence the food law regulates this issue in order to assure consumers that the foods they purchase meet their expectations as regards quality and safety. It is also an increasingly important public health issue. Governments all over the world are intensifying and growing consumer concerns as regards various food risks. Quality assurance systems have been established to assure food safety, and are subsequently called “safety assurance systems” (Oloo, 2010). These include Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP), Hazard Analysis Critical Control Point (HACCP) and Assured Safe Catering (ASC).

GMP is a set of guidelines specifying activities to be undertaken and conditions to be fulfilled in food manufacturing processes in order to assure that the food produced meets the standards of food safety. Similarly, the functions of these agencies include sensitization and implementation of codes of hygiene and agricultural practices by stakeholders throughout the

food chain (Food and Agricultural Organisation (FAO) and World Health Organisation (WHO), 2005). Despite these, Kenya experiences major problems of non-compliance with basic food safety practices in local markets. The level of awareness of the said practices among small producers is negligible (World Bank, 2015). ASC involves looking at the catering operation step by step from the selection of ingredients right through to the service of the food to the customer (Foskett et al., 2010). HACCP on the other hand is a systematic food safety assurance method that identifies, evaluates and controls food hazards throughout the food chain. It is an international, auditable standard that specifies the requirements for food safety management systems together with a comprehensive management system (Kafetzopoulos, Gotzamani & Psomas, 2013). ISO 22000 standard incorporates GMP and addresses Hazard Control based on HACCP development and it is set up around the HACCP method (Talbot, 2007). Prerequisite Programs (PRPs) is the main difference between the ISO 22000 and HACCP systems.

### ***Food legislation and monitoring in Kenya***

The object of food safety surveillance and monitoring system is to ensure that the food supplied in the market is safe. In the absence of an effective system, the consumer can be exposed to chemical and microbiological contaminants, causing a variety of food borne diseases caused by agents such as Mold, Yeast, E. Coli, Coliform, Salmonella, among others. The effectiveness of the food safety system can be judged by the frequency and extent of such diseases. Food safety management systems are much more likely to be effective if they are owned by all in production and management (Oloo, J. 2010). The national food safety and quality system in Kenya is managed by various statutory government agencies under different ministries (FAO/WHO, 2009). They aim at promoting public health, and protecting the consumers against health hazards, and enhancing economic development.

According to the recommendations adopted by the Global Agricultural network Kenya (2005), Kenya lacks a defined and published policy on food safety as part of a wider National Food and Nutrition Policy. Food safety control agencies operate under the Ministries of Trade, Industrialization, Public Health and Sanitation, Livestock, Fisheries Development, and Agriculture. The agencies handling safety and quality include; Kenya Bureau of Standards (KEBS), Kenya Agricultural Research Institute (KARI), Kenya Plant Health Inspectorate Services (KEPHIS), Department of Public Health (DPH), Department of Veterinary Services (DVS), Kenya Dairy Board (KDB), and Horticultural Crops Development Authority (HCDA), among others. Despite these, Kenya experiences major problems of non-compliance with basic food safety and quality. This is an indication that food safety may be compromised and may affect customer's choice of dining destinations.

### ***Management commitment***

According to Jennifer (2019), modern day management is seeing a paradigm shift. Organizations that value food safety relies on forward-thinking managers to manage people, processes, and priorities simultaneously. In addition to this, certification agencies such as the Food Standards certifications are requiring food businesses to obtain evidence of management commitment within their established Hazard Analysis and Critical Control Point (HACCP) systems. Over the years, strong management commitment, or the lack thereof, has proven to directly impact the effectiveness of a food safety and quality system. With more food establishments aligning themselves globally, there is a growing need for leadership to demonstrate their commitment to food safety. An organization can effect change, by seeing the bigger picture and understanding the interdependencies throughout the food system. As part of this, they need to help other staff to move the vision and mission of food safety plan forward.

They will need the skills to foster collaboration and innovation within their teams and across disciplines to help everyone succeed in making the changes needed in the food system (World Bank, 2015).

According to Foskett (2010), one of the key steps for new leaders in food and beverage industry is to adapt to food systems thinking. Most professionals are hired for their knowledge in a specific area. Now, to become next-gen leaders, they will need to think about the whole food production system and how all decisions made in this system, from sourcing, receiving, storage, production, service and retail sale affect people and the environment. When companies equip professionals with critical-thinking skills, they are developing their professionals who want to make a meaningful impact within their organizations as well as in the entire food system. This is true empowerment to improve the future of food and make companies viable and competitive in their destinations (Jennifer, 2019).

Food safety is purely technical, yet, with the right approach, it can be made relatable to all learning groups. Since middle managers directly oversee the activities of front-line employees, it is important for them to support the learning and development initiatives that impact the staff. If an organization doesn't have this training ability internally, it can support programs that are helping to build these leaders. Programs like the new Integrated Food Systems Leadership are designed to help future leaders bridge the current skills gap in the food system. These future leaders will have the tools to drive the change critical for many companies to succeed (Jennifer, 2019).

