

**ASSESSMENT OF THE EFFECTS OF GREEN INNOVATION PRACTICES  
ON PERFORMANCE OF RESTAURANTS IN TANZANIA: A CASE OF  
RESTAURANTS IN KINONDONI AND ILALA DISTRICTS, DAR ES  
SALAAM**

**BY**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF TOURISM  
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TANZANIA**

**2019**

## CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Tanzania this dissertation titled “**Assessment of the effects of Green Innovation Practices on Performance of Restaurants in Tanzania: A case of restaurants in Kinondoni and Ilala Districts, Dar es Salaam**” in partial fulfillment of the requirements for the degree of Master of Tourism Planning and Management of the Open University of Tanzania.

.....

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.....

**Date**

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**DECLARATION**

I, **Mwanga Zera Elias**, do hereby declare that this dissertation titled “**Assessment of the Effects of Green Innovation Practices on Performance of Restaurants in Tanzania: A case of restaurants in Kinondoni and Ilala Districts, Dar es Salaam**” is my own work and it has not been presented anywhere and will not be presented to any other institution for any award.

.....

**Signature**

.....

**Date**

**DEDICATION**

This dissertation is dedicated to my parents, my brothers and sisters, my lovely children Sylvia Namoyo, Elias Leonard Mwanga and Michelle Leonard Mwanga.

## **AKNOWLEDGEMENTS**

I would like to take this privilege to recognize and thank all those who in one way or the other contributed in completion of this study. First and foremost, to thee GOD Almighty for giving me courage, strength, guidance and healthy condition to pursue this study, I also thank my family for supporting me morally and spiritually during the entire period of the study.

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## **ABSTRACT**

This study aimed to assess the effects of green innovation practices on performance of restaurants in Tanzania; A case of restaurants in Kinondoni and Ilala Districts, Dar salaam. Green innovation practices were measured by green purchasing, water management, energy management and solid waste management. Therefore, the following objectives were developed: to identify green innovation factors that affect performance of restaurants; to examine the relationship between green purchasing and performance of restaurants; to test the influence of water management towards performance of restaurants; to examine relationship between energy management and performance of restaurants; and to test relationship between solid waste management and performance of restaurants.

The study is descriptive research in nature and used cross sectional research design to collect useful data. The study used quantitative research approach. The study solicited information from 150 respondents. The study collected information by using questionnaires and conducted descriptive statistics and regression analysis.

The study found that there is a positive relationship between green purchasing, water, energy and solid waste management on performance of restaurants,

The study recommends that, Restaurants should purchase and use goods and commodities that are environmental friendly, control water usage, cut energy consumption, adopt and implement solid waste management practices. The government should create strict rules and regulations which will require restaurants to take consideration of green innovation practices in their daily operations.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

- CIS** - Community Innovation Survey
- EU** - European Union
- GRA** - Green Restaurant Association
- OECD** - Organization for Economic Cooperation and Development
- SPSS** - Statistical Package for Social Scientist
- TQM** - Total Quality Management

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Introduction**

This chapter presents background to the problem and statement of the problem. The chapter also presents research objectives, hypothesis and significance of the study limitation and delimitation of the study.

#### **1.2 Background to the Problem**

Green innovation was initially addressed in the late 1990s, proposing change from existing production technologies to the invention of innovative products and processes under environmental regulations and sound economic, environmental and social considerations with the aim of long-term production and sustainable industrial development (OECD, 2012).

The subsequent terms were considered to refer to common concepts, namely, green innovation, eco/ecological innovation, sustainable innovation, and environmental innovation, with slightly different definitions in terms of environmental, social, technological, or micro/macroeconomic aspects (Schiederiget *al.*, 2011). The aforementioned terms interchangeably referred to the innovative products and processes that reduced environmental impacts (Rennings, 2014).

“Going green” has been one of the important ways that companies have dealt with environmental issues. Methods of acquiring green capabilities and conducting green

practices have drawn increased attention and prompted discussion for the last two decades (Schiederig, Tietze and Herstatt, 2012).

To facilitate the adoption of green innovations, companies must consider the important drivers and antecedents in their businesses. These include the concerns of customers, the preferences of business owners, the capabilities of suppliers, government regulations and the technological, organizational, and environmental determinants of green practices (Lin and Ho, 2011).

Due to the fact that customers recognize the seriousness of environmental problems, the consumer choices are becoming more ecologically conscious as they purchase products and services that are environmentally friendly. To meet the increasing demand for 'green' products and services, marketers throughout all industries invest enormous efforts into developing and promoting eco-friendly goods. The focus on environmentally friendly has urged the restaurant industry to adjust their services as well in order to meet the changing expectations of the customers (Han, Hsu, and Sheu, 2010).

Today we live in an information age where every day we get to see innovative products and services at our disposal, making things easier and convenient than ever before. Today's technology is about staying connected. Not only the people, but also various devices are connected with each other communicating and working smartly as the user needs. Witnessing this connected world of people and devices, the businesses could not keep themselves away from this network of opportunities.

The restaurant, as we know it, can directly be traced back to nineteenth century post-revolutionary Paris. Paris was a thriving commercial city catering to a flow of business travelers providing a steady demand for dining establishments. Restaurants

evolved as a space where patrons could eat, drink and pay for what they wished, and restaurateurs could differentiate their offerings accordingly (Kiefer, 2002).

The modern restaurants appeared in Europe – Paris in the 18th century then later in North America where restaurants' owners achieving greatness innovation and creativity in doing what others have not. The outcome of the innovation and creativity created a pace thus the World' greatest restaurants changed the design, products and services, utilities, cuisine and human resources to attract more eco-friendly customers. The concept of the green restaurant was then spread throughout the world and was adopted by different companies, organization as well as individuals (Jim, 2018).

The environment is being attacked daily by human life and restaurants are a part of the problem (Choi and Parsa, 2007). To remedy this problem, restaurants are now promoting and implementing sustainability initiatives (Choi and Parsa, 2007). Americans are beginning to view sustaining the environment as a lifestyle rather than an issue, which increases the need for restaurants to incorporate sustainability initiatives into their companies (Goodland, 1996). Environmental sustainability is an important practice for the restaurant industry in the United States because restaurants generate great amounts of waste, use a large amount of energy, and deplete natural resources to operate (Barclay, 2012; U.S. Environmental Protection Agency, 2010). Restaurants add to the attack of the environment through operation, construction, and design. The waste that restaurants produce includes: food waste, paper and paperboard, plastics, metals, and glass (U.S. Environmental Protection Agency,

2010). In the United States, food waste is the greatest contributor to landfills and incinerators with the restaurant industry.

Engel (2008) asserts that South Africa has made significant progress with environmental management in the last decade by implementing laws and strategies that focus on sustainable development and green issues. In spite of this notion, most businesses still do not recognize the need to become green. Previously, businesses assumed that incorporating 'green' into their business strategy would cost money, but they now realize that ignoring negative impacts on the environment will be costly in the future (Van der Zee, 2008). The purpose of going green is to use products and methods that would not negatively impact the environment through pollution or depleting natural resources (Robinson, 2008). In Zimbabwe and South Africa, the hospitality sector is facing an increasing burden regarding solid waste (Nhapi and Gijzen, 2014), pollution of water bodies (Feresu and Van Sickle 2016) and excessive use of energy and water (Lee *et al.* 2016). Issues relating to environmentally-friendly practices of hotels in these two developing countries is a topic that has received scant interest in the sub-Saharan Africa, according to Rogerson and Sims (2015) there is much pressure on restaurants to become green and restaurants Zimbabwe and South Africa cannot continue to be oblivious to managing green practices. Mugabe (2013) study conducted in Kenya found that a number of restaurants have been aiming at integrating environmental concerns in their business operations and in interactions with their stakeholders in embracing environmental sustainability into business strategies though the issue of green practices in restaurant industry is sparse. The growth of innovation through modern technologies has also give birth to modern

restaurants in Tanzania. Today's, the majority of customers visiting Tanzania and local customers do mind their health and pay much attention for the facilities use when receiving services in restaurants. The situation could have been caused by the changing trends and the development of restaurants geared by the creativity and innovation. There is a need then to assess the effect of modern sustainable (green) innovation in restaurant's performances of Tanzania to making easy understand of its concept and largely practices.

### **1.3 Statement of the Problem**

Various studies have been conducted on the restaurant industry concerning the issue of green innovation practices and performance of restaurants. Those studies were; the study by Hall et al. (2016) who pointed out that green management policy led to employee edification. Chung et al., (2016) noted that green restaurants establishments minimize the use of natural resources, (Sallam, 2015) pointed out that adopting green innovation practices helps to raise the return on sales. Those studies justified that green innovation practices are very crucial for the performance of restaurants.

The previous studies showed the necessity of having more studies on that area; Mbasera *et al.*, 2016) revealed that only a few managers in the restaurants formulated green management policies. The study conducted in Kenya by Ongori, Iravo and Munene (2013) found that performance of hotels and restaurants relies on top

management ability to strategically analyze both external and internal environment and plan for strategic service offerings.

The study by Hsieh, (2015) identified that many restaurants in developing countries have failed to adopt the green innovation practices and programmes which were designed to meet the special needs of the customers, regulators and the public and have made their commitment to environmental protection.

This study specifically looked on energy management, green purchasing, solid waste management and water management and tested their relationship towards performance of restaurants. Most of the previous studies conducted on the countries with different environment and technological development compared to Tanzania. Furthermore, there is lack of enough studies in Tanzania conducted in relation to the green innovation practices and restaurants performance, which rises a need of carrying out the study to reveal the magnitude of the problem and suggests possible solutions; as a matter of facts this study assessed the effect of green innovation practices on performance of restaurants in Tanzania.

#### **1.4 Objectives of the Study**

##### **1.4.1 General Objective**

The main objective of this study is to assess the effects of green innovation practices on performance of restaurants in Dar es Salaam; Tanzania.

##### **1.4.2 Specific Objectives**

The study strived to achieve the fallowing specific objectives;

- i. To identify green innovation factors that affect performance of restaurants
- ii. To examine the relationship between green purchasing and performance of restaurants
- iii. To test the influence of water management towards performance of restaurants
- iv. To examine relationship between energy management and performance of restaurants
- v. To test relationship between solid waste management and performance of restaurants

#### **1.4 Research Hypothesis**

The following are considered hypothesis:

- i. Green purchasing positively affects performance of restaurants
- ii. Water management has positive effects on performance of restaurants
- iii. Energy management positively affects performance of restaurants
- iv. Waste management has a positive effect on performance of restaurants

#### **1.4 Significance of the Study**

The findings of the study will act as a tool of information and knowledge dissemination to the hospitality and tourism stakeholders. On the other hand, it will help restaurant businesses improve their level of services in order to meet customer's satisfaction and improve the hospitality and tourism industry at large.

The findings of this study will disclose the effects of green innovation practices on performance of restaurants and hence contributes advantageous information to the policy makers and other stakeholders to improve, monitor and well manage green innovation practices for the betterment of restaurants performance.

Moreover, this study will act as starting point for other researchers who will research on the same field especially in the context of Tanzania where only few research concerning green innovation practices in restaurant performances have been conducted. This research will act as a reference tool for other researchers on aspects of literature review, methodologies and promotion of the hospitality and tourism sector.

### **1.5 Limitations of the study**

The use of secondary data might lead to the study to copy some errors done by the previous studies and that limits the study. Furthermore, some respondents hesitated to provide reliable information feeling that it might cost their job careers and that the researcher had to explain to them the importance and meaning the study so that they can provide reliable information. There was a limitation of time as some respondent were not on time so the researcher had to adjust the time table to fit the study. Being private sponsored is another limitation which makes the task of conducting the study a little bit challenging; the researcher had to utilize well the available budget to make sure that things go as planned.

### **1.6 Delimitations of the study**

The study aimed at assessing the effect of green innovation practices on performance of restaurants in Tanzania. The study is descriptive research in nature and used cross sectional research design to collect useful data. The study used quantitative research approach. The study collected secondary data from various reputable sources such as journals, pamphlets, published and unpublished researches, articles, as well as other reputable sources. The study collected primary data by using questionnaires.

### **1.7: Organization of the dissertation**

This study is organized in five chapters where by chapter one presents introduction, back ground of the study, statement of the problem, general objective, specific objectives and research questions, significance of the study, limitation of the study as well as delimitation of the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents literature from various reputable sources on issue of the effects of green innovation practices on performance of restaurants. It comprises of definition of key terms, theoretical literature, empirical literature review, conceptual framework and research gap.

#### **2.2 Definition of key terms**

##### **2.2.1 Restaurant**

According to Schimidigallet *al*, (2012) restaurant is defined as a for-profit food service operation whose primary business involves the sale of food and beverages products to individuals and small group of guests.

Restaurants are defined as organizations providing food, beverages and services at a specific location in return for monetary gain (Brotherton, 2003; Kiefer, 2002, Ottenbacher et al, 2003).

A restaurant is a business which prepares and serves food and drinks to customers in exchange for money. Meals are generally served and eaten on the premises, but many restaurants also offer take-away and food delivery services and some offer only take-away. Restaurants vary greatly in appearance and offerings, including a wide variety of cuisines and service models ranging from inexpensive fast food restaurants and cafeterias to mid-priced family restaurants, to high-priced luxury establishments.

Generally restaurant is an establishment designed, in whole or in part, to accommodate the consumption of food and/or beverages in exchange for money.

### **2.2.1.1 Types of restaurants**

According to Goode, (2013) there are two types of restaurants namely casual restaurants and formal restaurants, a casual restaurant provides meals at moderate prices and targets family and/or middle class customer market; the atmosphere is more casual for example, the service, dress standard and atmosphere of restaurant is casual; Moreover, the menu in casual restaurant often provide more choice than those in formal restaurants.

Formal restaurants are higher-quality restaurants and enhanced cooking technique resulting in higher priced menu items, targeted to an up-market customer.

### **2.2.2 Green Innovation**

Chen, Lai et al. (2006) defines green innovation as hardware or software innovation that is related to green products or processes, including the innovation in technologies that are involved in energy-saving, pollution-prevention, waste recycling, green product designs, or corporate environmental management.

Green innovation is the process to develop new, or significantly improved, products (goods and services) and processes, which provides a significant decrease in environmental impacts compared to relevant alternatives (Frank, 2015).

Green innovation is also defined as the new or modified products and processes, including technology, managerial, and organizational innovations, which help sustain the surrounding environment (Chiou, *et al*, 2011).

### **2.2.3 Types of green innovation**

According to Kemp and Pearson, ( 2007) there are four different classifications of green innovations, according to the specific nature of the innovation, namely the “environmental technologies” as pollution control technologies i.e., waste water treatment technologies, cleaner process technologies or green energy technologies; “organizational innovation for the environment” as the introduction of organizational methods and management systems for dealing with environmental issues in production and products; “product and service innovation offering environmental benefits” which are new or environmentally improved products and environmentally beneficial services, and “green system innovations” which are alternative systems of production and consumption that are more environmentally benign than existing systems.

Another relevant classification of green innovation employed is provided by the EU Community Innovation Survey (CIS). The CIS put forward six types of green innovations that refer to environmental benefits deriving from the production of goods or services: reduced material use per unit of output; reduced energy use per unit of output; reduced CO<sub>2</sub> footprint (total CO<sub>2</sub> production); replaced materials with less polluting or hazardous substitutes; reduced soil, noise, or air pollution; and recycled waste, water, or materials.

They empirically demonstrated that proactive green innovations are mainly pushed by internal firms' features, such environmental leadership, environmental culture,

and environmental capability, while reactive green innovations are more related to environmental regulations and Stakeholders' expectations.

#### **2.2.4 Green innovation factors**

There are various factors for green innovation such as employee conduct, customer pressure, pressure from suppliers and governmental pressure; green innovation is the considerable role played by policy interventions to drive its introduction (Rennings, 2014). In terms of organizational factors, there are intra-organizational collaborations, green core competences, green shared vision, green absorptive capacity, and green organizational ambidexterity as additional drivers of green innovation (Chen, Chang and Lin, 2014).

Other studies on green innovation determinants confirm that regulation and cost savings cover a critical role into pushing green innovation, even if green innovation today is proactively driven entrepreneurial and entrepreneurial initiatives. Furthermore, these studies suggest that, with respect to general innovation, these activities require more external sources of knowledge and information (Horbach, Oltra and Belin 2013).

Other green innovation factors are; customer pressure, customers now has strong concerns about the environment and prefers to purchase environmentally friendly products (Henriques and Sadorsky, 2014) Customers may refuse to buy products that damage the environment, which encourages companies to create green products (Varnäs, Balfors and Faith, 2013). Furthermore, customer experience with the

company's product or interacting with the company's services affects word of mouth and the company's branding and image.

Governmental Pressures, a number of studies have investigated the relationships between governmental regulations and environmental practices and have suggested that, governmental pressure is one of the most significant external stakeholders (Hsu *et al*, 2013). Regulatory changes and enforcement of these changes by the government affect firms' actions regarding environmental management and sustaining their business (Huang *et al*, 2012).

Pressure from Suppliers; Pressure from suppliers affect the cost, lead time, development risks, and market availability of manufacturers (Hultand Swan, 2013). According to Pujari, (2016) a firm's green innovation is largely determined by "upstream "environmental impacts, meaning that suppliers' materials and components could influence the quality, design, and competitiveness of a company's products. Sometimes, suppliers may refuse to supply products to firms that they believe damage the environment (Huang, Ding and Kao, (2013).

Employee Conduct; Top managers recognize the importance of environmental protection and their company's responsibility to influence strategic planning with regard to environment management. Additionally, a company's future direction with regard to environmental practices depends heavily on whether the management team encourages employees to actively participate in environmental management initiatives and on management's own commitment to green innovation practices (Fergusson and Langford, 2014).

### **2.2.5 Green Innovation Restaurants**

Lorenzini (1994) defined a green restaurant as a restaurant with new or renovated structures designed, constructed, operated, and demolished in an environmentally-friendly and energy-efficient manner. Kim and Bonn, (2011) defined a green restaurant as a restaurant that implements some green practices, such as the recycling and composting, water and energy efficiency and waste management, as well as a restaurant that offers an option of green food menu, which use locally grown food or organic food.

Increased competition in the marketplace coupled with changing guest demand for green as well the need to ensure guest satisfaction are some of the driving factors for restaurants to go green (Han and Kim, 2010).

As more customers recognize the seriousness of environmental problems, the consumer choices are becoming more ecologically conscious as they purchase products and services that are environmentally friendly (Han, Hsu, and Sheu, 2010).

Restaurant attributes include tangible attributes, such as mood lighting, visual effects, furnishings, seats and tables, carpets, art, and shades (Kim *et al.*, 2006), and intangible attributes, such as high-quality service, friendliness, knowledge, skill, and the attitudes of service personnel (Reich *et al.*, 2005; Kim *et al.*, 2006). The restaurant is said to be green innovation restaurant when it comprising both tangible and intangible attributes. According to Lorenzini (1994) green restaurants is a new or reconstructed structural design created using environmental friendly and energy-

efficient methods. The GRA, (2007) conveyed feasible green practices for the development of environmental friendly restaurants. Those practices are the green actions that restaurants could perform and thus includes efficient energy and water use, recycling, and green construction), green foods (organic and local), and green contributions (engaging or contributing toward green projects).

Over the past decade, the call to adopt sustainable practices in the restaurant industry has continued to grow. In particular, there has been a significant increase in an understanding of strategies restaurants could utilize in the areas of energy and water efficiency, the use of low or non-toxic cleaning and pest control products and the utilization of waste management practices. These strategies have often proven to be a profit bonus to operators who use them intelligently. Innovative technologies, especially in the area of monitoring waste have become as easy to use as pressing a few buttons on a smart phone. Local governments and utility companies have provided financial and equipment incentives to restaurant operators who agree to install energy or water efficient equipment or incorporate other sustainable practices. Surveys have shown that the consumer looks more favorably upon restaurants who promote green practices (Jeong and Jang, 2010).

### **2.3 Theoretical Literature Review**

The theories that guided this study are stakeholder, slack theory resources and good management . The use of the theories assisted researcher to conceptualize the framework of the study and show green innovation affects positively performance of restaurants

### **2.3.1 Stakeholder Theory**

According to Friedman (2006) stakeholder is any group or individual who can affect or is affected by the achievement of the organization's objectives. Stakeholder theory suggests that companies produce externalities that affect many parties which are both internal and external to the firm. This often causes stakeholders to increase pressures on companies to reduce negative impacts and increase positive ones. Darnell et al. (2010) pointed out regulatory, market and social actors to be stakeholders' groups which made pressure on businesses and their environmental practices. According to Darnell et al (2008) propagated that it is a legal requirement for the business to attend, involve and implement environmental issues and policies. Han et al., (2010) indicated that market pressures as industrial and/or household consumers and suppliers increase their awareness of the environment issues and also it's a force to make business adopt environmentally-friendly practices and/or eschew polluting activities.