## Materials and methods

A cross-sectional research design was used which involved both descriptive and inferential statistical procedures to fully describe and explain conditions of the current situation. The study used complete enumeration method to select 27 five and four Hotels in Kenya. The study sample was 527 respondents which were drawn from employees (Food and Beverage Managers and head chefs) and guests. Guests were sampled based on 2016 data provided by the Kenya Tourism Board bed occupancy calculated at 49%. Purposive sampling technique was used to select the expected number of employees, while simple random sampling was used to select the guests. Self-administered questionnaires were used to collect quantitative data from guests while interviews schedules were used to collect qualitative data from Managers and chefs. Quantitative data were analyzed using Multiple using (both direct and indirect) regression analyses with the aid of SPSS version 21. While thematic analysis was used to analyze qualitative data.

## Results

Most of the hotels (75%) had operated for more than 5 years while only 8% of the hotels had operated for less than 2 years. This observation implied that most hotels had operated long enough to be easily noticed by any customer. To deeply understand the nature of the operation, the staffs were asked about the nature of the operation. Results revealed that most of the hotels (45.8%) had a partnership as their form of ownership followed by limited company ownership (37.5%). Sole proprietorship and family-owned had 8.3% each. The study explored responses to various aspects of food safety by asking respondents whether they were aware of food safety assurance systems. There was a 100% confirmation that managers and executive chefs are much aware of issues pertaining to food safety. On the part of guests, all respondents (94%) agreed that food safety assurance is a deciding factor while choosing for a hotel to visit. Just a small fraction of guests (6%) responded that food safety assurance is not a key decision factor. Again this small proportion could be those who visited the hotels for other reasons other than for taking 861 a meal.





Most hotel heads departmental heads were much aware of HACCP (Yes = 70.8%) as one of the safety assurance systems compared to other listed systems followed by Good hygiene practices (Yes = 66.7%). According to the responses, the least known systems are Good manufacturing process (Yes = 33.3%) and Assured safe catering (Yes = 33.3%). This outcome should be used by the hotel heads to know which areas to focus on while enlightening their staffs on food safety assurance systems.

On monitoring food Safety, most hotels do adopt Testing, certification and Labeling, accounting for 41.7%, followed by ISO 9000, which accounted for 25%. Voluntary standards and ISO 22000 accounted for 20.8% and 12.5% respectively. Based on the regression model conducted without interaction of other variables (direct relationship of safety and choice of dining destination), Table 1 shows that food safety, as an independent variable, had a coefficient of 0.738 with a standard deviation of 0.230 and a t-statistics of 3.209. The corresponding p-value for this independent variable was found to be 0.005.  $p\text{-value } 0.005 < 0.05$ , implying that food safety significantly influences dining destinations picked by guests. On the other hand, the computed t-value (3.209) is greater than the tabulated t-score (2.069). In both cases, the two tests lead to a confirmation that there is a significant relationship between food safety assurance and choice of dining destinations.

Multiple regression analysis was used to assess both the direct and indirect effect. Direct effects analysis involved regressing customer destination choice on food safety assurance and food safety monitoring and surveillance on customer destination choice, while indirect effects analysis included evaluating the moderating effect of top management commitment on customer choice of a dining destination. For the direct effects regression analysis, the overall effect of food quality systems, food safety assurance and food monitoring and surveillance systems on customer dining destination choice was found to be positive and had a significant influence on customer's destination choice. The variables were positively corresponding with a respective p-values 0.015, 0.005 and 0.044. The corresponding  $t\text{-value}$  was 0.005, which was less than 0.05 ( $P\text{-value} = 0.005 < 0.05$ ).

For the indirect effects regression analysis, top management commitment was found to have a moderating influence on the relationship between the independent variables and customer destination choice ( $p\text{-value} = 0.004$ ). The two predictor variables explained only 55.4% of the total variations in the choice of dining destinations. This implied that the remaining 44.6% of the total variation in the dining destination choice were not explained by predictor variables included in the model. However, the explained variation in the relationship was found to be significant since the p-value was found to be less than 0.05. Based on these findings, this study recommends that although this study provided unique insights into the link between food safety, quality, monitoring and surveillance, top management commitment and customer-based factors to destination choice its conceptual and empirical setting had a number of limitations. For example, the study did not investigate the physical, chemical and microbial contamination that can cause unsafe food. This can be used as a source of future study.