Furthermore, the reduction of the adverse impacts of the restaurants activities to the natural is due to the pressure of community groups, trade associations, labor unions and environmental organizations. Kasim, (2007) pointed out that much pressure is from regulatory stakeholders as they have regulatory mandatory towards environmental protection. The fund availability is a moderating role which impacts on green practices in businesses.

The innovation adoption is influenced by social individual characteristics and the diffusion degree in the social system (Valente, 1996). In order for the restaurants to

sustain, perform well and gain the benefit from the usage of innovation practices there should be support and participation from various stakeholders such as tourism businesses, media, international forces, non-governmental organizations, local communities and visitors. This social system is expected to concern stakeholders as the internal, external and networks motivating and influencing in adopting innovative initiatives. The socio cultural context has direct impacts on leadership and shows relationship with organization innovation (Elenkov and Manev, 2005). Also, changing regulatory demands relating to environmental sustainability increase in the business environments which require managers to adapt constantly with new resources and innovative strategies (Lozano, 2013).

Generally, stakeholders are those groups who are vital to the survival and success of the corporation. Business need to identify the needs of their stakeholders and strive to meet their maximum expectations (Kotter, 2006).

In order to ensure stakeholders rights and participation in decision making, the management of organizations has responsibility to manage the organizations to benefit all stakeholders (Freeman, 2010). Therefore, success of any company depends on how the management manages the relationships with stakeholders. Thus without support of stakeholders, there is no reason for a firm to exist (Libido Ten, 2007).

Stakeholder are very necessary for the restaurant performance as they are assisting increases in shareholder wealth, gain in market share, improving branding and customer satisfaction. According to Angelo and Vladimir (1998), large and small restaurants are risky businesses with many forms of operating and financial risks

impacting their ability to stay in business. Among the risks are: changes in consumer tastes and discretionary spending patterns; changes in general economic conditions; public safety conditions or concerns such as outbreak of diseases; demographic trends; the cost of food products, labor and energy; competition; and governmental regulations. These risks put investments in restaurants at considerable risk, resulting in many business failures, despite the fact that the restaurant industry is booming.

Therefore, managing risk requires a focused and dedicated management team that understands the determinants or causes of uncertainty. This would enable them to implement policies and strategies that would help reduce risk, and thereby maximize firm value and shareholders' wealth (Brenner and Smidt, 1998).

Market share is the portion of a market controlled by a particular company or product. In recent years, a growing number of business practitioners and theorists have postulated that one way for a company to increase its return is by increasing its market share. Capturing a dominant share of a market is likely to mean enjoying the highest profits of any of the companies serving that market. It can also mean winning the leadership, power, and glory that go with such dominance (Angelo and Vladimir, 1998).

Brands and their added value are among the most important sources of competitive advantage for business in a competitive marketplace (Djuricin, Janoseic and Kalicanin, 2013). Brands manifest their impact at three primary levels: customer market, product market, and financial market. Hence, the importance of brands is Multifaceted (Keller and Lehmann, 2006). Brands are considered an asset that generates revenue and increased value for a company (Narayan, 2012). Srinivasan

and Hanssens, (2009) concluded that improvements in customer equity and brand equity are significantly related to firm value.

According to Deng et al. (2009) Customer satisfaction is becomes the most important part in the business field because when your customer is satisfied then it will provide the profitable business to the industry. Basically customer's satisfaction is term which means that how customers predict about your product after the use of a specific product and how they evaluate your product in single manner and compare with the competitors' products. The customer satisfaction is customer's evaluation of goods and services in term of whether it is according to the customer's requirements or it is dissatisfied the customer's needs and wants. Actually customer's satisfaction is the customer's evaluation of goods and services in term of whether it is according to the customer's needs and wants or customers dissatisfied with the product services or the dissatisfied with the performance of the products and not according to expectation of customers and sometime customers more satisfied if products performance is beyond with their expectations and if one aspect of product and services is not meets the customer's satisfaction then they can be dissatisfied with the overall performance (Kotler, 2012).

The theory fits in this study because the effects of green innovation practices on the performance of restaurants can be seen and realized if there is cooperation, relation and interaction between various stakeholders. That will help to put much pressure on the usage, sustainability, maintenance and implementation of green innovation practices as the way of increasing performance of restaurants. Furthermore it helps to reveal the effects of green innovation on the performance of restaurants.

### **2.3.2 Slack Resources Theory**

Slack resources are defined as “potentially utilizable resources that can be diverted or redeployed for the achievement of organizational goals”. Behavioral theorists argue that slack resources will increase experimentation, innovation and risk-taking (George, 2005). The theory explains that the identification and possession of internal strategic resources contributes to a firm’s ability to create and maintain a competitive advantage and improve performance (Crook et al., 2008). A resource is considered strategic if it is valuable, non-substitutable, rare or specific and inimitable in order to contribute to improving the performance of the firm. The theory is of the view that firms attempt to identify strategic resources that will most likely make them more competitive in the market and then employ these resources to exploit their value (Sirmon, Hitt and Ireland, 2007). Environmental management in an organization is a strategic resource because it can lead to a higher firm performance. It supports pollution prevention, product stewardship and sustainable growth (Christmann, 2000).

Slack allows firms to experiment with new projects, such as introducing products and entering markets. Although such projects may be risky, they are critical for the performance of entrepreneurial firms (Sapienza et al., 2006,). Moreover, slack shields firms from environmental turbulence (O’Brien, 2003). From the viewpoint of the slack resource theory, a firm’s unique portfolio of tangible and intangible resources influences the extent and direction of a firm’s expansion. In this regard, numerous studies have proposed that resources enable firms to create static and

dynamic synergies by applying resources required for sustainable development (Foss and Christensen, 2001). Thus, a firm's performance and development is influenced by how the management team conceptualizes and uses a firm's resources. The slack of resources is important because two firms may possess the same level of resources but differ in the resource exploiting of their current business. Hence, the two firms would have different levels of slack and thus also differ in their growth potential (Mishina *et al.*, 2004). According to (Graves and Waddock, 1994) theory of slack resources proposes that the company that has sufficient assets tends to allocate discretionary resources for socially responsible practices, such as environmental enhancements. This investment is designed to develop and enhance competitive advantage through reputation, image, and long term cost savings (Miles and Covin, 2000; Miles and Russell, 1997). In other words, by executing superior green performance, the company attempts to obtain a better image and reputation, which may lead to more successful outcomes in the future. The theory fits in this study as it helps to assess the effect of green innovation practices on performance of restaurants.

### **2.3.3 Good Management Theory**

According to Good Management Theory (Russo and Fouts, 1997), companies that have innovative management tend to seek out emerging sources of competitive advantage such as new environmental practices to better satisfy customers. Managers concern about the realization of superior environmental performance, which indicates customers' recognition of green image of the company through the company's green practices (performance) because they believe that gained

realization of such performance in public would give a distinctive advantage that intensifies their competitive power.

The theory indicates that, regardless of the financial condition, the company or the management strategies, the primary reason why companies are engaging in conducting and developing superior environmental performance is to improve the image of the company by conducting green practices and eventually to obtain the competitive advantage.

Bloom and Van Reenen, (2006) pointed out that there is positive correlations between high management practice scores and firm performance across industries. They further argue that management practices are important and can be used to improve firm performance. They further pointed out that management practices are positively correlated to better firm performance even when controlling for different factors like capital intensity, ownership, firm size and employee education, which is found to only reduce the coefficient on management modestly. They also find that different management practices within the same firm lead to better performance - parts of firms that apply management practices perform better than parts that do not.

## **2.4 Empirical Literature Review**

### **2.4.1 Underlying influences that effect green innovation practices on performance of restaurants**

#### **2.4.1.1 Water consumption**

The Restaurants industry relies on water for value creation. Restaurants tend to have long hours of operation, and have larger portions of operating expenditures allocated

to utilities. Companies in the industry have great opportunities for long-term cost savings enabled by technology improvements and other efficiencies (Jobs and Careers Powerhouse, 2014).

Furthermore, water pollution in developing countries makes available water supplies unusable or expensive to treat. Major uses of water in restaurants are related to food and beverage preparation, ice making, dishwashing, and sanitation. Limited-service eateries use relatively less water than full-service restaurants due of the use of disposable food containers and preprocessed ingredients (Affordable Care Act, 2015).

Depending on the location, water scarcity can pose a risk to operations. As a result, it is a growing concern for the Restaurants industry. This is likely to give rise to regulations that will impose further costs on restaurant companies as they rely on high-quality water for their growing operations. Water scarcity can result in higher costs, supply disruption, and social tensions, which companies across different industries, particularly water-intensive ones, will need to contend with (United States Government. 2016).

#### **2.4.1.2 Energy consumption**

Energy consumption in restaurants is due to the long hours of operation, large amounts of equipment, and demand; however, most of this consumption is often wasteful. Reducing energy usage in restaurants is a vital issue needing to be addressed by the hospitality industry because restaurants are contributing to the problems of depleting the Earth's resources (Sustainable Foodservice Consulting, 2017).

Energy consumption is determined to have a strong relationship with performance of restaurants. Therefore, applying sustainability practices in business operations can provide additional value to customers' satisfaction (Nicolau, 2018).

Green innovation practices can affect competitive advantage. Restaurants' sustainability practices positively contribute towards competitive advantage and performance of restaurants. Indeed, these contributions can be attained through competitive cost advantages and by being environmentally and socially responsible by reducing resource costs and energy consumption (Chan, 2015).

Restaurants can have control of energy consumption by applying energy star's electrical or gas equipment which saves energy such as refrigerators, freezers, fryers, holding cabinets, pre-rinse spray valves, steamers, griddles, ice machines, and ovens. Electrical and natural gas versions of the equipment exist (Energy Star, 2017).

Energy consumption, Waste management and water efficiency are important environmental areas related to sustainability in the restaurant industry and largely have direct impact to performance of restaurants (Bubna-Litic and de Leeuw, 2019).

#### **2.4.1.3 Solid waste management**

Restaurants produce waste in two main forms: food and packaging. Food waste includes ingredients, waste created during cooking (such as oil), and waste of the final product. Packaging waste includes packaging received from suppliers and packaging disposed by consumers in the restaurant areas. Food waste results in loss of resources, such as water, energy, land, labor, and capital, and produces greenhouse

gas emissions as a result of decomposition. Moreover, food ingredient deliveries to restaurants are a significant source of packaging waste. In addition, limited-service restaurants make heavy use of disposal tableware for serving customers (Cheeseman and Gina, 2016).

Restaurants those are able to reduce waste through various methods, including food recovery, diverting waste from landfills, and packaging reclamation programs, can reduce waste-handling costs and improve operational efficiency. Pressure to divert waste from landfill may result in higher disposal costs. Since food packaging for takeout is disposed offsite, restaurants are not able to divert takeout packaging from landfills. However, restaurants can be proactive about sourcing recycled and recyclable or compostable material (McDonald's Sustainability, 2017).

In restaurant businesses, the mostly used recycled items are napkins, paper towels, toilet paper, office paper, take-out containers, coffee jackets, plates, bowls, glasses, cardboards, and cooking oil. In a similar vein, restaurants could minimize harmful waste by replacing harmful products with safer alternatives and reducing chemical use (Green Restaurant Association, 2014).

#### **2.4.1.4 Green purchasing**

Restaurant attributes include tangible attributes, such as mood lighting, visual effects, furnishings, seats and tables, carpets, art, and shades (Kim *et al.*, 2016), and intangible attributes, such as high-quality service, friendliness, knowledge, skill, and the attitudes of service personnel (Reich *et al.*, 2015; Kim *et al.*, 2016).

In order for restaurants to survive and thrive in this twenty first century, they not only have to measure its success in their financial aspects but instead to work

towards discovering a formula to incorporate sustainability measures as part of their performance. Restaurants will have to ensure they have sustainable components to achieve competitive advantage or face suffocation and die a natural death (Chen, 2018). Kumar, (2014) argues that consumers' green buying intention is in line with their concern for the environment. Restaurants Businesses need to add value to the society as a whole, hence include sustainability elements and shift from shareholder capitalism to responsible capitalism.

In regard to consumers' perceptions of green restaurant attributes, earlier studies have determined that consumer perceptions of green restaurants (green energy, noise control, green ingredients, waste recycling, and employee education) positively and directly influence consumption intentions toward green restaurants (Yang, 2018). Critical factors affecting consumer selection of green restaurants are green foods and the degree to which a restaurant promotes green practices (Chen, 2018). Therefore, restaurants can purchase and use green products to strengthen their environmental safety image and to attract the attention of consumers, thus enhancing consumer satisfaction (Manaktola and Jauhari, 2017).

#### **2.4.2 Outcomes of Green Innovation Practices on restaurants**

The study by (Yum Brands Corporate Social Responsibility Report, 2017) pointed out that waste reduction efforts are likely to help companies reduce procurement and disposal costs, improving operational efficiency. Restaurants those are able to stay ahead of waste reduction regulations will not only see a positive impact on brand

image, but will likely reduce their cost of compliance and avoid the risk of fines and penalties.

The study by National Restaurant Association, (2014) pointed out that water and energy efficiency measures in company-owned stores can directly impact the bottom line. However, companies that can also influence energy and water management at their franchise locations will have a more significant effect on reducing indirect environmental impact. Reducing the risk of franchises being impacted by future climate change regulations and water constraints will ensure sustained growth.

The study by Energy Star Guide for Restaurants, (2014) propagated that, the use of energy-efficient appliances can be a source of significant savings, and investments can pay off in a relatively short amount of time.

The study by NPD Group, (2016) pointed out that companies in the industry that are able to reduce water consumption are likely to see positive impacts on their operating expenses. This is of particular importance for companies in which significant revenues are generated in regions where water is becoming scarce, and where the price of natural resources is expected to increase in the future.

The study by National Grid, (2017) propagated that companies in the industry are large purchasers of energy, given their hours of operation and their extended locations. Fluctuations in electricity and natural gas prices affect operating margins and profitability, and are hard to pass onto consumers to completely offset cost increases. Companies who are able to properly manage this issue by investing in new technologies that reduce overall energy consumption, improve energy efficiency, or

source from renewables, will be better able to protect themselves from energy price volatility while reducing operating expenses.

The study by (Withiam, 2015) pointed out that performance of restaurants can also be achieved through conservation certifications. Conservation projects could be identified and executed to explore cost savings, waste management, recycling and energy and water conservation

The study by Cvelbar and Dwyer (2018) identified that implementing environmentally friendly business operation would give a competitive cost advantage especially in water and energy consumption.

Marketing material which supports green innovation practices is more likely to yield emotional responses by consumers, creating linkages among sustainability issues (Ilbery and Kneafsey, 2014). Consumers who visit restaurants seem to not only enjoy their food, but also the environment (Heung, 2015). Firms attending to ecological issues are provided with an opportunity to differentiate their businesses from similar, but less ecologically-friendly firms, allowing the responsible companies to fulfill customers' desires for environmentally-friendly products or services (Ham, 2014).

#### **2.4.3 Various studies on green innovation practices on performance of restaurants.**

Restaurants are the food establishments that by nature uses large amounts of products for food, energy consumptions, water and detergent agents, disposable solid and liquid waste from food and also packaging of products. According to Green Restaurant Association (GRA, 2016) there are seven (7) categories of green practices

which the restaurant establishments should follow to be certified as a green restaurant. The seven practices consist of (1) water efficiency, (2) waste reduction and recycling, (3) sustainable durable goods and building materials, (4) sustainable food, (5) energy, (6) reusable and environmentally preferable disposables and (7) chemical and pollution reduction are used to deliver transparency on the guidelines followed to measure restaurant's environmental accomplishments.

The study by Sandvik, Duhan and Sandvik (2014) demonstrated that innovativeness is in itself a powerful tool for competing in markets. They showed that innovativeness positively influences market advantage and market advantage positively influences business profitability.

The study by Deloitte, (2018) pointed out that although, the hospitality sustainability movement has inspired many restaurants to adopt green practices and this is an evolving trend. Awareness, consumer expectations and regulations are some of the key drivers that have helped to introduce green initiatives in restaurants.

The study by Middleton and Hawkins, (2017) pointed out that there are four major necessary areas of green innovation practices for performance of restaurants such as energy management, waste management and water conservation and green purchasing.

The study by Hu et al., (2016) pointed out that restaurants could make a significant contribution by adopting sustainable practices throughout the industry to reduce the operational consumption of solid waste and energy and resources.

The study by Kirk, (2015) pointed out that restaurant operators who proactively pursue sustainable practices in their operations could likewise benefit from employing green innovation practices. Indeed, the most common actions undertaken to date have been related to energy usage and resource consumption, waste management, and environmental protection programme.

The study by Kumar, (2014) pointed out that in the current business era, although most leading brands have moved towards developing and introducing eco-friendly products, it still faces major challenge to overcome consumer skepticism about their green operations and green attributes.

## **2.5 Conceptual Framework**

The conceptual framework helps the researcher in construction of the logical sense on the relationship between independent variable (factors for green innovation) such as green purchasing, water management, energy management and solid waste management which effect dependent variable (performance of restaurants). The study selected those four factors for green innovation because are the key factors that assisted to assess the effect of green innovation practices on performance of restaurants in Tanzania.

*Therefore, this study considered the following hypothesis; -*

### **H1: Green purchasing positively affects performance of restaurants**

Green purchasing is an act of obtaining or buying goods or services that have minor effects to environment or human health. Green purchasing involves both the

customers and the firm act of buying goods or services that have lesser negative impacts to environment and human health.

Restaurants which consider green purchasing always take in consideration in not using dangerous and toxic materials at restaurants minimize release of pollution and waste products, decrease gas emission, improving environmental health, use of recycled materials, energy and water conservation as well as promoting quality products and services.

Customers are aware of green practices because of having prior information and usually like to dine in green restaurants. Customers' ecological behavioral intentions concerning restaurants are described as an acknowledged likelihood to engage in green purchasing by dining in a green restaurant. The ecological behavioral intentions can be captured by the customers' attitude toward green purchasing, which is elicited from their prior 'green' experience of a restaurant (Oliver, 1997). In that sense green purchasing have effects to restaurants performance meaning that the performance of restaurants depends on the restaurants act of green purchasing.

Therefore, this study considered the following hypothesis;-

**H2: Water management has a positive effect on performance of restaurants**

Water management has impacts on restaurants performance as the more the restaurant has good management the more the restaurant will have good performance and verse versa. Good water management is very necessary for restaurants to reduce negative impacts of environment and protect health of customers.

Restaurant water management includes; usage of water-efficient equipment in various areas in a restaurant such as kitchen, dining area, and restroom. Use flow restrictors on faucets, low-flow toilets, and water- less urinals, usage of safe and clean water for food and drink preparation, only serve customers water upon request as well as use of a system which monitors and controls comfortable temperatures efficiently with heating, ventilating and air Conditioning systems (EunHa and SooCheong, 2010). Therefore, this study considered the following hypothesis:-

### **H3: Energy management positively affects performance of restaurants**

Energy management has effects to restaurants performance as energy management improves profitability, reduces greenhouse gas emissions, conserves resources as well reduce impacts to environment and health of customers.