**Table 1: direct regression model**

<b>Model Summary</b>					
R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	F Change	Sig.
.799	.638	.629	.474	5.864	.005
<b>Regression Coefficients</b>					
	Beta	Std. Error	t-statistics	Sig.	
(Constant)	.271	.283	0.958	.054	
Food Safety Assurance	.738	.230	3.209	.005	
<b>ANOVA Analyses</b>					
ANOVA					



	Sum of Squares	Df	Mean Squares	F-statistics	Sig.
Regression	22.536	3	7.512	5.864	.005
Residual	25.620	20	1.281		
Total	48.156	23			

Dependent Variable: Customer Destination Choice  
 Predictor: (Constant), Food Safety Assurance

Source: Survey data (2019).

A regression model was performed to check leadership commitment in food safety and the outputs are summarized as shown in Table 3 below.

**Table 2: Moderation effect of top management commitment with interaction**

Model Summary					
R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	F Change	Sig.
.828	.686	.676	.582	5.177	.001
Regression Coefficients					
	Beta	Std. Error	t-statistics	Sig.	
(Constant)	1.784	3.110	1.743	.067	
X	2.301	.782	2.943	.030	
Z <sub>1</sub>	1.862	.490	3.801	.018	
Interaction	2.229	.150	14.86	.004	
ANOVA					
	Sum of Squares	Df	Mean Squares	F-statistic	Sig.
Regression	14.833	3	4.944	5.177	.001
Residual	18.90	20	.945		
Total	33.733	23			
<b>Dependent Variable:</b> Customer Destination Choice					
<b>Predictors:</b> (Constant), FSQ, TMC, Interaction of FSQ and TMC					

This model considered the existence of the interaction effect. The independent variable was food safety (X) and the interaction of X and Top management (Z<sub>1</sub>). When the interaction variable was included in the model, the explained variation in firm performance increased to 68.6% (R<sup>2</sup> = 0.686) with an adjusted R-squared value of 0.665. This explained variation was significant since P-value = 0.001 < 0.05. Further, the researcher observed that the effects of the independent variable were positive (β's > 0.00). The regression coefficients was found to be significant (P-value = 0.001 < 0.05). This was also supported by the fact that there is an increase in the explained variation when the interaction variable is included in the model (from 55.4% to 68.6%). The researcher, therefore, concluded that top Management Commitment has a moderating effect on the relationship between food safety aspects and customer's dining destination choice.

## Discussions

The results from this study agreed that food safety is a key component and a deciding factor while choosing a hotel to visit. Fortunately, consumers especially in the developed world, are aware of these and have become more discriminative with their food product choices. In order to improve performance of food safety, all employees in both management and operational level, cooperate or independently owned, part-time and full time must embrace

food safety practices. This will go a long way in ensuring the production of safe food that meets international standard. This means that destinations can lose out on potential customers if food safety is undermined due to the existence of fragmented legislation, multiple jurisdictions, and weaknesses in surveillance, monitoring and enforcement.

The study found out that that management plays a significant role in the extent to which food workers engage in safety practices especially in food purchase, preparation, storage, issuing cooking and service of food. Older and full-time managers with more experience can be a source to impart food safety knowledge through training and monitoring. Food safety education and training are not enough to encourage employees to perform proper food safety and sanitation procedures but management must come up with proper food safety policies enshrined in the company mission, vision and core values. Proper supervision of employees can lead to good performance especially when employees are aware that they would be reprimanded for improper procedures. This being the case, it is pertinent to understand why management must focus on training younger and less experienced employees in better and modern food safety methods such as HACCP system.

From a policy standpoint, the study raises urgent interventions for food safety systems and infrastructures (e.g. laboratories) to respond to and manage food safety risks along the entire food chain, including during emergencies; and also integrate food safety into broader food policies and programmes. Future research could consider using these food safety indicators to monitor the impact of food safety in the choice of dining destinations.

## Conclusion

Food safety continues to be an issue in the foodservice industry and since food-borne illness outbreaks continually happen, maintaining a healthy environment should be the top priority for hospitality business owners. In doing so they will make their destinations more competitive in terms of customer's choice of destination. As was confirmed by the study food safety is one of the factors that influence consumers to choose dining destination among competition. This means that the presence of perceived food safety risk can negatively impact consumers' food choice decisions. With different regulatory systems, developing countries should identify their own ways to promote social co-regulation of food safety according to their distinct market and institutional conditions to create a conducive environment for hospitality operators. From a policy standpoint, the study raises urgent interventions for food safety systems and infrastructures (e.g. laboratories) to respond to and manage food safety risks along the entire food chain, and also integrate food safety into broader food policies and programmes. Future research could consider using these food safety indicators to monitor the impact of food safety in the choice of dining destinations.

Although this study provided unique insights into the link between food safety, top management commitment and destination choice its conceptual and empirical setting had a number of limitations. For example, the study did not investigate the physical, chemical and microbial contamination rendering the food unsafe. This is a serious omission which can be used as a source of future study. Further research is needed to explain why, despite certification, the functioning of the mandatory HACCP principles is often incomplete and what factors affect the correct operation, as well as if these are sufficient to ensure food safety.

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