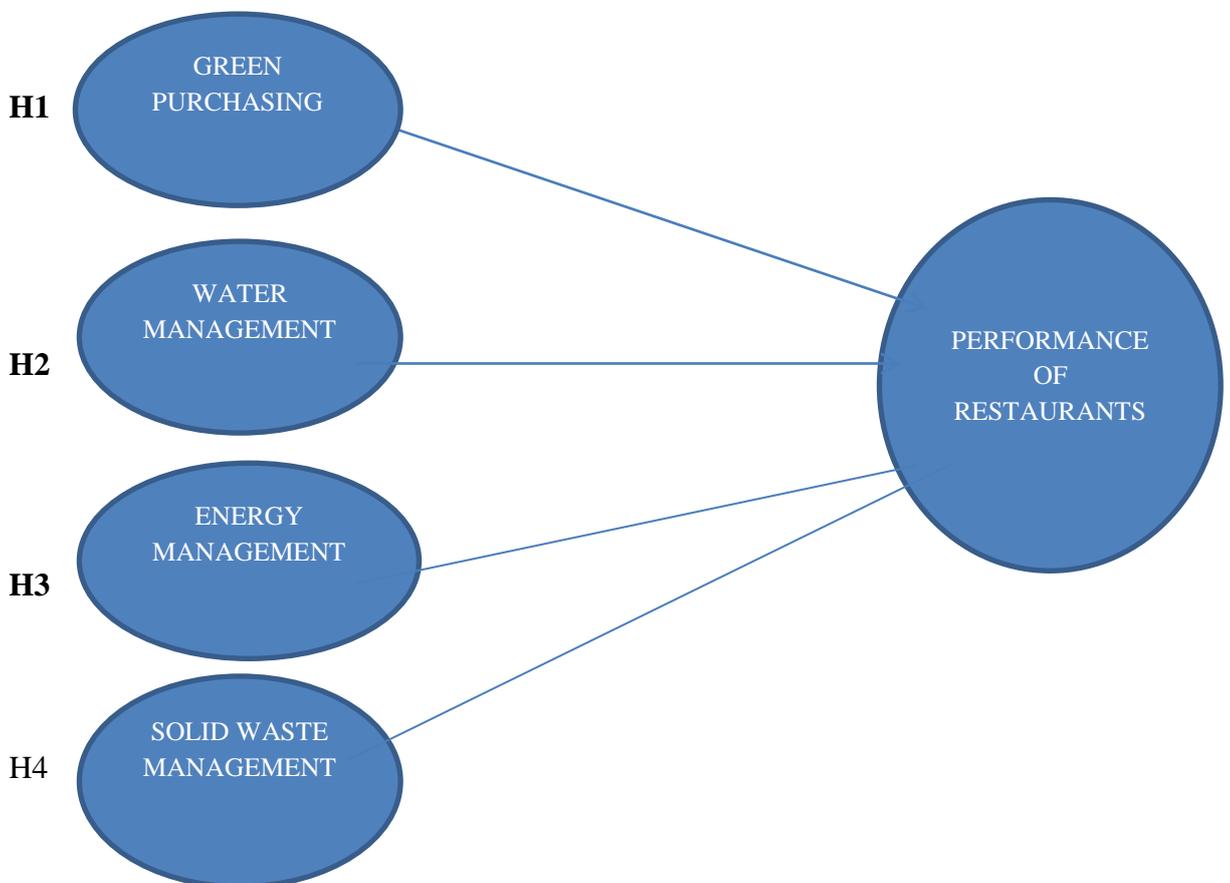
Energy management comprises of energy billing, maintenance, operations, and financial analysis, it is further includes refrigeration temperature monitoring for food safety, water and gas monitoring, replacement of incandescent light bulbs with longer lasting light bulbs, replace exit lights with LED's usage of motion detectors for lights in the restroom, keep the entrance door closed or use a double entrance door as well as lighting automation (EunHa and SooCheong, 2010). Thus, this study considered the following hypothesis:-

### **H4: Waste management has a positive effect on performance of restaurants**

Waste is defined as any substance or article which constitutes a scrap material or an effluent or other surplus substances arising from application of any process

(Environmental Protection Authority, 1990). Waste management is an overall approach to prevent waste and it combines a range of collection and treatment methods to handle all materials in the waste stream in an environmentally effective, economically affordable and socially acceptable way (McDougal, 2001).

Restaurants solid waste includes kitchen waste, garden sweepings, paper, books, cardboard, Plastic, synthetic fibre, glass, bulb, rubber, leather, metal, cans, clothes, hazardous waste, wood and organic as well as electronic waste. Solid waste management is very crucial for the restaurants performance as it helps minimize the impacts to environment and health of the customers (Kemp and Pearson, 2007).



**Figure 2.1: Conceptual framework.**

## 2.6 Research gap

Various studies have been conducted concerning the issue of green innovation practices on performance of restaurants. Those studies are such as; The study by Hoejmose et al, (2012), Wood and Jones, (2013), Hart and Abuja, (2014), Yim, Fung, and Lau, (2010), Wong, (2012) , Kesidou and Demirel, (2012), Lin *et al*, (2015), Han, Hsu, and Sheu, (2010), Azorin, Cortes, Gamero and Tari (2009) and (Rennings, 2014).

These studies remarked that restaurants experience a high level of stakeholder scrutiny while practices to achieve green capability, environmental management of restaurants may strengthen their economic goals, there is a positive relationship between green innovation and restaurants performance, there is a positive causality among the constructs that green product innovation is demonstrated to have a positive stronger influence on both green product competitive advantage and green new product success than green process innovation, green innovation is closely associated with corporate environmental management and eco-target achievement, green innovation in services serves as the driving ingredient for sustainable restaurant operations, the consumer choices are becoming more ecologically conscious as they purchase products and services that are environmentally friendly and there is a good effect of environment factor on financial performance.

However, this study is descriptive research in nature and used cross sectional research design to solicit useful information. The study used quantitative research approach. The study employed purposive sampling to select useful sample for the study and collect primary data by using questionnaires and secondary data by using

documentary study. Furthermore this study was specifically dealing with the issue by looking on four factors namely green purchasing, water management, energy management and solid waste management; A case of selected restaurants in Kinondoni and Ilala Districts, Dar es Salaam. And that is a research gap this study geared to fill.

## **CHAPTER THREE**

### **STUDY AREA AND RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter comes up with research design, the study area, target population, sample size and sampling technique, types and the sources of data, data collection methods and data analysis.

#### **3.2 Study Area**

The area of the study was Kinondoni and Ilala Districts where by 50 restaurants selected as case studies. The reason for the selection of the region is due to its popularity as the main tourist business region in the country, and that many business or tourist restaurants are located within the districts.

#### **3.3 The Research Design**

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. “In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data (Kothari, 2009).

The study is descriptive research in nature and used cross sectional research design to collect useful data. The study used quantitative research approach. This research

approach assisted the study to assess 'the effects of green innovation practices on performance of restaurants in Tanzania.

### **3.4 Target population**

According to Enon, (1998) population is the people that the researcher has in mind from whom he/ she can obtain information. A population is the total of all the individuals who have certain characteristics and are of interest to a researcher. The target population or surveyed population is the collection of subjects in which the sample is drawn (Kothari, 2009). The study involved general managers, food and beverage managers and head chefs because they are the ones who have enough information concerning effects of green innovation practices on performance of restaurants. Therefore, in this study the population was drawn from the entire population of restaurants in Kinondoni and Ilala Districts in Dar-es-salaam.

### **3.5 Sampling technique and sample size**

Sample size refers to the number of items to be selected from the universe to constitute a sample. A sample is a finite part of a statistical population whose properties are studied to gain information about the whole (Oxford, 2007). The sample size was 150 respondents.

The study used purposive sampling; Purposive sampling is selecting a sample "on the basis of your own knowledge of the population, its elements, and the nature of your research aims" (Babbie, 1990). Purposive sampling is used in order to access knowledgeable people, those who have in-depth knowledge about particular issues,

maybe by virtue of their professional role, power, and access to networks, expertise or experience. Purposive sampling method was used to general managers, food and beverage managers and head chefs to be interviewed.

### 3.5.1 Sample size

The sample size of this research consisted of **150 respondents as described in table 3.1.**

**Table 3.1: Sample size**

<b>Respondents</b>	<b>Frequency</b>
General Managers	50
Food and Beverage Managers	50
Head Chefs	50
<b>Total</b>	<b>150</b>

### 3.6 Data Collection Method

The research used quantitative method to deal with complexity information that arises in green innovation and modern restaurants practices. The researcher employed both primary and secondary data collection. Primary data involved data collected from questionnaires while secondary data was collected through the documentary review.

#### 3.6.1 Secondary data

Secondary data are the readymade data that the researcher takes from various reputable sources and use in his or her study. The study collected secondary data

from various reputable sources such as journals, pamphlets, published and unpublished researches, articles, as well as other reputable sources.

#### **i. Documentary study**

The study involved the use of library and other organizational records. Documentary study helped the researcher to get relevant information of the field study. The information was obtained from the related books, handbooks, brochures, Internet and reports.

### **3.6.2 Primary data**

Primary data are the data that a researcher establishes by collecting them from the field as the initiator of those data. The study collected primary data by using questionnaires.

#### **3.6.2.1 Questionnaires**

The questionnaires comprise of series of written questions that the selected respondents were asked to answer. The questions were in form of self-administered questionnaire with closed ended questions. The closed ended questions had predetermined responses. This method helped the researcher to collect the desired data.

### **3.7 Data Processes and Analysis**

The researcher after collecting the data, were processed, analyzed and put them into quantitative simple data. The data were applied to make an assessment of the effects of green innovation practices on performance of restaurants in Tanzania. The study analyzed quantitative data using Statistical Package for Social Scientist (SPSS) and

the results presented in form of graphs, tables and charts. Regression analysis was conducted to test relationships between variables.

### **3.8 Validity of the research instruments**

According to Borg and Gall, (2003) validity is defined as the extent to which the procedures actually accomplish what it seeks to measure. The researcher seeks opinion on the questions and structure of the questionnaires from experts before conducting a pilot test. In this case, 5 questionnaires were administered to academicians and restaurant experts for the purpose of refining the questions. This procedure enabled the researcher to assess the validity of questions in answering the research questions and meeting objectives of the research.

### **3.9 Reliability of the research instruments**

This is another important aspect that the researcher used to minimize errors. Reliability is defined as the extent to which the data collection yields consistent results. Kothari (1990), Saunders (2007) asserts that reliability can be assessed by posing the following questions. First will the measure yield the same results on other occasions? Secondly, will similar observations be reached by other observers? And lastly, is there transparency in how sense was made from the raw data?

### **3.10 Ethical considerations**

In order to carry out the research successfully, researcher had to seek a letter of permissions from his/her supervisor and acquire field site permission specifically from restaurants owners to conduct research. The researcher had to abide with the rules and regulations of the sites targeted to be visited and follow ethical issues to respondents to be interviewed.

## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents interpretation, analysis of the findings of the study. The findings are presented in line with objectives of the study. The study aimed at assessing the effects of green innovation practices on performance of restaurants in Tanzania. The study was directed by the following specific objectives; To identify green innovation factors that affect performance of restaurants, to examine the relationship between green purchasing and performance of restaurants, to test the influence of water management towards performance of restaurants, to examine relationship between energy management and performance of restaurants and to test relationship between solid waste management and performance of restaurants.

#### **4.2: Demographic Information**

This section comprises characteristics of the respondent's gender, age, level of education as well as work experience.

##### **4.2.1: Gender of respondents**

The study collected data from 150 respondents; Table 4.1 shows that 95 respondents which are equal to 63.3% were female while the other 55 respondents which are equal to 36.7% were male. The study shows that more females are employed than males.

**Table 4.1: Gender of respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentages</b>
Female	95	63.3
Male	55	36.7
Total	150	100.0

**4.2.2: Age group (Year) of respondents**

Table 4.2 shows that 19 respondents which are equal to 12.7 % had between 18-25 years old, 63 respondents which are equal to 42.0% had between 26-35 years old, 47 respondents which are equal to 31.3 % had between 36-45 years old and 16 respondents which are equal to 10.7 % had the age of 46 or above years old. The study distributed questionnaires to 150 respondents and all were filled.

**Table 4.2: Age group (Year) of respondents****4.2: Age group (Year) of respondents**

<b>Age</b>	<b>Frequency</b>	<b>Percentages</b>
18-25	19	12.7
26-35	63	42.0
36-45	47	31.3
46 or above	21	14.0
Total	150	100.0

### 4.2.3: Level of education

The study collected data from 150 respondents; Table 4.3 shows that 26 respondents which are equal to 17.3% had Ordinary Secondary School Qualification, 20 respondents which are equal to 13.3 % had Advanced Secondary School Qualification, 70 respondents which are equal to 46.7% had Technical Certificate Ordinary Diploma, 26 respondents which are equal to 17.3 had Bachelor Degree level of education, while the other 20 respondents which are equal to 13.3 % had masters level of education.

The study collected information from respondents with different levels of education where by some of the respondents had Ordinary Secondary School Qualification (17.3%), few had Advanced Secondary School Qualification (5.3) %, many had Technical Certificate Ordinary Diploma (46.7%) others had Bachelor Degree level of education (17.3%) and others 8 respondents had masters level of education (5.3%).

**Table 4.3: Respondents' level of education**

<b>Level of education</b>	<b>Frequency</b>	<b>Percentages</b>
Ordinary Secondary School Qualification	26	17.3
Advanced Secondary School Qualification	20	13.3
Technical Certificate Ordinary Diploma	70	46.7
Bachelor Degree	26	17.3
Master's Degree	8	5.3
Total	150	100.0

### 4.2.4: Experience in Tourism and Hospitality Industry

Table 4.4 shows that, 32 respondents which are equal to 21.3% had 1-5 years' experience in tourism and hospitality industry, 29 respondents which are equal to 19.3% had 6-10 years' experience in tourism and hospitality industry, 36 respondents which are equal to 24.0% had 11-15 years' experience in tourism and hospitality industry, 28 respondents which are equal to 18% had 16-20 years' experience in tourism and hospitality industry while the other 25 respondents which are equal to 16.7% had above 20 years' experience in tourism and hospitality industry.

**Table 4.4: Respondent's Experience in Tourism and Hospitality**

<b>Experience in Tourism and Hospitality Industry</b>	<b>Frequency</b>	<b>Percentages</b>
1-5 years	32	21.3
6-10 years	29	19.3
11-15 years	36	24.0
16-20 years	28	18.7
Above 20 years	25	16.7
Total	150	100.0

#### **4.2.5: Type of Ownership**

Table 4.5 shows that, 50 respondents which are equal to 33.3% pointed out that the restaurants were owned by family/individual, 65 respondents which are equal to 43.3% pointed out that the restaurants were of partnership ownership while the other

33 respondents which are equal to 22.0% pointed out that the restaurants are of chain ownership.

**Table 4.5: Respondent's response on restaurants' type of ownership**

Type of Ownership	Frequency	Percentages
Family/Individual	50	33.3
Partnership Ownership	65	43.3
Chain Restaurants	33	22.0
Total	150	100.0

**Table 4.6: Gender \* Experiences in Tourism and Hospitality Industry Cross tabulation**

**Gender \* Experiences in Tourism and Hospitality Industry Cross tabulation**  
Count

16-20 years		Experiences in Tourism and Hospitality Industry					Total
		1-5 years	6-10 years	11-15 years		above 20 years	
Gender	Female	32	29	34	0	0	95
	Male	0	0	2	28	25	55
Total		32	29	36	28	25	150

Table 4.6 shows that, 32 female respondents had experience of 1-5 years in tourism and hospitality industry, 29 female respondents had experience of 6-10 years in tourism and hospitality industry and 34 female respondents had 11-15 years' experience in tourism and hospitality industry. Two male respondents had experience of 11-15 years in tourism and hospitality industry, 28 male respondents had 16- 20 years' experience in tourism and hospitality industry and 25 male respondents had experience of above 20 years' in tourism and hospitality industry.

**Table 4.7: Education level \* Age of respondents' Cross tabulation**

**Education level \* Age of respondents Cross tabulation**

Count

		Age of respondents				Total
		18-25	26-35	36-45	46 or above	
Education level	Ordinary Secondary School Qualification	19	7	0	0	26
	Advanced Secondary School Qualification	0	20	0	0	20
	Technician Certificate Ordinary Diploma	0	36	34	0	70
	Bachelor Degree	0	0	13	13	26
	Master's Degree	0	0	0	8	8
<b>Total</b>		19	63	47	21	150

Table 4.7 shows that 19 respondents with age of between 18-25 years had ordinary secondary school level of education, 7 respondents with age of between 26-35 years had advance secondary school level of education and 20 respondents with age of between 26-35 years had advanced secondary school level of education. 36 respondents with age of between 26-35 years had Technician Certificate Ordinary Diploma and 34 respondents with age of between 36-45 years had Technician Certificate Ordinary Diploma. 13 respondents with age of between 36-45 years had bachelor degree, 13 respondents with age of 46 or above years had bachelor degree and 8 respondents with age of 46 and above years had master's degree.

**Table 4.8: Experiences in Tourism and Hospitality Industry \* Type of Ownership Cross tabulation**

**Experiences in Tourism and Hospitality Industry \* Type of Ownership Cross tabulation**

Count		Type of Ownership			Total
		Family/ individual	Partnership ownership	Chain	
Experiences in Tourism and Hospitality Industry	1-5 years	32	0	0	32
	6-10 years	18	11	0	29
	11-15 years	0	36	0	36
	16-20 years	0	18	10	28
	above 20 years	0	0	25	25
Total		50	65	35	150

Table 4.8 shows that, 32 respondents with experience of 1-5 years of in tourism and hospitality industry are from restaurants which are owned by family/ individual, 18 respondents with experience of 6-10 years in hospitality and tourism industry are from restaurants which are owned by family/ individual and 11 respondents with experience of 6-10 years in hospitality and tourism industry are from restaurants which are owned partnership. 36 respondents with experience of 11-15 years in hospitality and tourism industry are from restaurants which are owned partnership, 10 respondents with experience of 16-20 years in in hospitality and tourism industry are from restaurants which are of chain ownership and 25 respondents which are of above 20 years' experience in hospitality and tourism industry are from restaurants which are of chain ownership.

### **4.3 Testing Hypotheses**

#### **4.3.1 Green innovation factors that affect performance of restaurant**

The study conducted linear regression analysis and found that the value of R square is 82 which indicate that 82% of the variance in the dependent variable is explained by the independent variables in the model. This shows that performance of restaurants is affected by various factors as shown in Table 4.9 such as; employees training on the environmental purchasing procedures, purchases of recycled products, informing to supplies that restaurant prefer eco-friendly products, Preferences given to environmentally responsible supplier and Purchases of local food ingredients, installation of water efficient appliances, installation of low flow showerheads, educate staff on how to conserve water, reviews of water bills to monitor consumption and availability of safe and clean water as the factor that affect performance of restaurants.

Other factors are such as uses of solar energy, uses of energy-saving light bulbs, and review energy bills to monitor consumption, uses of electronic files rather than paper ones, recycle of food as the factor that affect performance of restaurants, uses recycled paper, installation of soap and shampoo dispensers and installation of recycle bins.

Performance of restaurants is affected by various factors such as green purchasing factors, water management factors, energy management factors and solid waste management factors.

The view which is supported by Wilson, Velis, and Cheeseman, (2006) who propagated that waste management programs include recycling, composting, and reducing or eliminating waste especially food waste. Recycling programs have an important impact on waste management.

Brodsky (2005) pointed out that in order for restaurants to reduce their water usage and avoid wasting water they should: 1) installing a low-flow pre-rinse spray valve, 2) using an Energy Star qualified steam cooker, and 3) using other Energy Star qualified commercial equipment. The U.S. Environmental Protection Agency (2012) present additional tips (besides upgrading equipment to Energy Star qualified models) for saving water which include: 1) educating users on proper dishware prep and loading techniques, 2) installing Water Sense labeled toilets, urinals, and bathroom faucets, 3) maintaining good operation of water using equipment by repairing any damage to the equipment and/or the plumbing, 4) installing automatic sensors on faucets, toilets, and urinals, 5) treating and reusing onsite water sources (e.g., irrigation, toilet flushing, and water fixtures).

The view which is in line with Hedrick, Smith, and Field, (2011) who pointed out several factors in restaurants influence energy use including: 1) hours of operation, 2) operational practices, 3) the number and type of appliances, 4) seating in conditioned space, 5) customer traffic patterns, 6) climate zone, 7) walk-in refrigeration type, 8). Additionally, outside lighting Helpful tips for energy conservation include: 1) upgrading equipment to Energy Star qualified appliances, 2) providing preventative maintenance on equipment such as regularly cleaning and maintenance, 3) making

repairs efficiently and promptly, 4) installing energy efficient lighting such as occupancy sensors and LED light bulbs, and 5) implementing start up and shut down schedules for equipment operations (Sustainable Foodservice Consulting, 2013; Energy Star, 2013).

**Table 4.9: Green innovation factors that affect performance of restaurants**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.908 <sup>a</sup>	.824	.802	.19913

a. Predictors: (Constant), Installs recycle bins, Uses of solar energy, Uses of electronic files rather than paper ones, Installs water efficient appliances, Uses of key cards energy control systems in bathrooms, Reviews water bills to monitor consumption, Uses recycled paper, Preferences given to environmentally responsible supplier, Uses of energy-saving light bulbs, Installs soap and shampoo dispensers, Educate staff on how to conserve water, Recycle of food, Informs supplies that restaurant prefer eco-friendly products, Uses of energy efficient appliances, Purchases of local food ingredients, Review energy bills to monitor consumption, Employees trained on the environmental purchasing procedures

#### **4.3.2: The relationship between green purchasing and performance of restaurants.**

The study conducted linear regression analysis to test the relationship between green purchasing and performance of the restaurants. As shown in Table 4.10, first statistic,

$R$ , is the multiple correlation coefficients between all of the predictor variables and the relationships shared by the independent variables and the dependent variables. The next value,  $R$  Square, is simply the squared value of  $R$ . This is frequently used to describe the goodness-of-fit or the amount of variance explained by a given set of predictor variables. In this model the value is 72. The study found the value of  $R$  square is 52 which indicate that 52% of the variance in the dependent variable is explained by the independent variables in the model. In that sense there is a positive relationship between green purchasing and performance of restaurants.

Green purchasing is very necessary for the performance of restaurants as it determines which products are purchased by the restaurants as it is obvious that the restaurants which purchase environment friendly products are in a position of performing better than the restaurants which purchase products which are not environment friendly.

The view which is in line with the study by Lewis, Cacciola and Dennill, (2011); U.S. Environmental Protection Agency, (2013) who pointed out that, procurement or purchasing impacts performance of restaurants largely through purchasing sustainable foods, supporting local farmers, using biodegradable products, and reducing waste at the source.

The view which is supported by the study by Rimmington, Carlton and Hawkins, (2006) who propagated that procurement Initiative includes five principles that can be helpful for other food procurement managers: 1) selecting local food products when available over imports, 2) providing menu and food information to encourage

consumers to choose sustainability, 3) avoiding foods which used processing that is damaging to the environment, 4) working towards adapting existing centralized purchasing systems, and 5) ensuring food products are processed in environmentally efficient facilities.

**Table 4.10: The relationship between green purchasing and performance of restaurants**

<b>Model Summary</b>				
Model	a	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721	.519	.492	.54580

- a. Predictors: (Constant), Purchases of local food ingredients, Preferences given to environmentally responsible supplier, Informs supplies that restaurant prefer eco-friendly, Employees trained on the environmental purchasing procedures, Purchase of supplies, products and condiments in bulk, Purchases of recycled products, Purchases of Energy Star Appliances, Purchases of used equipment

#### **4.3.3: The influence of water management towards performance of restaurants**

The study conducted linear regression analysis to test the relationship between water management and performance of the restaurants. As shown in Table 4.11, the first statistic, *R*, is the multiple correlation coefficients between all of the predictor variables and the relationships shared by the independent variables and the dependent variables. The next value, *R Square*, is simply the squared value of *R*. This is

frequently used to describe the goodness-of-fit or the amount of variance explained by a given set of predictor variables. In this model the value is 78. The study found the value of R square is 62 which indicate that 62% of the variance in the dependent variable is explained by the independent variables in the model. In that sense there is a positive relationship between water management and performance of restaurants.

The view which is supported by the U.S. Environmental Protection Agency (EPA) who claimed that advancing water efficiency could create financial benefits for restaurants. In order to enhance water efficiency, some green restaurants replace standard toilets with low-flow toilets, and equip water saving faucets, laundry and sprinkler systems (First, 2008). According to the U.S. EPA, restaurants could upgrade dishwashers, ice machines, and steam cookers to qualified models, and switch off water equipment when not in use in order to reduce water consumption.

The view which is in line with the study by Jonch-Clausen, 2004; U.S. Environmental Protection Agency, (2010) who propagated that; water conservation includes management of water use through efficient equipment, maintenance and repairs, and following practices that reduce usage and waste.

The study by Shanklin (1993) warns that the availability and quality of safe water are issues that the hospitality and tourism industry should be concerned about. Water resources are dwindling rapidly creating water stress due to growth in demand, depletion of non-renewable fossil water resources, pollution of water sources, and declining precipitation levels (Gossling et al., 2012).

**Table 4.11: The influence of water management towards performance of restaurants**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.784 <sup>a</sup>	.615	.590	.49048

- a. Predictors: (Constant), Availability of safe and clean water, educate staff on how to conserve water, Implement linen re-use policy, Installs low flow showerheads, Reviews water bills to monitor consumption, Educate customers on water conservation, Installs dual flush toilets, Implements water efficient gardening programme, Installs water efficient appliances

#### **4.3.4: The relationship between energy management and performance of restaurants**

The study conducted linear regression analysis to test the relationship between energy management and performance of the restaurants. As shown in Table 4.12, the first statistic, *R*, is the multiple correlation coefficients between all of the predictor variables and the relationships shared by the independent variables and the dependent variables. The next value, *R* Square, is simply the squared value of *R*. This is frequently used to describe the goodness-of-fit or the amount of variance explained by a given set of predictor variables. In this model the value is 73. The study found the value of *R* square is 54 which indicate that 54% of the variance in the dependent variable is explained by the independent variables in the model. In that sense there is a positive relationship between energy management and performance of restaurants.

The view which is supported by U.S. Environmental Protection Agency, (2010) who pointed out that, proper maintenance and use of restaurants equipment can contribute to significant energy savings and performance of restaurants. Reducing idle time, using the appropriate type and size of appliance for food load, and conducting regular maintenance and recalibration of equipment are all worth the time and expense in the long run.

The study by U.S. Environmental Protection Agency, (2010) propagated that, with a modest amount of planning, an energy management platform can be a powerful tool for boosting profits in restaurants by cutting energy consumption and improving the performance of critical equipment. And by bringing visibility to what has historically been an invisible cost for restaurants, it is finally possible to move energy from an “uncontrollable” cost to a “controllable” cost.

Energy management is very crucial for the performance of the restaurants as the proper usage of energy enhances profitable performance of restaurants. Wang *et al*, (2013) pointed out that operating a restaurant consumes intensive energy. The “Pacific Gas and Electric’s Food Service Technology Center” in the United States reported that restaurants are the largest energy consumers in the retail world. They consume approximately five times more energy per square foot compared with industrial buildings. That means if the

Restaurants will fail to maintain the energy usage; the performance of restaurants will be affected. In order to advance energy efficiency, restaurants could establish an energy management system and use the energy efficiency products such as energy-

saving light, refrigeration, AC system and gas appliances to reduce consume of energy. An energy management system can track and optimize the consumption of energy (Lee, Barber and Tyrrell, 2013). Statistic shows that a typical restaurant can save up to \$15,000 per year by using energy efficient equipment in kitchen, and a fluorescent bulb can save \$30 in energy cost over a bulb's life (Energy and Water Efficiency, n.d.).

**Table 4.12: The relationship between energy management and performance of restaurants**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 <sup>a</sup>	.537	.521	.52997

Predictors: (Constant), Uses of energy efficient appliances, Uses of solar energy, Uses of key cards energy control systems in bathrooms, Review energy bills to monitor consumption, Uses of energy-saving light bulbs

#### **4.3.5: The relationship between solid waste management and performance of restaurants.**

The study conducted linear regression analysis to test the relationship between solid waste management and performance of the restaurants. As shown in Table 4.10, the first statistic, *R*, is the multiple correlation coefficients between all of the predictor variables and the relationships shared by the independent variables and the dependent variables. The next value, *R* Square, is simply the squared value of *R*. This is frequently used to describe the goodness-of-fit or the amount of variance explained by a given set of predictor variables. In this model the value is 80. The study found the value of *R* square is 64 which indicate that 64% of the variance in the dependent

variable is explained by the independent variables in the model. In that sense there is a positive relationship between solid waste management and performance of restaurants.

The view which is in line with Karimi, (2014) who investigated the relationship between green operations practices and operational performance of restaurants in the Kenya; The finding of the study indicated that, green hotel operations have a positive effect on restaurants operational performance.

The view which is supported by Kirk (2008) who indicates that, proper waste management practices are of much value to firm's operational performance in that: it improves efficiency in service delivery, reduces firm's operational cost through efficient operations, and reduces time spend to offer service, enhances quality of service, and productivity. As a result, firm's image is improved in the eyes of the public enhancing company's competitive advantage

The view which is in line with the study by Han *et al*, (2010) who pointed out that, there are many waste products which are recyclable in restaurants. They are glass, plastic, metal, cardboard, and aluminum. Composting food waste helps to reduce the amount of waste and it improves the quality of the soil. These are possible green practices in restaurants regarding recycling and composting.

That mean if there is no proper solid waste management in the restaurant it is obvious that the restaurant performance will be affected.

The view which is in line with National Institute of Environmental Health Services, (2013) who pointed out that restaurants can improve the performance by incorporating the popular program Reduce, Reuse, Recycle for waste management

including the management of food waste, plastics, glass, and paper/ paper boards. Food waste is defined by the Environmental Protection Agency as “Uneaten food and food preparation wastes from residences and commercial establishments such as grocery stores, restaurants, and produce stands, institutional cafeterias and kitchens, and industrial sources like employee lunchrooms” (U.S. Environmental Protection Agency, 2011).

Recycling and composting systems have been a common approach to reducing the amount of waste (First, 2008). Some restaurants implement environmental sustainable activities by using recycled products and non-tree-fiber products. In restaurant businesses, the mostly used recycled items are napkins, paper towels, toilet paper, office paper, take-out containers, coffee jackets, plates, bowls, glasses, cardboards, and cooking oil.

**Table 4.13: The relationship between solid waste management and performance of restaurants**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.801 <sup>a</sup>	.641	.615	.47499

a. Predictors: (Constant), Installs recycle bins, Uses of electronic files rather than paper ones, Recycles toner cartridges, Uses two sided copying standard practice in business, Recycles newspaper, Uses of biodegradable key cards, Recycle of food, Uses two sided printing standard practice in business, Installs soap and shampoo dispensers, Uses recycled paper

#### **4.3.6: Restaurant's Green Innovation Awareness (RGIN)**

The study conducted found that green innovation awareness is contributed by various factors, as shown in Table 4.14 such as, information on restaurants green innovation practices on customer's e- mails, participation in eco-friendly sustainability meetings, gender influences awareness on green innovation, communicate on green innovation practices to stakeholders, educate customers on green innovation practices management issues and customers sharing different ideas on green innovation practices on restaurant Website..

The view which is in line with the study by Environmental Leader, (2007) who found that, restaurants' industry professionals recognized the importance of eco-friendly practices as one of the components contributing to the image of the company. Furthermore, the study by (Ryu et al, 2008) added that, Industry professionals also believe the image of the company can be improved through executing environmentally friendly practices, which in the long run will contribute to customer loyalty.

The view which is supported by the study of Dutta *et al*, (2008) who pointed out that, managers should train their employees to educate customers on recycling opportunity offer within the store. By putting signs to inform customers on how they can participate in green practice to keep the environment clean, the managers may contribute to the improved the image of the restaurant.

The study by Griskevicius *et al*, (2010) suggests that, in reality, customers' perceived green image of the restaurant can mainly be affected by companies' green advertisements rather than customers' perception of green practices in the restaurant. In other words, even though the company performs excellent green practices, the customers may under-perceive the green image of the restaurant and through the companies' green advertising, customers perceived green image of the restaurant can be formed regardless of the companies' green practices performance. This suggests that restaurateurs may effectively induce a customer ecological behavior intention by conducting green advertisement.

**Table 14.14: Restaurant's Green Innovation Awareness**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.683 <sup>a</sup>	.466	.447	.33240

a. Predictors: (Constant), Customers sharing different ideas on green innovation practices on restaurant, Participate in eco-friendly sustainability meetings, Gender influences awareness on green innovation practices, Information on restaurants green innovation practices on customer's e- mails, Communicate on green innovation practices to stakeholders

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents conclusion and recommendations of the study after detailed data analysis. The chapter includes various comments and suggestions provided by the respondents in the field. The study presents conclusion and recommendations for action after summarization of the findings based on the objectives of the study.

#### **5.2 SUMMARY**

The findings and recommendations provided by the study can be applied to the policy makers to look on the weaknesses that make it difficult to address well the challenges that effects of green innovation practices on performance of restaurants in Tanzania. Furthermore the study findings are applicable to the owners and managers of restaurants to challenge themselves and strengthen their capability of employing green innovation practices for the betterments of performance of restaurants and development at large.

#### **5.3 Conclusion**

The findings of the study shows that, there is a strong positive link between green innovation practices and performance of restaurants; Restaurants view the green

innovation practices as very important hence adoption of green innovation practices by restaurants have a positive effect on their performance.

There is a great need for restaurant managers to adopt and sustain green innovation practices in operating their restaurants. Therefore, it is essential to have an investigation on the drivers that affect their targets to adopt such green innovation practices. An in-depth understanding the likelihood of green practice adoption from the perspectives of restaurant managers, to a large extent will importantly assist the policy makers and business players to work together to promote and support establishment of green restaurants and that in one way or the other will improve performance of restaurants. The findings of this study offer a wider perspective in explaining and understanding the impact of green innovation practices on performance of restaurants. Furthermore, it helps in explaining the theory related to the study such as stakeholder theory, slack resources theory and good management theory.

#### **5.4 Recommendations**

- i. Restaurants should purchase and use goods and commodities that are environmental friendly that will help to implement green innovation practices and improve performance of restaurants.
- ii. Restaurants should control water use through efficient equipment, maintenance and repairs, and following practices that reduce water usage and waste.

- iii. Restaurants should cut energy consumption and improving the performance of critical equipment that consumes lower energy. For instance, switching off electrical gadgets which will not be in use as well as the use of solar energy for heating and cooling systems.
- iv. The restaurants should adopt and implement solid waste management practices; that include waste collection and depositing, waste reduction, recycling and reuse and waste composting.
- v. The government should create strict rules and regulations which will require restaurants to take consideration of green innovation practices in their daily operations. That is implementation of green purchasing, solid waste management, water management as well as energy management.
- vi. There should be further research on the area of the effect of green innovation practices on performance of restaurants. That will help to get more reliable source of information and solutions to deal with the reveled challenges.
- vii. The study recommends that different approaches should be engaged in conducting the studies; that will help to get more current, pertinent and vital findings that can address various issues and make direct impact on the well-being of individuals and the Nation at large

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## APPENDICE

### APPENDIX I: QUESTIONNAIRE FOR THE COLLECTION OF DATA

#### Introduction:

Dear General Manager/ Food & Beverage Manager/ Head Chef

I am Zera Elias Mwangi from Open University of Tanzania: I am doing the research concerning assessment of the effects of green innovation practices on performance of restaurants in Dar es Salaam; Tanzania, a requirement for the completion of my degree of Master in Tourism Planning and Management (MTPM) of Open University of Tanzania. I would like to ask few questions to fulfill my study. I assure you that the provided information will be used for the purpose of this study and not otherwise.

#### PART I: RESPONDENT PROFILE/DEMOGRAPHIC FACTOR

Please tick (√) one of each of the following demographic information										
1		2 Age				3				
Femal	Mal	18-25	26-35	36-45	46 or	Singl	Marrie	Separate	Divorce	Widowe

#### 4. Highest level of education

Ordinary Secondary School Qualification ( )	Advanced
Secondary School Qualification ( )	
Technician Certificate Ordinary Diploma ( )	Bachelor
Degree ( )	
Master's Degree ( )	

#### 5. Work experience

1-5 years ( ) 6-10 years ( ) 11- 15 years ( ) 16- 20 years ( ) 21-25 years ( )  
26 years and above ( )

#### 6. Experiences in Tourism and Hospitality Industry

1-5 years ( ) 6-10 years ( ) 11-15 years ( ) 16-20 years ( ) above 20 years ( )

7. Your Title: Tick the appropriate one

1. Restaurant Manager\_\_\_\_\_ 2. F&B Manager\_\_\_\_\_ 3. Chef

8. Type of Ownership

Family/ individual ( ) Partnership ownership ( )  
Chain Restaurant ( )

9. Size of the company (please indicate numbers)

Number of covers	
Number of dining rooms	
Total number of staff	
Chain	

## PART II: RESEARCH QUESTION ATTRIBUTES

	Dear respondent: Please show the level of importance to each of the following items in regards to the implementation of green innovation practices on performance of restaurants by circling the right number. Use 1= Extremely not important, 2 = Not	Extremely Important	Not Important	Neutral	Important	Extremely Important
<b>1. GREEN PURCHASING ITEMS (GPI)</b>						
GPI-I	Employees trained on the environmental	1	2	3	4	5
GPI-II	Purchases of recycled products	1	2	3	4	5
GPI-III	Purchases of used equipment	1	2	3	4	5
GPI-IV	Purchases of Energy Star Appliances	1	2	3	4	5
GPI-V	Informs suppliers that restaurant prefer eco-	1	2	3	4	5
GPI -	Preferences given to environmentally	1	2	3	4	5
GPI -	Preference is given to purchase recyclable	1	2	3	4	5
GPI -	Purchase of supplies, products and condiments	1	2	3	4	5
GPI -	Purchases of local food ingredients	1	2	3	4	5
<b>2. WATER MANAGEMENT ITEMS (WMI)</b>						
WMI-I	Educate customers on water conservation	1	2	3	4	5
WMI -	Implement linen re-use policy	1	2	3	4	5
WMI -	Installs water efficient appliances	1	2	3	4	5
WM-	Installs low flow showerheads	1	2	3	4	5
WMI -	Implements water efficient gardening	1	2	3	4	5
WMI -	Educate staff on how to conserve water	1	2	3	4	5
WMI -	Installs dual flush toilets	1	2	3	4	5

WMI -	Reviews water bills to monitor consumption	1	2	3	4	5
WMI-	Availability of safe and clean water	1	2	3	4	5
<b>3. ENERGY MANAGEMENT ITEMS (EMI)</b>						
EMI-I	Uses of solar energy	1	2	3	4	5
EMI-I	Uses of energy-saving light bulbs	1	2	3	4	5
EMI -	Uses of key cards energy control systems in	1	2	3	4	5
EMI -	Review energy bills to monitor consumption	1	2	3	4	5
EMI-V	Uses of energy efficient appliances	1	2	3	4	5
<b>4. SOLID WASTE MANAGEMENT ITEMS (SWMI)</b>						
SWMI-	Uses of electronic files rather than paper ones	1	2	3	4	5
SWMI-	Recycle of food	1	2	3	4	5
SWMI -	Uses of biodegradable key cards	1	2	3	4	5
SWMI -	Uses two sided printing standard practice in	1	2	3	4	5
SWMI -	Uses two sided copying standard practice in	1	2	3	4	5
SWMI -	Recycles toner cartridges	1	2	3	4	5
SWMI -	Recycles newspaper	1	2	3	4	5

SWMI-	Uses recycled paper	1	2	3	4	5
SWMI -	Installs soap and shampoo dispensers	1	2	3	4	5
SWMI-X	Installs recycle bins	1	2	3	4	5
<b>5 PERFORMANCE OF RESTAURANT (POR)</b>						
POR- I	Reduces operational costs	1	2	3	4	5
POR -II	Improves relationships with local communities	1	2	3	4	5
POR -III	Improve financial gain	1	2	3	4	5
POR -IV	Improve brand image	1	2	3	4	5
POR -V	Enhances employees	1	2	3	4	5
POR -VI	Increases customers' satisfaction	1	2	3	4	5
POR -VII	Gaining stakeholder's confidence	1	2	3	4	5
<b>6. RESTAURANT'S GREEN INNOVATION AWARENESS (RGIN)</b>						
RGIN-I	Information on restaurants green innovation practices on	1	2	3	4	5
RGIN-II	Participate in eco-friendly sustainability meetings	1	2	3	4	5
RGIN-III	Gender influences awareness on green innovation	1	2	3	4	5
RGIN-IV	Communicate on green innovation practices to	1	2	3	4	5
RGIN-V	Educate customers on green innovation practices management issues	1	2	3	4	5
RGIN-VI	Customers sharing different ideas on green innovation practices on restaurant	1	2	3	4	5
<b>7. RESTAURANT PERFORMANCE OUTCOME ( RPO)</b>						
RPO- I	Increase number of customers	1	2	3	4	5
RPO-II	Increase profit	1				
RPO-III	Improvement of employees' wages	1				
RPO-IV	Customer satisfaction	1				
RPO-V	Asset quality	1				
RPO-VI	Capital expenditure	1				

**Thank you for your corporation.**